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A Crook is a Crook ... But is He Still a Crook Abroad? On the Effect of Immigration on Destination-Country Corruption

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A Crook is a Crook ... But is He Still a Crook Abroad? On the Effect of Immigration on Destination-Country Corruption

Abstract

This paper analyzes the impact of migration on destination-country corruption levels. Capitalizing on a comprehensive dataset consisting of annual immigration stocks of OECD countries from 207 countries of origin for the period 1984-2008, we explore different channels through which corruption might migrate. We employ different estimation methods using Fixed Effects (FE) and Tobit regressions in order to validate our findings. Moreover, we also address the issue of endogeneity by using the Difference-Generalized Method of Moments (GMM) estimator. Independent of the econometric methodology, we consistently find that while general migration has an insignificant effect on the destination country's corruption level, immigration from corruption-ridden origin countries boosts corruption in the destination country. Our findings provide a more profound understanding of the socio-economic implications associated with migration flows.

JEL-Code: D730, F220, O150.

Keywords: corruption, migration, impact of migration.

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1. Introduction

Among the countries with the highest level of corruption (according to the International Country Risk Guide), several countries exhibit substantial numbers of emigrants. One may speculate that persistent corruption in a country makes corrupt behavior a general attitude among citizens, and emigrants from a corruption-ridden country may carry some of this attitude to their destination countries. That is, once substantial inflows of migrants from more corrupt countries into less corrupt countries is observed, will we see – sooner or later – increasing levels of corruption in the destination countries as well? Or, rather, will we see no significant (or even an opposite) effect on destination countries' levels of corruption because it is mostly honest citizens that flee their corrupted home countries? Given these contrasting views, the ultimate impact of migration flows on the destination country's corruption is not immediately obvious. It will thus be the present paper's aim to investigate the underlying effects in detail, and segregate them in distinct channels through which corruption may migrate and thus possibly exert adverse effects on the targeted society in the short and medium term. To date, this specific topic has yet not been examined in the existing literature, but in related literature, addressed in this paper.

Anecdotal evidence from several branches of organized crime exemplifies the problem under consideration. In the late 19th century, thousands of members of the Cosa Nostra migrated from Sicily to the United States, where they started their criminal activities. While in the beginning they resorted to petty crime, institutional shifts in U.S. public policies allowed them to establish a powerful Mafia organization exerting various forms of criminal activities including all levels of corrupt behavior (from petty corruption to grand corruption) (cf. Varese, 2011).

In 1980, the Mariel boatlift became infamous for Fidel Castro forcing boat owners who were allowed to bring relatives from Cuba to the U.S. to also carry back prisoners of Cuban jails.

Consequently, many of the 125,000 refugees that landed in Florida had a criminal record (cf. Larzelere, 1988), arguably affecting criminal and corrupt behavior in Florida. At the same time, the civil war in Lebanon in the 1980s made thousands of members of the Miri-Clan flee the country and head toward Europe. They settled mainly in larger German towns, where they soon became involved in criminal activities, allegedly including drug and arms trafficking, kidnapping and prostitution (cf. Albrecht, 1997). Similarly, mainly driven by contrasting attitudes and behavior patterns, Chinese immigration to Thailand and Indonesia triggered criminal activities over the last decades. In particular, the combination of severe government regulation and ethnic discrimination compelled overseas Chinese to turn to both ad hoc bribery and more sophisticated economic relations with government officials, precipitating a discernible acceleration of criminal behavior in the post-World War II era (cf. Sowell, 1997).

In fact, the fear that domestic criminal activities and corruption might skyrocket due to generous immigration policies recently entered the international arena, when the G20 agreed to immigration control measures proposed by the Anti-Corruption Working Group targeting specifically corrupt immigrants and the proceeds of crime imported into the G20 countries. These measures even include the deportation of wealthy foreign nationals (cf. De Palma et al., 2013).

The previous examples point at two different issues which require closer inspection. First, the channels through which corruption might migrate, and second, the impact that (selective) migration has on the development of corruption in the destination country. Our paper's aim is to shed light on both these issues. However, there is a third issue, namely endogeneity, which needs to be considered. Our previous reasoning implicitly assumes that destination-countries' levels of corruption change as a consequence of inflows of migrants. While this appears plausible given the presented evidence, we cannot entirely exclude the possibility that migration flows are shaped by the levels of corruption in the destination country. For instance, corrupt (honest) migrants might have a preference for living in a corrupt (non-corrupt) environment

both at home and abroad. If this kind of reverse causality (or other endogeneity problems) apply, statistical inference would be misleading. Hence, we include appropriate empirical strategies (in particular, a Difference-GMM approach) to exclude this possibility.

Our paper will proceed as follows: Section 2 will elaborate on the theoretical assumptions underlying the migration process and derive hypotheses on the migration-corruption nexus. Our empirical method will be explained in Section 3, while our data will be presented in Section 4. Our hypotheses will be empirically tested and discussed in Section 5. We conclude in Section 6.

