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Brianna O'Steen*

Bilateral labor agreements and the migration of Filipinos: An instrumental variable approach

Abstract

Bilateral labor agreements (BLAs) are preferred policy models for regulating migration by many governments around the world. The Philippines has been a leader in both agreement conclusion and exporting labor. A recent Congressional evocation is pushing bureaucrats and academics alike to investigate this policy strategy for outcomes and effectiveness. The following analysis answers the question “Do BLAs affect the migration outflows of Overseas Filipino Workers (OFWs)?” using a plausibly exogenous variation to isolate a causal effect. I test for effects of BLAs using two instrumental variables (IVs), such as Bilateral Investment Treaties (BITs) and Formal Alliances, and an original dataset of land-based and sea-based Filipino BLAs and migrant stock in 213 unique areas from 1960 to 2018. I do not find any empirical evidence that these treaties drive migration. However, BLAs have statistically significant effects on gross domestic product (GDP) per capita and exports, suggesting other important channels through which these agreements affect economic outcomes. These null results are critically important for policymakers and diplomats because the resources spent on negotiation are wasted if the primary goal is to increase migration.

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1 Introduction

Migration for securing employment and increasing wages is no longer an obscure personal choice; today it is a global phenomenon. Approximately 2% of the global population engages in some form of labor migration, be it temporary or permanent. Of the world's 258 million international migrants, nearly 64% emigrate explicitly for work (International Labour Organization, 2020). National policies institutionalize and the United Nations (UN) Sustainable Development Goals (SDGs) further reify this practice rendering it commonplace (United Nations Foundation, n.d.). A recent UN Department of Economic and Social Affairs study finds that 68% of countries identify "meeting labor market demands" as the primary reason for their current immigration policies (United Nations, 2019), indicative of congruence between labor-sending and labor-receiving countries. Despite the mutual response to market needs, sometimes further steps are necessary to bring nations into concordance. This paper focuses on one form of the accord, bilateral labor agreement (BLA), growing in popularity since the 1940s.

International organizations define BLAs as agreements between two countries that outline needs and expectations for migration and employment. In most instances, there are clear labor-sending countries and labor-receiving countries. While the agreement is mutual, the motivations and benefits to sending and receiving countries vary. Labor-receiving countries wish to address the manpower needs of various industries, manage regular and irregular migration, and promote cultural and political ties with their cosignatories (Blank, 2011; Go, 2007). Labor-sending countries have different social and economic priorities. They wish to maintain access to labor markets, ease unemployment pressures at home, increase capital flows in the form of remittances (Blank, 2011; Go, 2007), and encourage repatriation of migrants, mitigating brain drain effects (Oh, 1977; Özden and Schiff, 2005). The social reasons for entering BLAs include improving working conditions, negotiating fair contracts, and reducing the exploitation of migrants. Both labor-sending and labor-receiving countries benefit from negotiating visa and work permit stipulations.

Other low- and middle-income nations tout the Philippines as a model for global migration and cash remittance sending. It ranks third (behind China and India) in deploying migrant workers. There are 10 million Filipinos living and working outside of the archipelago, >2 million of them are temporary migrants, known as Overseas Filipino Workers (OFWs). Collectively, these workers remit income exceeding 13% of the national gross domestic product (GDP) each year (Bangko Sentral Ng Pilipinas, 2020). The nation is path-dependent on these remittances, making labor migration a permanent feature of the economy of the Philippines. To sustain the high volume of cash flow into the country, the government must maintain existing migration avenues while simultaneously seeking fresh opportunities. The Philippines is currently in talks with the Czech Republic and Romania as part of its COVID-19 redeployment plan (CNN Philippines Staff, 2020).

Mangulabnan and Daquio (2019), in their review of BLAs, found a resurgence of labor agreements over the last two decades to regulate existing flows but, more importantly, open new channels for labor migration flows. In his 2011 review of Philippine BLAs, Blank also finds maximizing efficiency of sending and receiving workers to be a common theme, demonstrating the government's priority through policy design. The Philippine labor migration system is now managed by >10 government agencies making it one of the most unique and complex in the world to study.

Having a competitive advantage does not necessarily translate to the expansion of human resource development or negotiation of high-paying jobs. This is when the oversight of policymakers is vital. In early 2018, Congress made several inquiries into the motivations for and ways in which the Department of Labor and Employment (DOLE) concludes BLAs. The Philippine Government wants to know if BLAs as a policy instrument are helping to achieve the nation's development goals, via remittance capital, while also upholding its obligations to protect migrant workers under Republic Act No. 10022 (2009).

The fields of international relations, economics, and political science pay little academic attention to BLAs in comparison to research on trade agreements. Though there has been some content analysis on the makeup of these agreements (Mangulabnan and Daquio, 2019; Wickramasekara, 2015), there is only one other empirical study that addresses the question of the impact of labor agreements on migration in the Philippines (Chilton and Woda, 2021). There appears to be enthusiasm for BLAs among labor-sending governments (Chilton and Posner, 2018; Gordon, 2010; Peters, 2019). To better understand the uptake of this policy model around the world, we need more comprehensive, verifiable research.

This study makes methodological and empirical contributions to the body of research and real-world policy issues. In this paper, I use a unique dataset to determine the impact of BLAs on the migrant stock of OFWs in 213 destination countries and regions using an instrumental variable (IV) approach. This is an important question from a policy perspective because governments continue to name increasing the flow of migrants as a reason for signing BLAs. If there is a statistically significant positive relationship between BLAs and migrant stock, I can conclude that these agreements are fulfilling at least one objective. However, this study does not test whether BLAs impact unemployment pressures, perceived security in cosignatory countries, or transfer of remittance capital.

I proceed with the following sections. Section 2 provides a historical snapshot of Philippine labor export policy, situates BLAs and migration in theoretical contexts, explores why countries enter these agreements, and reviews empirical BLA literature. Section 3 describes my research design, model specification, and accompanying methods. In Section 4, I introduce the dataset for this study. Section 5 presents the eventual results and discusses robustness checks. Section 6 concludes with limitations and calls for further research.

2 Literature Review

2.1 Labor export policies of the Philippines

Though Philippine labor migration dates to the 16th century, the modern era of overseas employment was ushered in by the debt crisis under the Marcos regime (1965–1986). To ease surplus labor supply and calm civil unrest under martial law, Ferdinand Marcos devised his foreign policy strategy, referred to as “development diplomacy” (Punongbayan and Mandrilla, 2016). The administration predicated this plan on finding, establishing, and formalizing international labor markets for Filipinos to travel to (Santos, 2014). The Philippines began negotiating bilateral agreements with other nations for the expressed purpose of regulating temporary migration. By 1974, the Overseas Employment Program was adopted into the Philippine Labor Code, formalizing national labor export policy for the first time. Male migrants found work

in construction in many Middle Eastern countries that were booming with oil money and investing in infrastructure. Filipinas began migrating in the 1970s to fill the need for English-speaking teachers (James, 1997). However, the demand for female migrants spiked in the late 1980s when health, sales, and domestic service sectors opened in Hong Kong, Singapore, South Korea, Japan, and Taiwan (Center for Migrant Advocacy, 2011). This system flourished when fresh markets were introduced, allowing OFWs to dominate certain labor markets.

The Philippines has been a consistent source of labor throughout all phases of migration and BLA ratification (Chilton and Posner, 2018). The state has a history of using diplomatic tools for development gains. Though there is variation in the type, depth, and clarity of their BLAs, the treaties appear to be the desired form of official policy. The government continues to prioritize labor agreements for deploying migrant workers, evidenced by the ongoing negotiations in Eastern Europe (CNN Staff, 2020). Due to this capital-producing system, the widespread desire to replicate the Philippines' export model in other source states is growing (Mendoza, 2015). The following section situates BLAs and migration in theoretical contexts and explores the competing and commingling explanations as to why people move.

2.2 Theory

BLAs, much like other international treaties, are best understood through the international relations lens of liberalism. This is the belief that states achieve economic and social power through international cooperation rather than direct force. Though liberalists are not against military action, they prefer to utilize international diplomacy and bi- or multilateral agreements to achieve their national interests.