2. Theoretical Considerations

There are many reasons why individuals may want to leave their home countries and move abroad. In his seminal paper, Sjaastad (1962) condenses the individual migration decision to a meaningful cost-benefit calculus. Both economic and non-economic costs⁴ and benefits⁵ need to be taken into account. More specifically, we may apply the following categorization which distinguishes between *push* and *pull factors* affecting migration decisions.⁶ On the one hand, better career and income prospects are typical pull factors which attract migrants to come to a certain destination country. On the other hand, unfavorable conditions at home, such as poverty or unemployment, constitute push factors which make people want to leave. However, these examples are purely economic ones. A number of recent publications have shown that politico-institutional factors (and sometimes environmental factors, cf., e.g., Gröschl, 2012) also affect potential migrants' cost-benefit matrices. Of particular relevance for our approach are papers which relate a weak institutional framework to migration flows. For instance, civil

⁴ These costs include, e.g., the actual moving costs as well as (psychological) costs related to giving up social relations or a devaluation of location-specific human capital.

⁵ Here, we refer to, inter alia, higher incomes as well as gaining personal freedoms.

⁶ Cf. Zimmermann (1996) for a detailed description of the push-pull model of migration, including a discussion of a variety of these factors.

war tends to foster emigration (cf., e.g., Collier and Hoeffler, 2004) and migrants might harbor more conflictive attitudes than locals after war (Hall, forthcoming, p. 2).

Similarly, Dreher et al. (2011) show that people tend to leave terror-ridden countries. Dimant et al. (2013) and Cooray and Schneider (2014) explicitly consider the effect of corruption on migration, showing that a high level of corruption drives people out of the country. Interestingly, these authors also argue that skilled people are particularly prone to emigrate because terror and corruption make it difficult to recoup the often substantial investments into one's own education, and to earn an adequate return on this investment. We will return to this argument shortly.

Let us first turn to the important question why we would (or would not) expect migration to affect the level of corruption in the destination country. At first glance, there appear to be several arguments why there ought to be no such effect. Firstly, migrants tend to assimilate (at least) in economic terms – although at different speeds – in the target country (cf. Chiswick, 1978). One may also reasonably speculate that this is true in even more general terms, for example, assimilation might occur on a wide range of individual behaviors.⁷ Hence, even if immigrants stem from a highly corrupted country, once they enter the less corrupted destination country they might very well start to follow the rules, and align themselves to the existing norms of the destination country. This leads us to our first hypothesis:

Hypothesis H1: *The general effect of immigration on the host country's level of corruption is insignificant.*

Contrary to this view, the effect of selective migration could be traceable, thus allowing the destination-countries' corruption levels to change with immigration, thereby allowing for effects in either direction. To begin, emigrants from a highly corrupted country may represent a positive selection. Selection effects have played a prominent role in the migration literature

⁷ This is, e.g., well established for the case of fertility (cf., e.g., Mayer and Riphahn, 2000).

since Borjas' (1987) seminal paper. Self-selection into specific countries occurs because migrants with certain characteristics expect these traits to generate utility gains abroad.⁸ In this context, Krieger et al. (2014) show that cultural closeness matters to the self-selection of migrants, suggesting that a wide range of factors, including cultural, political and institutional factors, are indicative of explaining migration flows. With respect to our model, Dimant et al. (2013) raise the important point that the reason for brain drain from a corrupted country might be that skilled workers could be outsiders to the labor market due to inherent systemic frictions. Although highly productive, these workers do not find employment because of corruption and nepotism. Jobs are given to insiders irrespective of their qualification, for example, to those who are either close to the employer, or who have sufficient funds to bribe them. Here, frustrations with existing institutions are important drivers to migrant self-selection.

What is more, when (skilled) outsiders leave a country there ought to be a high probability that they are (far) less corruptible than the average citizens of this country when nepotism (from which they do not benefit) prevails. In fact, they might even be less corruptible than the average person in the destination country. This would imply a decreasing level of corruption after immigration took place.⁹

Finally, the behavior of the target country's population and the country's institutional setting matter. Even if immigrants are highly corrupt and remain so over time, the target country's population may simply ignore immigrants' efforts to bribe them. If then the native population approaches immigrants for goods, services, or other things which might require bribing the immigrants, there is arguably no reason to expect that immigration will have a relevant effect

⁸ For instance, people with high individual ability may prefer to enter countries with a less equal income distribution as at home because they expect to end up with a high probability at the upper end of the more dispersed income scale due to their skills.

⁹ Clark et al. (2014) find that a higher stock of migrants coming from non-OECD countries leads to an improvement of institutional quality in a set of 110 countries. Zhang (2014) finds that, over time, migration leads to a decrease in property crime rates in Canada.

on the level of corruption in the host country. Consequently, one could be more inclined to believe that corruption is relatively invariant against migration.

However, the previous reasoning might be challenged on several grounds. First, corrupt countries often experience large outflows of migrants. Corruption is often accompanied by a large set of unfavorable outcomes such as poverty, inequality, unemployment, a rise of the shadow economy, adverse effects on economic growth, abolishment of social values and norms and the like (cf. Tanzi, 1998; for a comprehensive overview, cf. Dimant, 2014). These negative conditions typically constitute push factors of migration, not only for a small positive selection of honest people, but also to the corruptible average individual. Our anecdotal evidence points in this direction.

Second, the assimilation assumption might be difficult to justify if persistent cultural and social beliefs prevail. Corruption in a country might be the outcome of the (historical) development of institutions, policies, and markets. If, in the evolution of this institutional setting, corrupt behavior has become a cultural norm and belief, it will be internal to the individual. When individuals migrate, their beliefs and values can be expected to move with them, although their external (corrupt) environment remains behind (cf. Alesina et al., 2013). This argument is in line with a wide range of scholarly work. Capitalizing on a unique data set that includes the parking behavior of United Nations officials in Manhattan, Fisman and Miguel (2002) find that corruption levels in the diplomats' home countries are strongly related to their parking violations in Manhattan. Their results indicate that inherent norms related to corruption are deeply entrenched within the people's mindset. Bilodeau (2014) finds that the immigrants' relationship with their destination country's politics are substantially affected by the political environment in their home country, thus sustainably imprinting their personal attitudes. Along these lines, Helliwell et al. (2014) also find support for the footprint effect of trust levels, which are of high relevance in the corruption context (cf. Rothstein and Eek, 2009; Bjørnskov, 2011). Their results suggest that migrants from low-trust environments car-

ry over their trust-attitudes to their destination countries in a much more pronounced way than migrants from high-trust environments, indicating an asymmetric interrelation between migration and stickiness of norms (see also Uslaner, 2008). Consequently, value assimilation becomes unlikely in the short-run, and corrupt behavior remains persistent.

Third, as Varese (2011) notes, successful criminal behavior in a new and unknown environment does not only require a criminal mind, but also an opportunity. It might take some time after entering the destination country to comprehensively adapt to the new environment, and to find ways and means for successful corruption. If immigrants show persistent corruption attitudes, the full effect of immigrants' corrupt behavior may become visible in the target country only after some period of time. This leads us to our next hypothesis.

***Hypothesis H2:** The effect on the destination country's level of corruption, related to immigration from a more corrupt sending country to a less corrupt destination country, is positive. However, it might take some time before the effect becomes noticeable.*

In the following section, we will test our hypotheses to investigate which effects dominate. Beforehand, a caveat is in order. Endogeneity is a widely acknowledged issue in empirical corruption research.¹⁰ As is generally true for empirical panel data research, a correlation exposes a general coherence rather than rendering a clear causal relationship. In our case, corruption could potentially be both the antecedent and the effect of other factors. As already indicated above, Dimant et al. (2013) and Cooray and Schneider (2014) show reverse causality between migration and corruption, finding that excessive corruption decisively impacts migration flows. Hence, immigration might very well leave a corrupt footprint in the destination country because of (self-) selection effects. If, for instance, an honest outsider decides to

¹⁰ For example, the literature indicates that the relationship between corruption and economic growth also holds in the reverse direction (cf. Dreher and Gassebner, 2013, supporting the 'greasing-the-wheels' hypothesis, and Meon and Sekkat, 2005, supporting the 'sanding-the-wheels' hypothesis).

leave a corrupt country it is unlikely that he/she will (voluntarily) choose an equally corrupt destination. That is, the level of corruption in the destination country might be a relevant effect shaping migration flows. Evidently, it is important to control for endogeneity as the results might potentially suffer from a reverse-causality bias. Our approach of how to address this problem will be presented in the following section.

3. Empirical Analysis

3.1 The empirical model

Based on the previous theoretical considerations, the discussion in this and the following section aims at testing the hypotheses developed in Section 2. Our starting point is a panel model of the form,

$$corruption_{it} = \alpha + \phi migration_{it-q} + \beta X'_{it-1} + \eta_i + \varepsilon_{it}$$

where $corruption_{it}$ is the level of corruption in country i and year t , $migration_{it-q}$ is the total migration stock with a time lag q , X'_{it-1} is a conditioning set of lagged control variables and the disturbance term is composed of the individual effect η_i and the stochastic disturbance ε_{it} which is assumed to be generated by a white noise process. This specification allows testing the general effect of migration on corruption according to hypothesis $H1$.

Since we assume the migration variable to have a time-shift effect on corruption, we let the independent variable of interest enter the model with a time lag q , which may take values from one to five if, for example, the maximum lag is five years. This lag structure allows us to differentiate between immediate and delayed effects. Additionally, lagging the independent variable of interest dampens the problem of a possible endogenous relationship between corruption and migration by eliminating the correlation between the explanatory variables and the error term. We report the Akaike Information Criterion (AIC) and Bayesian Information

Criterion (BIC) to allow for a comparison of the model fit of the alternative lag selections.¹¹ Assuming control variables also do not have an immediate effect in the same period, all other controls enter the model with a lag of $t-1$. We provide results for fixed-effects panel regressions that allow us to account for country-specific effects.