Countries use BLAs as diplomatic tools to regulate labor migration. These instruments take several forms with varying degrees of enforceability including Memorandums of Understanding (MOUs), Memorandums of Agreement (MOAs), Protocols, Annexes, Inter-Agency Agreements (IAAs), framework agreements, statements of mutual labor cooperation, and cross-border worker agreements (Wickramasekara, 2015). Though growing in popularity,¹ countries conclude BLAs less frequently than international investment agreements (United Nations Conference on Trade and Development, 2019; Wickramasekara, 2015). In 1949, the International Labour Organization (ILO) adopted the revised Migration for Employment Recommendation (No. 86); for decades, an accompanying annex has served as a template for drafting BLAs.

States enter BLAs for a variety of social and economic reasons. Reducing exploitation is a common social goal for labor-sending countries when entering BLAs. They wish to protect the rights of their nationals abroad, improve working conditions, and negotiate fair contracts with minimum standards (Blank, 2011; Chilton and Posner, 2018; Moraga, 2008). Labor-sending countries may wish to strengthen economic relations with certain states. Entering a BLA could establish other positive avenues for trade and investment down the road. Additional economic drivers for source countries include relieving a labor surplus, facilitating the return of remittances (Chilton and Posner, 2018), and preventing brain drain by negotiating contract terms and repatriation (Moraga, 2008).

¹ See Chilton and Posner (2018) and Wickramasekara (2015) for more information on global trends of BLA conclusion.

Host or labor-receiving countries may wish to attract migrants to respond to a labor market need, as with the oil industry in the 1970s or the need for health-care workers to assist with aging populations in Japan, Canada, and the United States. Greater ability to control regular and irregular migration motivates hosts (Blank, 2011; Moraga, 2008). States can accomplish this by establishing specific types of visas and setting quotas relative to the labor shortage. Labor-receiving nations may also wish to secure a benefit unrelated to migration from a source country (Sykes, 2013), promote cultural ties, or gain symbolic political benefits (Chilton and Posner, 2018).

Migration scholars hypothesize a myriad of contributing factors and frameworks to explain why people move; however, there are three dominant theories. Researchers conceptualize the first as push and pull factors. The push-pull theory extrapolates key tenets from Ravenstein's 1885 work, *The Laws of Migration*. Determinants that push migrants to leave their home localities are war, violence, poor working conditions, meager wages, famine, and natural hazards. Services, food security, better job opportunities, and political asylum may also pull migrants to a new location. The applications of this push-pull theory of migration are vast and vary, but the central assumption is that migration is a function of sending and receiving countries' economic performance (Cuamea Velázquez, 2000). Some scholars assume a symmetry hypothesis, stating that the push and pull factors between source and host countries impose approximately equal, "but opposite effects (elasticities)" (Schultz, 1982, p. 573). In her empirical study on the determinants of Filipino migration, Carlos finds evidence for asymmetry resulting from uneven information, natural barriers, and restrictive policies in host states leading her to conclude that "factors in the Philippines exert greater influence on the probability to migrate" (2002, p. 100). There is a significant overlap between push-pull migration determinants and the reasons for the BLA conclusion. BLAs are inherently flexible and versatile tools that account for asymmetry.

The second migration theory growing in popularity, the labor recruitment approach, builds on Piore's Dual Labor Market theory (1971). This theory depends on bilateral agreements to formalize, or private companies to orchestrate, direct recruitment to fill what Piore (1971) calls the "secondary sector." This approach to explaining migration sets itself apart from push-pull theory by intentionally excluding income and wage gaps and focuses on employers' recruitment strategies (Cuamea Velázquez, 2000). Piore develops the constructs of the Dual Labor Market to explain why Black Americans in urban areas occupy second sector jobs with poorer working conditions, lower wages, and less upward mobility. His core tenets challenge the push-pull supposition that migrants enter better living and working conditions inherent to their movement. Piore and others expand this theory to explain international migration patterns besides rural to urban in-country movement. When subscribing to the assumption that BLAs increase international migration flows, this is an *apropos* theoretical lens through which to view these agreements; unfortunately, it yields limited empirical results (Ashton and Maguire, 1984).

To address the shortcomings of the aforementioned theories, some migration scholars describe this phenomenon as a social process.

This view holds that sending and receiving areas should be analyzed as two components of the migration system, and [are] interrelated by a complex set of linkages: state to state relations (trade and financial flows, immigration and emigration

policies, complementary of labor supply and demand); family and personal networks (remittance flows, family obligations, community solidarity, information); migrant agency activities (job recruitment, regulations governing the migration process, contracts with migrant workers); and mass culture connections (international media dissemination, social acceptance of migrants, cultural similarity, assimilation). (Cuamea Velázquez, 2000, p. 147)

Conceptualizing migration as a social process creates space for analyzing the interaction between flows and structural features of host and source states. This perspective accounts for the macroeconomic factors that influence migration systems and considers a variety of incentives—beyond financial enticements—to motivate individuals. Accounting for the interconnectedness of decision-making is more comprehensive than other frameworks; however, it is only useful for *ex post facto* studies.

These three theories each provide an additional layer of explanation as to why people migrate. Unfortunately, they lack predictive power. This is a problem for states wanting to plan evidence-based immigration policy. It is possible to find case studies that prove or disprove each of these migration theories. Disney et al. (2015) find no reliable theory for predicting migration. Both deterministic forecasts (often called “projections”) and probabilistic (stochastic) forecasts have very high levels of error. Migration is difficult to forecast due to the myriad of political, social, economic, meteorological, and climatological drivers. Despite constraints in migration forecasting, policymaking must go on.

Varying theories and commingling reasons for seeking work abroad lead us to question BLAs' ability to fulfill their objectives. If states are successful in achieving economic and social power through this diplomatic tool, it offers further evidence for continuing BLA use in international diplomacy and obliges researchers to expand their investigations. The following section reviews relevant empirical literature on global BLA conclusions and impacts in the Philippines.

2.3 Empirical findings on BLAs

Although academic attention to BLAs is increasing (Go, 2004, 2007; Gordon, 2010; Panizzon, 2010; Sáez, 2013), very few empirical studies test their strengths and weaknesses as a policy instrument. To my knowledge, there are three published articles on the topic that use econometric models. Chilton and Posner (2018) and Peters (2019) posit why countries sign BLAs and use unique global datasets to test several hypotheses. Chilton and Woda (2021) use administrative data from the Philippines to test the impact of BLAs on the flows of migrants to and remittances from cosignatory countries.

Chilton and Posner (2018) assemble an original dataset of 582 BLAs between 1945 and 2015 and test several assumptions using state-state dyads. The primary focus of their study is to test hypotheses around why states conclude labor agreements with one another. One such argument is that agreements draw countries with sizeable differences in the level of democracy and strength of economy into concordance on migration policy. The authors use logit regressions to examine patterns of ratification and find evidence against the belief that countries with dissimilar political regimes and relative levels of wealth are more likely to sign BLAs

unless the host state is Middle Eastern. The researchers also conduct some exploratory analysis on their country dyads to determine the effect of BLAs on migration. They find that across their global dataset, countries with BLAs experience higher levels of migration; however, these trends appear to begin slightly before the BLAs ratification. Thus, Chilton and Posner (2018) do not claim a causal relationship between BLAs and migration.

In another global study, Peters (2019) uses a rare events logit model to test the hypothesis that hosts, or labor recipient states, enter BLAs only when they cannot fulfill their labor needs unilaterally. She argues that host states have all the negotiating power; hence, it will not benefit them to give up some control over immigration if the country meets its own labor needs. Using BLAs to serve as recruitment tools, instead of third-party middlemen, solves the “matching problem” Peters presents. By signing treaties, hosts can reduce screening costs and vacancy costs associated with filling positions. Here she assumes that “costs of screening tend to rise when the economy needs more skilled labor” (Peters, 2019, p. 290). Peters uses labor productivity to support the hypothesis for reducing screening costs, and remoteness and an increase in labor force participation to measure vacancy costs.