Furthermore, we explore the effect of immigration from highly corrupt countries on the corruption level of the target countries according to hypothesis $H2$. This is tested by regressing the total migration stock from countries that exhibit a corruption level which is higher than the total average over all 207 countries of migration origin on the corruption level of the destination country, so that we can test if a higher migration stock from more than proportionally corrupt countries drives the corruption level in the destination country.

3.2 Dealing with potential endogeneity

We account for potential endogeneity by applying a Difference General Method of Moments (Difference-GMM) estimation in order to exclude results that might be driven by the underlying econometric approach, and thus do not allow for statistically reliable inference. The dynamic GMM approach developed by Arellano and Bond (1991) appears as an appropriate approach, as it allows calculating consistent and efficient estimates by using lagged levels dated in period $t-2$ and earlier as instruments. The corresponding moment condition can be checked using the Sargan statistic that tests the validity of the instruments.

In following Arellano and Bond (1991), we provide results for Difference-GMM estimations. In general, the results are in line with the estimations presented before. An alternative estimation proposed by Arellano and Bover (1995) and Blundell and Bond (1998) is the System-GMM approach, which performs well with highly persistent data under mild assumptions.

¹¹ Plümper et al. (2005) illustrate that in fixed-effects models the lag structure of the independent variable has a large impact on the coefficient and the level of significance. They argue that there is no generally accepted indicator for the determination of the length of the lag, however, there are several candidates like the t -statistic, the R^2 , the AIC (Akaike Information Criterion) and the BIC (Bayesian Information Criterion) that facilitate the choice.

However, there is an important point to be made about using System-GMM. Given that System-GMM uses more instruments than the Difference-GMM, it may not be appropriate to use System-GMM with a dataset that consists of a small number of countries. In this case, this method is likely to exhibit a finite sample bias as the number of instruments increases exponentially with the number of periods used. As argued by Roodman (2009), such an over fitting of endogenous variables is likely to lead to false positive results. In addition, the assumption of lagged control variables being exogenous to the error term is non-trivial. For this reason we resort to the Difference-GMM approach, as the ratio of countries and time periods used in our panel is well balanced, thus ruling out a potential small sample bias (cf. Alonso-Borrego and Arellano, 1999).¹²

4. Data

4.1 Dependent Variable

We use the cross-national corruption rating from the International Country Risk Guide (ICRG). It relies on the subjective assessment of country experts typically operating within international non-governmental organizations. As a component of the political rights index, it is concerned with actual or potential corruption in the form of excessive patronage, nepotism, job reservations, 'favor-for-favors', secret party funding, and suspiciously close ties between politics and business.¹³ Originally, the value of the index ranges from 0 to 6, with 0 indicating a high level of corruption and 6 representing a low level. We transpose the scale to simplify the interpretation of the results so that higher values of the index indicate a higher extent of corruption. The main advantage of this index is that it is available annually for a large sample of countries beginning in the early 1980s, and so enables us to analyze the corruption-

¹² To check the robustness of the model specification, we also run all regressions using the System-GMM. The results support our main findings. However, the rule of thumb – to keep the number of instruments less than or equal to the number of groups – cannot be met. Even if only the second lag is used as an instrument for the System-GMM the number of instruments exceeds the number of countries. The results are available upon request.

¹³ http://www.prsgroup.com/ICRG_Methodology.aspx.

migration nexus within a panel framework.¹⁴ The summary statistics can be found in the Appendix Table A1.

4.2 Main Independent Variable of Interest

Our main independent variable is immigration (*migration*). We use the OECD International Migration Database which provides annual series on migration flows and stocks into OECD countries from 207 countries of origin for the period 1975-2011. The major advantage of this data set is that it provides bilateral data and so allows distinguishing between countries of destination and countries of origin, allowing us not only to analyze the general effect of migration on corruption but also to group source countries according to their level of corruption. We weigh migration by the respective destination country's population in thousands in order to account for the inherent population size heterogeneity across the OECD countries. Since different countries use different definitions of immigration¹⁵ and different sources for their migration statistics, the OECD database offers both data on immigrants by nationality and on immigrants by country of birth.

Especially in the case of the migration stock variable, the differences in the definition play an important role and must be considered. The “country of birth” approach takes into account all foreign-born population, for example, the first generation of immigrants, including immigrants that have obtained citizenship. The “nationality” approach includes second and higher generations of foreigners, but does not cover naturalized citizens. Thus, the nature of the countries' legislation on citizenship and naturalization plays a role (Pedersen et al., 2008). We use the immigrants stock by “nationality” variable for three reasons. First, this variable is

¹⁴ Other common corruption measures like the Corruption Perceptions Index (CPI) constructed by Transparency International or the Control of Corruption Rating published by the World Bank are available only from 1995 and 1996, respectively. Svensson (2005) and Treisman (2007) show that all three measures are highly correlated.