Peters' most notable finding in relation to this study is that a BLA is more likely when the dyad signs another treaty (trade or aid) in the same year. She does not attribute this to linkage, because none of the BLAs she examines include links to other treaties but to the existing relationship between the two countries. This finding supports the IV identification strategy I discuss in the next section. Additionally, Peters (2019) finds that hosts are less likely to sign labor agreements with source states from which they already have a large stock of migrants, supporting her hypothesis that receiving states do not enter BLAs when they can fulfill their labor needs independently. This result explains the holdout by Saudi Arabia from signing a BLA with the Philippines (2005) despite the source country's decades-long effort.

Finally, her analysis reveals a negative and statistically significant relationship between BLA conclusion and distance, showing that a remote host country is nearly three times more likely to sign an agreement than a non-remote host. The logic behind this finding is that distance is a barrier to migration; clauses requiring recruitment agencies or employers to cover the associated travel costs can mitigate that barrier. This may be relevant to OFWs because many of their destinations are island nations.

Chilton and Woda (2021) attempt to mitigate past criticism of empirical evaluations of international treaties by employing an event study research design. This method allows them to model control and treatment groups to test the impact of Philippine BLAs on emigration and remittance flows. Event studies must satisfy three fundamental assumptions: (1) parallel trends that are independently and identically distributed through time, (2) events are unexpected, (3) no other events can occur during the event window. Unlike the two studies above, these authors use OFW labor migration data specifically rather than general migration variables. Their dataset includes the 68 land-based BLAs originally from Mangulabnan and Daquio's report (2019).

Their findings indicate that BLAs between the Philippines and cosignatories do not increase the deployment of migrant workers, nor the return of capital in the form of remittances. Chilton and Woda (2021, p. 20) argue that their “results suggest that signing more BLAs may not be an easy solution for countries wishing to increase their labor migration, and the financial benefits of that labor migration.” This finding is critical for policymakers who are

actively negotiating labor agreements as part of the nation's COVID recovery plan (CNN Staff, 2020).

The authors recognize four limitations of their study: non-random BLA conclusion, imperfect data, inability to test other reasons the Philippines signs such treaties (namely, worker protections), and lack of generalizability to other countries' BLAs. Like Chilton and Woda (2021), this study uses specific labor migration data from the World Bank and the Philippine Overseas Employment Administration (POEA) and has the same limitations. However, an IV's research design has different identifying assumptions than an event study design and allows other events (e.g., bilateral treaties) to be instrumented in place of the endogenous BLA. It is promising that by using different estimation techniques with similar data, we reach the same conclusions.

These studies are all critically important pieces to the BLA-migration puzzle. The following analysis uses the first IV approach to test whether BLAs truly impact migration. The paper proceeds with a thorough explanation of the methodological contribution and details my identification strategy, including two suitable instruments.

3 Methods

3.1 OLS and endogeneity

The theoretical model is macroeconomic in nature and allows migrant stock of OFWs to be a function of a BLA with a host country, in addition to a set of control variables,

$$y_{it} = \beta_0 + \beta_1 BLA_{it} + \beta_2' x_{it} + \alpha_i + \delta_t + u_{it} \quad (1)$$

where subscript it denotes the country i in time t . BLA_{it} is the independent variable of interest, a dummy variable for the years a BLA is in effect between the Philippines and country i . For example, BLA for Saudi Arabia is 0 from 1960 to 2004 and 1 from 2005 to 2018. β_1 is the coefficient of interest, x_{it} is a vector of country characteristics, α_i is an unobserved time-invariant country-fixed effect, δ_t is a time trend, and u_{it} is the error term. The dependent variable, denoted by y_{it} , is the number of temporary Filipino migrant workers in country i at time t .

The ordinary least squares (OLS) method produces biased results since the independent variable, BLA, suffers from two types of endogeneity. First, it is plausible that reverse causality affects the model. One situation where this may occur is between the Philippines and Saudi Arabia. Filipino migration to Saudi Arabia increased by 560% from 1960 to 1970 and rose another five-fold between 1970 and 1980 due to the oil boom. To expedite deployment the Philippines proposed a BLA in 1988 but the Kingdom declined to take part in negotiations. Migration continued to rise, and the Philippines remained consistent in its efforts to formalize the labor relations between the two countries. The parties eventually signed a BLA in 2005 when migration peaked at around one million. Though Saudi Arabia remains a top destination for OFWs, there has been a decline in the number of migrants since the BLA. In this dyad, it seems that migration was the driver for the BLA conclusion and is consistent with reverse causality.

Similarly, reverse causality may also be present with Japan, a top destination country for OFWs, especially seafarers (Go, 2004). The Philippines proposed an MOA on Mobilization of

Manpower in 1988. Japan did not outrightly decline the BLA; instead, they chose the course of inaction. Deployment increased year after year from the late-1980s to mid-2000s until Japan tightened its entertainer visa restrictions to address human trafficking. Deployment of newly hired OFWs dropped by 81.7% from 2005 to 2006. Negotiations of the Japan-Philippines Economic Partnership Agreement (JPEPA), a unique bilateral agreement concerning investment, trade, and labor, were ongoing. According to Amante, “the employment of Filipino nurses and caregivers in Japan was the main item requested by the Philippine side” (2007, p. 26). This indicates an effort to increase deployment, dominate a new sector, and relieve a nursing surplus. JPEPA includes language for seafarers and nurses and ultimately led to the conclusion of two specific MOUs with Japan in 2009 for these industries.

Besides reverse causality, OLS likely suffers from omitted variable bias caused by other unobserved factors driving the migration patterns of Filipinos that are also correlated with the adoption of BLAs. Arguments exist in qualitative literature on the strength of social networks and imitation of kin migration patterns, also known as *stepwise migration* (Francisco-Menchavez, 2020), which is unaccounted for in the data. The Philippines tends to conclude agreements where its citizens are already working hoping to expand protections, encourage remittance transfer, and maintain the migration stream. If OFWs are migrating to countries where their family members work and there are systematically more BLAs with those destinations, that omitted variable would cause positive bias in the BLA coefficient. The unmeasured migration would over-inflate the effect of the agreement on migration.

Exploitation of migrant workers is an issue the Philippine government contends with regularly. Scholars cite increasing protections for OFWs as a reason for BLA conclusion (Blank, 2011; Chilton and Woda, 2021; Go, 2004). It is also an issue that I expect to bias the OLS model. Exploitation is likely to have a negative effect on the dependent variable and positively impact the independent variable. To my knowledge, there are no empirical studies that analyze this issue, nor does the Philippines distribute quantitative data on violation of migrant workers' rights.

3.2 Identification strategy

To overcome endogeneity concerns, I use an IV estimator. The impact of BLAs on the migration of Filipinos is identified by two instruments, bilateral investment treaties (BITs) and formal alliances. IV regressions are a well-tested approach in econometrics that allows researchers to identify causal effects in the presence of endogeneity. The scarcity of empirical literature on the impact of BLAs on migration is due, in part, to the difficulty of finding a suitable instrument that must satisfy two assumptions, instrument relevance and the exclusion restriction.

3.2.1 Instrument relevance

The relevance assumption states that the instrument, Z_i , is correlated with the endogenous variable, X_i , $Cov(Z_i, X_i) \neq 0$. If the correlation is weak, the instrument does not explain much of the variation in the endogenous variable, which can bias results. An instrument is considered strong if its F statistic is >10 (Staiger and Stock, 1997). Both instruments passed the relevance check and were jointly significant with an F statistic of 19.77 and 14.35 for Model 2

and 3 specifications, respectively. The manual first-stage regressions of the endogenous variable (BLA) on the instruments (BIT and Alliance), expressed by Eq. (2), are presented in the Table B3 in Appendix B.

$$BLA_{it} = \gamma_0 + \gamma_1 BIT_{it} + \gamma_2 Alliance_{it} + \gamma_3' x_{it} + \alpha_i + \delta_t + \nu \quad (2)$$

3.2.2 Exclusion restriction

The exclusion restriction of the IV method is not testable; rather it requires institutional knowledge and a sound argument (Angrist and Krueger, 2001). For BIT and formal alliance to be valid, they must not be correlated with the dependent variable, migration, conditional on the other control variables. On the surface, it may appear that BITs have nothing to do with migration, but the relationship is more complex. BITs are associated with the foreign direct investment (FDI) and FDI is both contemporaneously substitutable and dynamically complementary with migration (Kugler and Rapoport, 2007). Thus, if BITs cause an increase in FDI one might expect an impact on migration via this channel. The following subsection reviews extensive literature and rules out the possible threat to identification since BITs have no causal impact on FDI—they are plausibly exogenous.

3.2.2.1 Bilateral investment treaties (BITs)

$$BIT \rightarrow FDI \leftrightarrow Migration$$

BITs are international agreements that set rules and regulations on private investment between nationals or companies of one country in a second recipient country. Like BLAs, investors and recipient states enter BITs for diverse reasons. Investors wish to protect their investments from expropriation while developing countries hope to gain a competitive advantage to increase their FDI. The capital flows unilaterally but typically both parties have equal recourse to arbitration through the World Bank's International Centre for Settlement of Investment Disputes, or under the United Nations Commission on International Trade Laws (UNCITRAL) Arbitration Rules, if either party violates treaty terms.

Conclusion of BITs has seen exponential growth over the last several decades. In response, legal scholars, economists, and political scientists took an interest in why nations are so eager to sign them and what effects they realize. The existing evidence is contradictory but overwhelmingly concludes that, while BITs and FDI are strongly correlated, the former has no causal impact on the latter.

Hallward-Driemeier (2003) analyzes the bilateral flow of FDI from 1980 to 2000 between 20 Organisation for Economic Co-operation and Development (OECD) countries and 31 developing countries. She finds that BITs have an insignificant effect on FDI flows. Further, she argues that the liberalization and stability of the investment climate are more influential on FDI than BITs are. Neumayer and Spess (2005) critique her sample for being too limited and argue that her research design does not permit investigation into signaling and spillover effects of BITs. Aisbett (2007) also points out that Hallward-Driemeier's use of levels (highly skewed) rather than log FDI could bias her results.

Rather than country dyads, Tobin and Rose-Ackerman (2004) use 5-year averages for FDI inflows in their panel of 63 countries from 1980 to 2000. They conclude that the relationship

between BITs and FDI is weak and that the treaties are not fulfilling their purpose of attracting more investment capital. Where there is a relationship, it appears to be weakly negative. The authors do not completely discount BITs as ineffectual; they find that agreements in countries considered “relatively risky” from 1980 to 2000 more FDI than their stable counterparts (Tobin and Rose-Ackerman, 2004). Neumayer and Spess (2005) critique Tobin and Rose-Ackerman’s specification for measuring political risk, but a greater limitation is that the latter pair focus solely on the US-administered FDI.

Two studies are often cited as evidence for the positive impact of BITs on FDI, Salacuse and Sullivan (2004) and Neumayer and Spess (2005). The former uses a cross-sectional design for up to 99 developing countries in 1998, 1999, and 2000 as well as a fixed-effects model for only 31 US FDI-recipient countries from 1991 to 2000. Salacuse and Sullivan (2004) argue that the increased FDI does not immediately follow the signing of the BIT. Neumayer and Spess’ findings are far less conservative and claim BITs cause massive increases in FDI. Aisbett (2007, p. 34) replicates both studies demonstrating that these large effects “are almost certainly due to misspecification and insufficient attention paid to the endogeneity of BIT participation.” Furthermore, Yackee (2009) reproduces Neumayer and Spess’ (2005) study and finds “no evidence that BITs and FDI share the kind of conditional relationship theorized (and identified) by [the authors]” (p. 391).

In his 2010 study, Yackee revisits Tobin and Rose-Ackerman’s (2004) interest in political risk. He finds no meaningful correlation between BITs and political risk using regression analysis. Tobin and Rose-Ackerman’s (2011) study confirms Yackee’s conclusion since the authors find that FDI is more dependent on political risk than a BIT. Yackee also uses survey evidence to “show that providers of political risk insurance do not reliably take BITs into account when deciding the terms of insurance” (Yackee, 2010, p. 397). He asserts that past positive findings between BITs and FDI may be spurious and remains quite skeptical of treaties’ impact on investment.

Academics and practitioners now widely accept that BITs and FDI are strongly correlated economic phenomena but lack a causal relationship; the literature is shifting to focus on the contents of the investment treaties (including their trade brethren) as well as governance of the international investment regime (Simmons, 2014). Some scholars criticize the simplicity of treating the agreements as homogenous “black boxes;” to overcome this limitation, empirical research has pivoted toward the direction of content analysis. Berger et al. (2013) use Yackee’s (2008a, 2008b) codes for dispute, national treatment, and most favored nations clauses in BITs and extend them to regional trade agreements (RTA). They find evidence that when RTAs lack these clauses would-be investor-nations may export goods to the developing country instead of capital. They also find foreign investors respond to BITs rather indiscriminately, and the authors attribute this to the technical and low-profile nature of BIT negotiations (Berger et al., 2013).

Allee and Peinhardt (2014) offer a more comprehensive coding scheme for investment treaties to test theoretical explanations of their variation. Their findings impart skepticism on the “rational design of international institutions” and highlight the power politics at play in the investment regime (Allee and Peinhardt, 2014, p. 81). Neumayer et al. (2016) fill a previous gap in the literature by considering spatial dependence when examining the BIT conclusion. The authors find that developing countries are more likely to sign strict agreements to “avoid

diversion of FDI to competing developing host countries which agreed to similar binding commitments before" (Neumayer et al., 2016, p. 204). Arguably, the new directions of BIT and trade agreement research are richer and more substantive than the BIT \rightarrow FDI causal inquiries of the past. I expect to see a profundity of ideas as this body of work grows.

Policymakers around the world are busy drafting, negotiating, and voting on trade, investment, and migration policy. Unfortunately, these concurrent processes are often done in isolation from each other. This causes incompatible legal frameworks where normative regulations can contradict one another. More importantly, migration networks develop without due regard to investment and trade mechanisms (Cottier and Sieber-Gasser, 2015).

Since the literature overwhelmingly rejects a causal link between BITs and FDI, I maintain that such agreements do not directly affect the migration choices of Filipinos. Nevertheless, if two parties enter a BIT, regardless of ratification and investment status, they have the functional relations necessary to use diplomatic tools (BLAs, BITs, formal alliances, other trade agreements). This relationship is correlated with the two parties' likelihood of entering a BLA, since it requires the same productive relationship irrespective of migration history between the parties.

3.2.2.2 Formal alliance

States enter formal alliances to maintain peace and neutrality, prevent conflict, or deter hostility. The Correlates of War Project (Gibler, 2009) classifies formal alliances as mutual defense pacts, non-aggression treaties, or entente agreements between at least two states. The Philippines signed all its formal alliances during the Cold War era. All have expired apart from the Mutual Defense Treaty with the United States (1951) and a recent agreement with Jordan (2018). These alliances are conditional upon large-scale conflict, which the Philippines has not engaged to date. The Philippines has a weaker military than its alliance cosigners, rendering them more likely to receive manpower into their country to fight an insurgency rather than deploying Filipinos elsewhere. If they mobilize troops to fight or aid in war efforts, it would be temporary and not captured in the OFW data reported by POEA. This was the case during the Vietnam War; nearly 2,000 Filipinos deployed to South Vietnam to support the US military and medical efforts (Lockwood, 1999). However, the migrant stock data in this analysis reports 45 Filipinos working in Vietnam in 1970 and 292 by 1980.

Migration scholars cite civil war as a push factor of migration (Cuamea Velázquez, 2000); however, a formal alliance is not considered a pull factor. Migration studies do not consider military agreements to be a determinant of migration because civilians are typically unaware of these agreements. Since the Philippines is not involved in any conflict and the migrant stock data do not account for servicemembers, there is no reason for the formal alliances to be correlated with the migration of OFWs conditional on the presence of a BLA. Most of the alliances ended before Philippine migration saw exponential growth. However, these agreements signal diplomatic and defense cooperation and would be correlated with the likelihood of the same country pairs entering a BLA (Peters, 2019). In fact, there are four overlapping country dyads, that have both a BLA and a formal alliance with the Philippines, including the United States of America (BLA, 1968), Jordan (BLA, 1988), United Kingdom (BLAs, 2002, 2003), and New Zealand (BLAs, 2008, 2015). A careful review of the migration literature, detailed in section 2.2., reveals that formal alliances likely have no direct impact on migration and are thus plausibly exogenous in the migration equation.