¹⁵ Countries like Australia, Canada, the Netherlands, New Zealand, Poland, the Slovak Republic and the United States define an “immigrant” by country of origin or country of birth, while some countries like Austria, the Czech Republic, Denmark, Finland, Greece, Iceland, Italy, Norway and Sweden define an immigrant by citizenship and finally some countries like Belgium, France, Hungary, Germany, Japan, Luxembourg, Portugal, Spain, Switzerland and the United Kingdom rely on self-reported nationality (Pedersen et al., 2008).

available for more country-time observations than the immigration stock by “country of birth”, thus allowing for more meaningful estimations. Second, we act on the assumption that naturalized citizens should be put on an equal footing with the domestic population as it is reasonable to assume that the naturalized citizens’ magnitude of assimilation is well advanced. Third (and closely connected to the previous argument), our hypothesis *H2* takes the assimilation process into consideration assuming that the full effect of immigration on destination country corruption occurs only after some time. The “nationality” approach takes up this time dimension more naturally.

4.3 Control Variables

To avoid spurious relationships between the dependent variable and the independent variable of interest, we employ a set of control variables commonly identified as potential determinants of corruption. In our baseline specification we control, first, for the impact of *economic development* measured by (logged) real per capita income (*GDP p.c.*). It is a commonly-used variable to explain corruption. The theoretical argument stresses that economic development fosters higher institutional quality, which in turn will provide fewer breeding grounds for corruption via implementation of more sophisticated anti-corruption measures. A higher chance of identification and punishment of corruption will increase the expected costs, and crowd out incentives to engage in deviant behavior (cf. Serra, 2006). Along these lines, several empirical studies find a robust negative correlation between economic development and perceived corruption, suggesting that poorer countries exhibit higher corruption rates (cf. La Porta et al., 1999; Serra, 2006; Treisman, 2007). However, panel studies based on fixed-effect estimation by Braun and Di Tella (2004) find that an increase in a country’s wealth measured by GDP per capita also increases corruption. A potential explanation for a positive nexus between growth and corruption is provided by Kindleberger (2000). He argues that moral standards vanish in times of economic booms due to a more pronounced manifestation of greed, eventually undermining the individual’s disposition to obey the law. Overall, we follow the empiri-

cally settled mainstream argument and expect that more developed countries (in terms of GDP per capita) experience lower rates of corruption.

We also account for the effect of *population size* on corruption. From the theoretical perspective, Knack and Azfar (2003) suggest that larger polities may benefit from economies of scale in establishing political and administrative structures, so that a large country size might be negatively correlated with corruption. On the other hand, small countries may benefit from higher manageability, and more efficiency and transparency in administrative management, leading to a positive correlation between population size and corruption. Empirical evidence shows mixed results. For one, Knack and Azfar (2003) show that there is indeed no clear relationship between country size and corruption and that existing results suffer from selection bias. On the other hand, a cross-country study by Tavares (2003) shows a negative impact of population on corruption, while Root (1999) finds that a larger population is significantly associated with more corruption indicating that smaller countries are less corrupt than larger countries. We follow the majority of existing evidence and assume that population size and extent of corruption go hand in hand, due to a higher number of potential bribers and bribees and issues of effective monitoring, which are likely to be more extensive with a growing population size.

Ali and Isse (2003) argue that a large government sector (*government size*) may create opportunities for corruption. The larger the size and scope of the bureaucracy, the more likely it is to find corrupt behavior. On the contrary, Goel and Nelson (2010) indicate that government size might be inversely related to a country's corruption level. Not a large public sector per se determines the magnitude of corrupt activity, but larger governments might in fact devote a higher share of public spending to operative law enforcement aimed at deterring deviant behavior (cf. Fisman and Gatti, 2002; Goel and Nelson, 2005).¹⁶ Although not explicitly tested

¹⁶ However, it is worth noting that parts of the existing literature also point at a different relationship between government sector and corruption. Corrupt governments may impose detrimental effects on public goods deliv-

for a subset of OECD countries, we follow the majority of existing empirical evidence and expect a large government sector to have a negative impact on a country's corruption level.

Furthermore, we control for *democracy*, which is found to be highly relevant in existing theoretical and empirical research on corruption. In general, both strands of research indicate that more democratic countries tend to be less corrupt (e.g., Knack and Azfar, 2003; Braun and Di Tella, 2004; Kunicová and Rose-Ackerman, 2005; Shen and Williamson, 2005). From a theoretical perspective, Shen and Williamson (2005) contend that states with democratic governments are likely to have more sophisticated policies and legal institutions that are more likely to be independent of the elites' impairment. Seldadyo and de Haan (2006) argue that political liberty imposes transparency and provides checks and balances within the political system and so tends to reduce corruption. Kunicová and Rose-Ackerman (2005) suggest that electoral rules and political structures can influence the level of corruption. Political participation, political competition, and constraints on the chief executive make it easier to monitor the political system and limit political corruption.¹⁷ Overall, since both theory and empirics resonate with each other, we would expect a negative impact of democracy on corruption.

In addition, existing research acknowledges the important link between *economic freedom* and corruption. From a theoretical perspective, one can argue that, especially in modern economies, many restrictions on economic freedom – in particular restrictions of capital and financial markets – provide opportunities for corruption (cf. Graeff and Mehlkop, 2003). This notion is strongly supported by the empirical literature. Goel and Nelson (2005) find a strong negative relationship between economic freedom and corruption, where the relationship depends on a country's level of development. Paldam (2002) presents similar results suggesting

ery, weaken the tax morale and the bureaucratic quality whose functional interaction, *ceteris paribus*, likely leads to a smaller government sector (cf. Johnson et al., 1997; Hall and Jones, 1999; Frey and Torgler, 2007; Tanzi, 2013).

¹⁷ Treisman (2007) indicates that the relationship between democracy and corruption might be more complex, suggesting that democratization increases corruption in the short run and reduces it as democracy deepens. However, the composition of our data does not allow us to examine long-run effects of controls such as democratization. Thus, we resort to a short-run examination of the control's impact on corruption.

that countries with high regulation and little economic freedom have a larger potential for rent seeking, resulting in higher levels of corruption. Supportive results of a negative relationship between economic freedom and corruption are also found by Ali and Isse (2003), and Kunicová and Rose-Ackerman (2005). We expect that more economic freedom and fewer restrictions imposed on trade are inversely correlated with a country's corruption level. We measure economic freedom by the investment profile variable of the ICRG, arguing that a high investment risk accompanies lower economic freedom.¹⁸

Finally, *religion* may also matter for explaining corruption. Religion is believed to play a decisive role in affecting corruption levels through its inherent heterogeneity in putting emphasis on moral values, honesty, and being in thrall to authority. Consequently, religious structures that are more hierarchical are believed to be more conducive to the inception and development of corrupt structures (cf. Paldam, 2001). Empirical research finds that countries with a predominantly protestant population tend to have lower corruption levels, while more hierarchically structured religions (such as Catholicism, Eastern Orthodoxy and Islam) tend to increase corruption (cf. La Porta, 1999). We follow Blomberg and Hess (2008) in using religious tensions as a control in order to get an impression whether a dominant role of a specific religious group, and the suppression of religious freedom, has an effect on the level of corruption. The argument is that a dominant religion in a country creates differential access to power, leading to a situation in which less powerful religious groups resort to corruption for leveling the political and economic landscape.

A set of variables do not enter our baseline model, in particular economic growth, trade openness, internal and external conflicts, and regime stability. Rather, they are used to assess the robustness of our findings. The first of these variables is *economic growth* (in addition to the level of development). Ali and Isse (2003) argue that if countries with lower corruption levels

¹⁸ As an alternative, we also employed the "Economic Freedom" index provided by the Fraser Institute (Gwartney and Lawson, 2008). The results (based on a significantly smaller data set) support our main findings and are available upon request.

grew faster, this positive experience ought to give way to a stricter fight against corruption in the future. That is, economic growth should be negatively correlated with future corruption. However, the empirical evidence on this argument is mixed. While Leite and Weidmann (1999) find that GDP growth has a dampening effect on country level corruption, Berdiev et al. (2013) find the opposite effect. However, for the subset of OECD countries (in which we are interested in) their results remain insignificant. Furthermore, other studies find no significant effect at all (cf. Mauro, 1995, Brunetti et al., 1997, Ali and Isse, 2003). Consequently, due to the focus on the same subset of countries, we expect our results to be in line with Berdiev et al. (2013) for their subset of OECD countries and expect no significant effect in either direction of GDP growth on corruption levels.

We furthermore assess the impact of *trade openness* – measured by exports and imports as a share of GDP – as an indicator of competition.¹⁹ Leite and Weidmann (1999) suggest that openness to foreign trade, which is equivalent to a relatively strong economic competition, is a primary factor for experiencing relatively low levels of corruption. This argument is backed up by empirical research. Sandholtz and Koetzle (2000) find that economic integration decreases corruption activity, albeit not directly.²⁰ In particular, the existing research sheds light on the interrelation between openness of financial markets and corruption levels. Although not exceedingly congruent, for the most part the existing literature points at the idea that restrictions bring about individual effort to bypass regulations with the use of deviant behavior, such as bribing public officials (cf. Edwards, 1999; Dreher and Siemers, 2009). We thus expect an inverse relationship between trade openness and corruption, which is along the lines of the previous discussion on the impact of economic freedom on corruption.

¹⁹ Alternatively, we proxy trade openness by the ratio of import to GDP (cf. Herzfeld and Weiss, 2003). Here, a low import share implies high import restrictions. Consequently, the presence of such restrictions offers an opportunity to bribe (cf. Seldadyo and de Haan, 2006).