3.3 Empirical model

Equation (2) estimates *BIT* and *Alliance* as instruments for *BLA*. The country characteristics included in x_{it} are GDP ratio, unemployment rates, government spending, population, imports, exports, and Polity2² scores. The dependent variable is the Filipino migrant stock in a host country, territory, or autonomous region, hereafter referred to as country. This variable, recorded as the number of persons, has 1685 intermittent observations across the sample period, from the 213 unique countries. Despite the sporadic nature of the observations, there is at least 1 year of migrant data for every country in the sample. The sample period is from 1960 to 2018 (see Table 1).

The independent variable of interest is an indicator for the presence of a labor agreement with the Philippines in country i at time t . The variable includes all forms of diplomatic instruments used to reach an agreement for the Philippines to supply labor to a host country, such as MOAs, their annexes and protocols, and less-binding forms such as MOUs. Seventy-one BLAs have been identified between the Philippines and other states or provinces, 69 concern land-based labor and the remaining two are sea-based. Of these, there are 29 unique country pairs, and the remaining 42 are updated protocols, renewals, or brand-new agreements with previous partners. As a robustness check, I test two forms of this variable, BLA-onset and BLA-real, both dichotomous. BLA-onset assumes that once an agreement is in place for a country dyad it remains in effect until the end of the sample period. The benefit of using the onset form is to test for the lasting effects of a BLA on migration; this captures the persisting impact on migration, even if the agreement has expired.

BLA-real refers to the actual years that the agreements are in effect. This variable measures the impact of the agreement on migration during the window the agreement is valid and does not consider persisting effects. Unfortunately, some information is missing for Liberia (33 obs.), Norway (16 obs.), and Qatar (15 obs.). The text of the Liberian BLA concerning seafarers is publicly available but does not specify the length of the terms. Texts for the BLAs with Norway and Qatar (1981) are not publicly available, and I could not identify if the agreements remain in force or expired. These data are considered missing at random, there is no indication that agreement texts or status details are not available systematically, thus the missing values are not likely to bias results. Using the “real” form identifies 461 observations as having a BLA in effect while using the “onset” form increases this figure to 556 observations. This difference results from missing observations (64) and expired agreements (31 obs.) (see Table A1 in Appendix A).

The following control variables, denoted by X , measure wealth, trade relationships, and governance schemes. I divide the GDP per capita of the host countries by the GDP per capita of the Philippines to calculate a ratio for each country dyad. The natural log of the host-to-Philippines GDP ratio is in the model to capture the relative wealth between the host and source countries. There is evidence that workers migrate to countries with growing economies (Ghosh, 2013; Rass, 2012; Wickramasekara, 2015). A simple glance at the World Bank's GDP per capita indicator graph demonstrates the upward trend of global growth across the sample

2 “Revised Combined Polity Score: This variable is a modified version of the POLITY variable added in order to facilitate the use of the POLITY regime measure in time-series analyses. It modifies the combined annual POLITY score by applying a simple treatment, or ‘fix,’ to convert instances of ‘standardized authority scores’ (i.e., -66, -77, and -88) to conventional polity scores (i.e., within the range, -10 to +10)” (Center for Systemic Peace, 2020).

period. Overall, this does not provide much information. The ratio, however, gives some insight into how the economies of host countries are growing relative to the Philippines.

The model contains national estimates of unemployment because this variable has a negative relationship with migration, according to Geis et al. (2008). Host countries with high levels of unemployment may be less likely to sign BLAs and may be less desirable destinations for OFWs. The model controls for the population because it is correlated with both x and y . Population growth of developed countries is slowing because of aging and decreasing fertility while populations of developing nations are booming. This is the precise reason that countries like Canada, Germany, and Japan are recruiting Filipino nurses and care workers via bilateral agreements. According to Brush and Sochalski, “[o]ver the past 60 years, the Philippines has led the world in preparing nurses explicitly for export to meet the demand for nurses in the United States and other developed nations” (2007, pp. 37–38).

To mitigate omitted variable bias and improve the precision of the estimates, I include direction of trade statistics. Peters’ study (2019) finds that country pairs are more likely to sign a BLA when they sign another economic or aid treaty in the same year. Furthermore, trade is correlated with migration (Campaniello, 2014; Upreti, 2019). Bilateral trading between all possible country dyads has increased from 13% in 1950 to 58% in 2014 (Ortiz-Ospina and Beltekian, 2018). Though there is still one-quarter of country pairs in a non-trade relationship and nearly 17% unilaterally trading, the effects of globalization on mutual export partnerships have been positive. Eaton and Kortum (2002) document a negative relationship between trade and distance, speaking to the strength of the Philippines’ ability to trade with every country in the sample.

The regression includes a variable for the absolute value of the difference between the Polity2 score of the Philippines and the Polity2 score of the host country. Center for Systemic Peace (2020) rates countries on their level of democracy and then assigns an annual Polity score. The scores range from -10 (total autocracy) to 10 (consolidated democracy). The absolute value of the difference captures the governance scheme similarity of the country dyads across the sample period. The coefficient on the variable estimates the effect of the relative level of democracy on migration flows of Filipinos and provides a test of whether OFWs migrate to host countries with political systems like their own in a given year.³ Polity affects both BLA conclusion and migration, thus it is critically important to the model to avoid omitted variable bias.

To proxy for a variety of country characteristics likely to attract migrants, such as strong health-care systems, wages, education systems, and other goods and services which have a positive effect on migration, the model includes government spending (Böheim and Mayr, 2005; Dinbabo and Nyasulu, 2015; Geis et al., 2008). Migrants’ preferences may differ based on their skill level and length of the employment contract. Filipinos respond to labor market needs in both high- and low-skilled categories. The 2018 Survey of Overseas Filipinos reports nearly 75% of all OFWs holding low-skilled occupations (Philippine Statistics Authority, 2019).

The model includes a set of region dummies to further control for variation and regional shocks across time. For consistency and replicability, I group countries using the World Bank’s region classifications: East Asia and Pacific, Europe and Central Asia, Latin America, Middle East and Northern Africa, North America, South Asia, and Sub-Saharan Africa. Model 3 interacts these region dummies with a time trend (Table 2).

3 The difference in Polity2 scores without taking the absolute value is substituted for this variable as a robustness check discussed in Section 5.1.

4 Data

Table 1 presents summary statistics. The panel incorporates data from several publicly available databases and archival research of various treaties and diplomatic instruments, which I cross-reference with news sources when possible. The data begin in 1960, the first year of recorded migrant stock counts, and end in 2018, the most recent year for which data are available. The unit of analysis is a country and/or autonomous region, in which OFWs are working (country i in time t), with a total sample size of 213 countries.

Despite the sporadic nature of the migrant stock data, there is still at least one observation for every country in the sample. Earlier estimates are from the Global Bilateral Migration Database, which relies on states to report their own figures to the World Bank (Özden et al., 2011). Migrant stock counts from 1992 to 2018 come directly from the POEA. Since implementing the Survey of Overseas Filipinos, the Philippine Statistics Authority in collaboration with other government agencies collects and publishes more thorough and reliable data, resulting in consistent counts beginning in 1992. The Philippines does a remarkable job of ensuring that its OFW data contain only persons deployed for labor. The migrant stock variable in this study does not contain permanent migrants who resettle in a new country nor does it contain refugees or asylum seekers.

Wealth and demographic-related controls for this study—GDP per capita, unemployment⁴ rates, government spending, and population data, for both the Philippines and host countries—come from the World Bank's Development Indicators database (World Bank Group, 2017). The World Bank does not report figures for Taiwan, so these data are from the Directorate General of Budget, Accounting, and Statistics (DGBAS) (Executive Yuan, 2020a, 2020b). Direction-of-Trade statistics are from the International Monetary Fund (2019).⁵ The Center for Systemic Peace maintains and updates the Polity Project annually; Polity2 scores are from the 2019 version. Region dummies use the World Bank's region classifications.