²⁰ However, Knack and Azfar (2003) argue that trade share and import share of GDP are strongly related to country size. Smaller countries tend to have a higher trade share, so not controlling for population the coefficient on openness is likely to reflect selection bias.

We also account for a potential effect of *internal and external conflicts* on corruption. Conflicts – in terms of domestic and transnational terrorism or civil war – may have a destabilizing effect on the economy which is what we expect to show up in our analysis. For instance, Dreher et al. (2010) and Meierrieks and Gries (2013) show that terrorism affects the economy negatively and contributes to political instability. This in turn may create a breeding ground and may also provide opportunities for corruption.

Regardless of the regime type, *regime stability* is another political variable that may affect corruption. As suggested by Treisman (2007), it may take decades for democratic institutions to translate into low perceived corruption so that not the current regime type but the regime stability affects the corruption level. This is supported by an extreme-bounds analysis by Serra (2006), who provides evidence that actual democracy is weakly interrelated with corruption, whereas political stability measured by uninterrupted democracy results in reducing corruption. It is reasonable to assume that the political vacuums inherent to unstable regimes enable fraudsters to more easily find means to precipitate successful acts of corruption. Consequently, and in compliance with the previously lead discussion on the interrelation between democracy and corruption, we expect countries with stable regimes to be less prone to corruption.

5. Empirical Results

In this section we report our empirical results using different econometric approaches to ensure robustness and to account for possible endogeneity issues. Table 1 presents results for the baseline model with an alternative lag length for both fixed effects (FE) and Difference-GMM estimations, while Tobit results are generally presented in the Appendix.²¹

²¹ It should be noted that the results of the GMM estimates differ from those of the FE and the Tobit estimates in some cases. This has at least two reasons. For one, the Difference-GMM includes the lag of the dependent variable as an additional regressor, resulting in a reduction of the number of observations of about 10 percent. For another, based on the rule of thumb, which declares the number of instruments to be smaller than the number of

For the FE model, AIC and BIC indicate that a higher lag length selection leads to a better model fit. To account for possible heteroskedasticity, standard errors are Huber/White-corrected (Huber, 1967; White, 1980). To rule out the problem of multicollinearity, we present the mean VIF statistics of the corresponding regression, according to which our estimations do not suffer. In addition, to verify GMM consistency, we have to ensure the validity of the instruments. We use the Sargan test of over-identifying restrictions to test the validity of the instrumental variables, and consider the test of second-order serial correlation of the error term suggested by Arellano and Bond (1991). Throughout all model specifications, both tests do not indicate problems with the instruments' validity.

Our results suggest that general migration has no consistent impact on corruption that would survive and hold across our different econometric models. This supports hypothesis *H1*. Specifically, both the FE and Difference-GMM estimations do not indicate any significant impact of general migration on corruption in the short or medium term.²²

With respect to our control variables, we find that corruption is more likely in more developed (in terms of GDP per capita) countries, that have a high level of economic freedom and a large government, which finds support in existing empirical work (cf. Braun and Di Tella, 2004; Ali and Isse, 2003). Our findings concerning the impact of economic freedom on corruption are somewhat more surprising. More economic freedom seems to propel a country's corruption level, which is not in line with existing mainstream research. Rather, this result is supportive of the hypothesis that economic freedom deals with a country's link to the global

cross-sections, only one lag is used for instrumentation. However, in this case the GMM estimator is not necessarily efficient since it does not make use of all available moment restrictions.

²² It is important to note that although the lagged structure of the migration stock allows investigating a delayed effect, it should nevertheless be considered a short-term effect. A truly long-run effect (in the sense of a steady-state equilibrium outcome) might exhibit a different effect. Although the analysis focuses on the short-term perspective, we also run models which are able to capture long-run effects as a robustness check. The results from Dynamic Ordinary Least Square (DOLS) and Error-Correction Models (ECM) which we used to investigate a long-term relationship between migration and corruption are, however, ambiguous. While DOLS does not find a long-run relationship, the results of ECM support a co-integrated relationship between migration and corruption. The results are presented in Table A5 in the Appendix. A full-fledged investigation of these findings is, however, beyond the scope of the present paper and is therefore left to future research.

markets, and that this link could be beneficial for illegal actors. For example, in terms of an exploitation of economic rents (as argued by, *inter alia*, Tornell and Lane, 1999; Graeff and Mehlkop, 2003). Such a disparity might partly be attributed to the circumstance that prior to our examination, to the best of our knowledge, no such comprehensive analysis existed for the impact of economic freedom on a subset of OECD countries' corruption level. For these countries with their particularly well-developed institutional settings, the interdependency between economic freedom and corruption levels might very well deviate from what has been found on a global scale. The impact of economic freedom on corruption levels proves to be robust in terms of the coefficients' magnitude, the effect's direction, the significance levels across different econometric models, and the use of the Economic Freedom index provided by the Fraser Institute as an alternative measure (see footnote 18). Along these lines, we do not find such robustness across different specifications for the impact of GDP p.c. and government size on corruption levels.