Labor agreement data comes primarily from a recent review and content analysis for the Institute of Labor Studies, a division of DOLE, which identified 68 agreements (Mangulabnan and Daquio, 2019). I also chose to include an expired land-based agreement with Qatar and two sea-based BLAs because they all contain migrant worker language (International Organization for Migration (IOM), 2013; POEA, 2016a; 2016b). Although some agreements may be missing, I offer the most comprehensive list for Philippine BLAs to date (see Table A1 in Appendix A). To cross-reference and get more information on the end dates for expired agreements, I conduct archival research using the Philippine Treaties Online database and sources hosted by ILO and the Center for Migration Advocacy. Data for BITs and trade treaties come from the International Centre for Settlement of Investment Disputes (World Bank Group, 2019) and the Investment Policy Hub of the United Nations Conference on Trade and Development (2019).

BIT is an indicator variable for the presence of an agreement. I identify 41 BITs between the Philippines and other countries, available in Table A2 in Appendix A. France and Germany

⁴ The World Bank's source notes indicate that unemployment figures are national estimates reported to ILO. Definitions of labor force and unemployment differ by country.

⁵ Three quarters of observations are missing one or more of the control variables. To maximize the sample size and prevent observations of the dependent variable from being dropped, the controls were extrapolated using *ipolate* and *epolate* commands in STATA. The extrapolated versions and their accompanying dummy variables were used for all regressions in this study. Dummy variable means can be found at the bottom of Table 1. Specific commands for replication are available in the supplementary .do file.

Table 1 Summary statistics

	Obs.	Mean	Std. Dev.	Min	Max
<i>Primary variables</i>					
Migrants	1,685	33,649.47	188,752	0	2,700,000
BLA-real	12,862	0.036	0.186	0	1
BLA-onset	12,862	0.043	0.203	0	1
BIT	12,921	0.072	0.258	0	1
Alliance	12,921	0.012	0.111	0	1
<i>Controls</i>					
GDP Per Capita Phil.	59	1,000.579	850.895	156.704	3,102.713
GDP Per Capita Host	9,773	8,167.732	16,035.06	34.791	1,89,170.9
GDP Per Capita Ratio	9,733	7.072	11.571	0.088	117.737
GDP pc Ratio Ex. ¹ (ln)	12,921	0.946	1.471	-2.432	4.768
Unemployment	3,804	8.105	6.231	0.05	57
Unemployment Ex. ²	12,921	8.639	6.312	0.05	57
Government spending	7,901	15.951	7.251	0	135.809
Government spending Ex. ³	12,921	17.142	8.039	0	135.809
Population	12,807	24,050,417	100,978,845	3,893	1,392,730,000
Population Ex. ⁴ (ln)	12,921	14.763	2.434	8.267	21.055
Imports	6,096	244.712	1,014.366	0.000019	21,394.27
Imports Ex. ⁵ (ln)	12,921	-0.489	3.563	-10.871	9.971
Exports	6,977	169.576	866.987	2.001	13,918.86
Exports Ex. ⁶ (ln)	12,921	-0.531	3.182	-13.122	9.541
Polity scores Phil.	58	3.207	6.722	-9	8
Polity scores host	8,306	0.998	7.409	-10	10
Polity scores absolute dif.	8,306	6.964	2.715	0	10
Polity scores dif. ex. ⁷	12,921	6.873	2.441	0	10
<i>Regional dummies</i>					
East Asia and Pacific	12,921	0.174	0.379	0	1
Europe and Central Asia	12,921	0.265	0.441	0	1
Latin America and Caribbean	12,921	0.196	0.397	0	1
Mid. East and Northern Africa	12,921	0.096	0.294	0	1
North America	12,921	0.014	0.116	0	1
South Asia	12,921	0.037	0.188	0	1
Sub Saharan Africa	12,921	0.219	0.414	0	1

¹GDP per capita ratio extrapolate dummy mean = 0.244.

²Unemployment extrapolated dummy mean = 0.711.

³Government spending extrapolated dummy mean = 0.389.

⁴Population (ln) extrapolated dummy mean = 0.009.

⁵Imports (ln) extrapolated dummy mean = 0.528.

⁶Exports (ln) extrapolated dummy mean = 0.460.

⁷Policy score absolute difference extrapolated dummy mean = 0.357.

BLA, bilateral labor agreement; GDP, gross domestic product.

each have two treaties, resulting in 39 unique country pairs. Thirty-four agreements are currently in force.⁶ Fifteen BIT country pairs overlap with BLA dyads.

The Correlates of War Project, in collaboration with Douglas Gibler from the University of Alabama, hosts a dataset for formal alliances that include mutual defense pacts, non-aggression treaties, and ententes between 1816 and 2012 (Gibler, 2009). This dataset serves as the primary source for the formal alliance IV, along with other archival, news, and government sources. The Philippines has far fewer formal alliances than BITs and BLAs. I located information for nine agreements, two of which are with the United States, resulting in eight unique dyads. Of those eight pairs, four also share BLAs. Seven agreements have been terminated leaving only two valid by the end of the sample period (United States, 1951; Jordan, 2018). The complete list is given in Table A3 in Appendix A, followed by variable measurement and source information in Table A4.

5 Results

The results of estimating Eq. (1) are presented in Table 2. The first column shows the OLS estimates, while columns 2 and 3 give the results of the IVs estimation. All three models include a time trend, country-fixed effects to control for unobserved heterogeneity between countries, and country-clustered standard errors to adjust for serial correlation. Column 3 includes interaction terms between the region dummies and the time trend, which further control for region-specific time shocks that may impact migration. Examples include the Middle Eastern oil boom of the 1970s and the Asian financial crisis of 1997.

The coefficient on the variable of interest, *BLA*, maintains the expected positive sign in all three models, but the magnitude increases by 140,000 migrants between models 1 and 3, after controlling for endogeneity. Reverse causality and omitted variable bias drive the underestimation in OLS, demonstrating the need for the IV approach. The coefficient on *BLA* is not statistically significant in any specification, indicating no evidence of a causal impact of BLAs on the migration of Filipinos.

When I include regional time trend interactions unemployment and government spending experience a change in sign from negative in Model 2 to positive in Model 3. These variables are likely affected by unmeasured differences across regions and time such as natural hazards, conflict, policy agendas, and party control. All other signs remain consistent across the models.

The coefficients on GDP per capita ratio and exports are positive and significant at 10% and 5%, respectively. These two explanatory variables are jointly significant at 5% ($p = 0.02$) demonstrating that economic conditions and relationship with the host countries matter to Filipino migrants. The coefficient on the GDP per capita ratio indicates that more OFWs are working in states with economies growing at a faster rate than the Philippines. In 2018, the Philippines GDP per capita fell in the bottom third of the global distribution with a value of \$3,103. Switzerland (\$82,839), Iraq (\$5,878), and Madagascar (\$461) represent high, medium,

⁶ The 1976 treaty with France was superseded by another in 1994. Five BITs have been signed but are not in force (Cambodia, Indonesia, Iran, Pakistan, and Sweden), and the agreement with Lao has been signed but I was unable to verify if it is in force, not in force, or terminated. For the abovementioned six agreements, the onset version of the variable is used for consistency with the rest of the treaties for this variable, which are valid through the end of the sample period.

Table 2 Effect of BLAs on the migrant stock of Filipinos in host countries

Variables	(1) OLS	(2) IV	(3) IV
BLA (real)	12,310 (29,626)	208,470 (249,204)	152,194 (261,107)
GDP Per Capita Ratio	13,079* (7,819)	14,242* (7,340)	13,917* (8,287)
Unemployment	51.45 (1,020)	-30.94 (1,151)	618.8 (927.9)
Government spending	-397.4 (915.5)	-438.3 (921.2)	24.88 (527.5)
Population (ln)	32,548 (19,992)	17,479 (17,182)	30,315 (18,487)
Imports (ln)	4,299* (2,268)	3,189 (2,532)	3,007 (1,852)
Exports (ln)	5,823** (2,646)	5,568* (3,015)	4,135** (1,999)
Polity scores difference	956.8 (1,654)	182.4 (2,377)	804.6 (2,645)
Year (time trend)	120.9 (593.3)	-191.5 (964.9)	-675.8 (1,432)
Euro Cen Asia*year			-11.40 (854.6)
Latin Am and Carib*year			-296.6 (1,214)
Mid East North Af*year			349.3 (800.5)
North America*year			15,662 (10,059)
South Asia*year			-235.7 (1,211)
Sub-Sah Africa*year			48.55 (1,331)
Observations	1,685	1,685	1,685
R ²	0.041		
Countries	213	213	213

Robust (country-clustered) standard errors in parentheses. All models include country-fixed effects and dummies for extrapolated variables.

*** $p < 0.01$, ** $p < 0.05$, * $p < 0.10$.

BLA, bilateral labor agreement; GDP, gross domestic product; IV, instrumental variable; OLS, ordinary least squares.

and low GDP per capita levels for the 2018 distribution. Dividing these countries' GDP per capita by that of the Philippines gives ratio values of 26.699 for Switzerland, 1.894 for Iraq, and 0.148 for Madagascar. Going from a poor economy like Madagascar to a medium-size economy like Iraq only increases the predicted number of OFWs by 1,779, which is 10% of the mean. Similarly, if a country moved to a Switzerland level from a medium-sized economy, the model suggests an 11.4% increase of OFWs. The GDP per capita ratio variable has an effect that is rather small in magnitude and is weakly significant.

The statistical significance of exports shows that migrants are likely to work in countries that receive Philippine goods. The lack of significance on imports suggests that a host country sending their goods to the Philippines does not have a causal link to migration. The coefficient suggests a 1% increase in exports corresponds to an increase of 41 migrants. For a tiny trading partner such as Palau, a 1% increase in exports is <20,000 dollars. A 1% increase for Singapore is 42 million dollars and 105 million dollars for the United States. All else equal, if a host country went from a Singapore level to US level they would experience a 250% increase in exports from the Philippines corresponding with 10,338 more OFWs. If a small nation like Palau increases its Philippine exports to a Singapore level, this change represents an approximate increase of 214,000% or nearly 9 million more migrant workers. Considering there are currently 2.2 million OFWs around the globe, the shift in exports is massive for small trading partners but less impactful for larger host countries.

5.1 Robustness checks

Results from a series of robustness checks are available in Appendix B. Using the *onset* version of the BLA indicator variable instead of the *real* version produces qualitatively similar results (See Table B1). The results are also robust to redefining the instruments for the IV estimation. The first model in Table B2 in Appendix B uses BIT as the only instrument for BLA. This specification is nearly identical to the main model (Table 2, Model 3); GDP per capita ratio and exports are still significant at 10% and 5%, respectively. The second model in Table B2 in Appendix B presents estimates when a formal alliance is the only instrument for BLA. There are no significant variables in this model and all the standard errors, except for unemployment, are inflated compared to the main model. For Model 3 of Table B2 in Appendix B, the instrument is a single dummy variable for either a BIT or a formal alliance. The coefficients and standard errors are relatively similar to the main model. GDP ratio and exports keep their significance and population becomes significant at 10%.

Allowing the difference in Polity2 scores to take on positive or negative values, rather than using the absolute value of this difference, changes the sign of the coefficient from negative to positive. The coefficient indicates that as the Polity score increases by one (becomes more democratic) there is an expected reduction of approximately 253 migrants. Labor demand, which is high in Middle Eastern countries that have low polity scores, likely drive this negative relationship rather than migrants seeking less democratic conditions. Redefining the polity variable leads to an unremarkable change in other coefficients. Finally, since government spending is part of GDP and unemployment is a percentage of the population, I conduct checks that remove the controls. Dropping them from the model independently or together leads to no change to signs or significance of the coefficients.

6 Conclusion

The BLA literature to date finds no effect of the agreements on migration (Chilton and Posner, 2018; Chilton and Woda, 2021; Peters, 2019). My identification strategy is novel and builds on the OLS, rare events logistic regressions, and event study analyses that precede it. I, too, find that there is not enough evidence to claim a causal effect of BLAs on the migration of Filipino workers. These methodological and empirical contributions further strengthen the grounds for this conclusion. The Philippine government should consider these new findings to determine if the policy instruments it is currently negotiating will produce desired results.

Readers should interpret these results keeping data limitations in mind. Despite techniques such as extrapolation, sparse migrant stock counts between 1960 and 1991 reduce statistical power. POEA in partnership with the Philippine Statistics Authority publishes the most consistent and reliable migrant stock counts beginning in 1992. Similarly, Chilton and Woda (2021) use newly hired deployment data as an alternative to capture this effect, but it is only available from 1992 to 2016, which suggests nothing about the agreements from 1968 to 1991. Furthermore, the Philippine government does not sign these treaties at random which prevents researchers from creating experimental or fully randomized study designs.

Despite the null results, one should not assume that BLAs are purely symbolic policies. Many scholars document that agreements are signed for various reasons not modeled here. More empirical research is needed to test other potential effects of these labor agreements such as improving working conditions, streamlining screening and predeparture training, encouraging repatriation and remittance sending, and receiving non-migration-related benefits. Efforts in these areas would constitute vital contributions to the scarce literature on BLAs. Until more quantitative and qualitative assessment is conducted, policymakers should remain skeptical that BLAs increase migration and call for further evaluation of these unique diplomatic tools.

Abbreviations

BIT, Bilateral Investment Treaty; BLA, Bilateral Labor Agreement; DOLE, Department of Labor and Employment; FDI, Foreign Direct Investment; GDP, Gross Domestic Product; IAA, Inter-Agency Agreement; ILO, International Labour Organization; IOM, International Organization for Migration; IV, Instrumental Variable; JPEPA, Japan-Philippines Economic Partnership Agreement; MOA, Memorandum of Agreement; MOU, Memorandum of Understanding; OECD, Organisation for Economic Co-operation and Development; OFW, Overseas Filipino Worker; OLS, Ordinary Least Squares; POEA, Philippines Overseas Employment Agency; SDG, Sustainable Development Goals; UN, United Nations; UNCITRAL, United Nations Commission on International Trade Laws.

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Appendix A: Bilateral Agreements

Table A1 Philippines BLAs chronologically

Country	Date signed	Country	Date signed
United States*	12/28/1968	New Zealand*	11/04/2008
Papua New Guinea	03/14/1979	Qatar*	10/18/2008
Libya	10/18/1979	Japan*	01/12/2009
Qatar	05/05/1981	South Korea	05/30/2009
Jordan	11/05/1981	South Korea	05/20/2009
Iraq*	11/25/1982	Canada*	09/21/2010
Liberia	08/10/1985	Jordan	05/27/2010
Jordan	11/03/1988	Taiwan*	07/26/2011
Northern Marianna Islands	09/19/1994	Canada*	05/19/2012
Kuwait	09/14/1997	Jordan	01/29/2012
Qatar*	05/10/1997	Kuwait*	03/23/2012
Taiwan*	09/03/1999	Lebanon*	02/01/2012
Northern Mariana Islands*	12/18/2000	Lebanon*	02/01/2012
Norway	06/26/2001	Canada*	10/07/2013
Taiwan	01/12/2001	Germany*	03/19/2013
Switzerland*	07/09/2002	Papua New Guinea*	11/26/2013
United Kingdom	01/08/2002	Saudi Arabia*	05/19/2013
Bahrain*	12/15/2003	South Korea	04/08/2014
Indonesia*	01/18/2003	Switzerland	11/14/2014
Taiwan	03/20/2003	Canada*	05/08/2015
United Kingdom*	07/30/2003	Canada*	05/09/2015
South Korea	04/23/2004	Italy*	05/09/2015
Lao*	07/27/2005	Taiwan	08/03/2015
Saudi Arabia*	10/21/2005	New Zealand*	09/19/2015
South Korea	12/15/2005	Cambodia*	12/14/2016
Canada	12/18/2006	Japan*	11/21/2017
Libya*	07/17/2006	South Korea*	2017
Japan	09/09/2006	Saudi Arabia*	04/11/2017
South Korea	10/20/2006	United Arab Emirates*	09/12/2017
Spain*	06/25/2006	United Arab Emirates*	09/12/2017
Bahrain*	04/04/2007	China*	04/10/2018
United Arab Emirates	04/09/2007	Israel*	09/03/2018
Canada	01/29/2008	Israel*	09/03/2018
Canada	02/08/2008	Jordan*	09/06/2018
Canada	10/01/2008	Jordan*	09/06/2018
		Kuwait*	05/11/2018

*BLA is still valid.

BLA, bilateral labor agreement.

Table A2 BITs with the Philippines

Country	Date signed	Country	Date signed
Argentina	09/20/1999	Lao*	06/08/2007
Australia	01/25/1995	Mongolia	09/01/2000
Austria	04/11/2002	Myanmar	02/17/1998
Bahrain*	11/07/2001	Netherlands	02/27/1985
Bangladesh	09/08/1997	Pakistan	05/11/1999
Belgium-Luxembourg	01/14/1998	Portugal	11/08/2002
Cambodia*	08/16/2000	Romania	05/18/1994
Canada*	11/09/1995	Russia	09/12/1997
Chile	11/20/1995	Saudi Arabia*	10/18/1994
China*	07/20/1992	South Korea*	04/07/1994
Czech Republic	04/05/1995	Spain*	10/19/1993
Denmark	09/26/1997	Sweden	08/17/1999
Finland	03/25/1998	Switzerland*	03/31/1997
France	06/14/1976	Syria	11/25/2009
	09/13/1994		
Germany*	03/03/1964	Taiwan*	02/28/1992
	04/18/1997		
India	01/28/2000	Thailand	09/30/1995
Indonesia*	11/12/2001	Turkey	02/22/1999
Iran	10/08/1995	United Kingdom*	12/03/1980
Italy*	06/17/1988	Vietnam	02/27/1992
Kuwait*	12/03/2000		

*BLA with this country.

BITs, bilateral investment treaties; BLA, bilateral labor agreement.

Table A3 Formal alliances with the Philippines

Country	Start year	End year
Australia	1954	1977
France	1954	1974
Jordan*	2018	Still valid
New Zealand*	1954	1977
Pakistan	1954	1972
Thailand	1954	1977
United Kingdom*	1954	1977
United States*	1951	Still valid
United States	1954	1977

*BLA with this country.

BLA, bilateral labor agreement.

Table A4 Variables

Variables	Form	Source
<i>Independent</i>		
BLA	Dummy	Mangulabnan and Daquio (2019)
<i>Dependent</i>		
Migrant Stock	# of persons	Philippine Overseas Employment Agency and Global Bilateral Migration Database
<i>Instruments</i>		
BIT	Dummy	ICSID and UNCTAD databases
Formal alliance	Dummy	Correlates of War Project database
<i>Controls</i>		
GDP pc host	Current USD, ln	World Development Indicators
GDP pc Phil.	Current USD, ln	World Development Indicators
GDP pc ratio	Natural log ratio ln(host/Ph)	
Unemployment	% of total labor force (national ests.)	World Development Indicators
Gov. spending	% of GDP	World Development Indicators
Population host	# of persons, ln	World Development Indicators
Population Phil.	# of persons, ln	World Development Indicators
Imports	USD millions, ln	International Monetary Fund
Exports	USD millions, ln	International Monetary Fund
Polity2 Host	Polity 2 score	Center for Systemic Peace
Polity2 Source	Polity 2 score	Center for Systemic Peace
Polity2 Difference	Absolute difference	

BLA, bilateral labor agreement; GDP, gross domestic product.

Appendix B: Robustness Checks

Table B1 Effect of BLA-onset on the migrant stock of Filipinos in host countries

Variables	(1) OLS	(2) IV	(3) IV
BLA (onset)	13,671 (30,270)	225,161 (270,067)	174,313 (302,610)
GDP Per Capita Ratio	13,216 (8,064)	16,480** (7,097)	15,976* (8,251)
Unemployment	55.63 (1,013)	40.25 (1,169)	665.4 (915.9)
Government spending	-379.9 (884.7)	-148.9 (1,182)	244.9 (826.7)
Population (ln)	32,137 (20,422)	11,162 (19,903)	26,298 (22,172)
Imports (ln)	4,303* (2,281)	3,291 (2,508)	3,179 (1,958)
Exports (ln)	5,841** (2,673)	5,864** (2,903)	4,458** (2,048)
Polity scores difference	987.7 (1,712)	713.8 (2,193)	1,076 (2,427)
Year (time trend)	110.3 (577.6)	-356.1 (1,140)	-880.7 (1,782)
Euro Cen Asia*year			-58.25 (814.8)
Latin Am and Carib*year			-153.1 (1,462)
Mid East North Af*year			62.91 (923.5)
North America*year			15,644 (10,044)
South Asia*year			-39.98 (1,546)
Sub-Sah Africa*year			170.9 (1,558)
Observations	1,685	1,685	1,685
R ²	0.04		
Countries	213	213	213

Robust (country-clustered) standard errors in parentheses. All models include country-fixed effects and dummies for extrapolated variables.

*** $p < 0.01$, ** $p < 0.05$, * $p < 0.10$.

BLA, bilateral labor agreement; GDP, gross domestic product; IV, instrumental variable; OLS, ordinary least squares.

Table B2 Single instrument checks for the effect of BLA on migrant stock

Variables	(1) BIT	(2) Alliance	(3) BIT and alliance
BLA (real)	152,011 (279,322)	154,929 (462,103)	152,229 (257,964)
GDP Per Capita Ratio	13,915* (8,121)	13,949 (12,286)	13,917* (8,322)
Unemployment	618.9 (935.3)	616.7 (903.1)	618.7 (926.5)
Government spending	25.02 (518.4)	22.65 (783.9)	24.85 (529.4)
Population (ln)	30,322 (18,958)	30,215 (21,685)	30,314* (18,404)
Imports (ln)	3,007 (1,875)	3,000 (1,941)	3,007 (1,847)
Exports (ln)	4,134** (1,976)	4,144 (2,935)	4,135** (2,004)
Polity scores difference	805.6 (2,733)	789.4 (2,971)	804.4 (2,629)
Year (time trend)	-674.9 (1,515)	-689.7 (2,440)	-676.0 (1,418)
Euro Cen Asia*year	-11.92 (904.8)	-3.602 (1,334)	-11.30 (845.8)
Latin Am and Carib*year	-297.4 (1,301)	-284.2 (2,037)	-296.5 (1,198)
Mid East North Af*year	349.7 (802.2)	343.4 (1,400)	349.2 (800.9)
North America*year	15,663 (10,098)	15,653 (9,595)	15,662 (10,051)
South Asia*year	-236.5 (1,295)	-223.3 (2,069)	-235.5 (1,196)
Sub-Sah Africa*year	47.64 (1,421)	62.25 (2,323)	48.73 (1,316)
Observations	1,685	1,685	1,685
Countries	213	213	213

Robust (country-clustered) standard errors in parentheses. All models include country-fixed effects and dummies for extrapolated variables.

*** $p < 0.01$, ** $p < 0.05$, * $p < 0.10$.

BLA, bilateral labor agreement; GDP, gross domestic product.

Table B3 First Stage results for final models

Variables	(2)	(3)
BIT	0.1394*** (0.0223)	0.117*** (0.2227)
Alliance	0.0944 (0.0576)	0.0966* (0.0569)
GDP Per Capita Ratio	−0.0065 (0.0112)	−0.0118 (0.011)
Unemployment	−0.0005 (0.0026)	−0.00002 (0.0026)
Government spending	0.0004 (0.0013)	0.0009 (0.0012)
Population (ln)	0.0893*** (0.0212)	0.0442 (0.0268)
Imports (ln)	0.0029 (0.0036)	0.0004 (0.0035)
Exports (ln)	−0.0015 (0.0038)	−0.0053 (0.0038)
Polity scores difference	0.003 (0.0029)	0.0046 (0.0029)
Year (time trend)	0.0008 (0.0007)	0.0044*** 0.0009
Euro Cen Asia*year		−0.003*** (0.0009)
Latin Am and Carib*year		−0.0041*** (0.0009)
Mid East North Af*year		0.0019* (0.0011)
North America*year		0.0027 (0.0021)
South Asia*year		−0.0048** (0.0016)
Sub-Sah Africa*year		−0.0047*** (0.0009)
Observations	1,685	1,685
Countries	213	213
F Statistic	19.77***	14.35***

Standard errors in parentheses. All models include country-fixed effects and dummies for extrapolated variables.

*** $p < 0.01$, ** $p < 0.05$, * $p < 0.10$.

GDP, gross domestic product.