As for the remaining controls, neither religion nor population size exert a significant impact on corruption. As suggested by Paldam (2001), an existing misbalance of religious groups is generally conducive to the spread of corruption in a given country. However, this seems not to be true for the subset of OECD countries. Provided that OECD countries dispose of a higher institutional quality and a more comprehensive protection of (religious) interests as compared to the global average, OECD countries could be less prone to corruption driven by a religious imbalance.

Although the general picture is the same and supports our main hypothesis H1 when applying the Difference-GMM approach, the results are far more conservative with respect to the controls' impact on corruption levels. Here, only economic freedom shows up significantly. The direction and magnitude of the economic freedom's impact on host countries' corruption levels are similar to what is indicated by the FE regressions. This strengthens the validity of the result that a higher degree of economic freedom facilitates corruption in OECD countries.

Table 1: Migration and Corruption - Fixed Effects and GMM Baseline Regression

corruption	Fixed Effects					GMM				
	(1.1)	(1.2)	(1.3)	(1.4)	(1.5)	(2.1)	(2.2)	(2.3)	(2.4)	(2.5)
corruption _{t-1}						0.4985*** (0.1652)	0.4491** (0.2237)	0.3917 (0.2425)	0.3147 (0.2147)	0.3484 (0.2145)
migration _{t-1}	0.0005 (0.0039)					0.0003 (0.0047)				
migration _{t-2}		0.0002 (0.0043)					-0.0017 (0.0051)			
migration _{t-3}			0.0019 (0.0047)					-0.0047 (0.0085)		
migration _{t-4}				0.0033 (0.0046)					0.0122 (0.0078)	
migration _{t-5}					0.0043 (0.0048)					0.0059 (0.0042)
GDP p.c. _{t-1}	1.8796*** (0.5646)	1.7139** (0.6567)	1.4869* (0.7289)	1.4467** (0.6060)	1.6121*** (0.5222)	-0.0311 (0.4961)	0.0215 (0.5336)	0.0422 (0.8027)	-0.5728 (0.7398)	0.0948 (0.4358)
population _{t-1}	-0.0000 (0.0000)	-0.0000 (0.0000)	0.0000 (0.0000)	0.0000 (0.0000)	0.0001 (0.0000)	0.0000 (0.0000)	0.0000 (0.0000)	0.0000 (0.0000)	-0.0000 (0.0000)	0.0000 (0.0000)
gov size _{t-1}	0.0770** (0.0345)	0.0972*** (0.0345)	0.1169*** (0.0291)	0.1363*** (0.0259)	0.1316*** (0.0258)	-0.0050 (0.0306)	-0.0087 (0.0352)	-0.0058 (0.0347)	-0.0180 (0.0328)	0.0039 (0.0264)
democracy _{t-1}	-0.1664*** (0.0300)	-0.0913* (0.0470)	0.0875 (0.1487)	0.1434 (0.1536)	0.1997 (0.1603)	-0.0081 (0.0267)	0.0124 (0.0703)	-0.0034 (0.0728)	-0.0390 (0.0654)	-0.0245 (0.0604)
econ freedom _{t-1}	0.0592* (0.0307)	0.0648* (0.0343)	0.0674* (0.0348)	0.0639** (0.0291)	0.0463** (0.0217)	0.0620*** (0.0235)	0.0525*** (0.0202)	0.0606*** (0.0178)	0.0580*** (0.0167)	0.0435*** (0.0145)
religious tension _{t-1}	0.2412 (0.1431)	0.2159 (0.1353)	0.2188 (0.1351)	0.1842 (0.1290)	0.1606 (0.1176)	-0.0581 (0.0742)	-0.0744 (0.0786)	-0.0470 (0.1054)	-0.0805 (0.0850)	-0.0780 (0.0660)
VIF	1.55	1.56	1.58	1.59	1.61					
Adjusted R ²	0.383	0.368	0.397	0.438	0.486					
AIC	669.3707	632.4003	550.0034	467.6052	392.3704					
BIC	697.9622	660.6486	577.8022	494.9997	419.3358					
Sargan (p-value)						0.5958	0.7639	0.7944	0.6773	0.6785
AR (2) (p-value)						0.1857	0.2882	0.4189	0.5372	0.5605
Instruments						31	30	29	28	27
Observations	439	418	392	370	348	406	385	363	341	319

* $p < 0.10$, ** $p < 0.05$, *** $p < 0.01$; robust standard errors in parentheses; GMM results based on the two-step Difference estimator, second lag of the dependent variable used as GMM-style instrument; AR (2) refers to the Arellano Bond test for autoregressive correlation (order 2); Sargan refers to the Sargan test of over identification restrictions; migration stock is weighted by population.

In order to check the robustness of our findings, we add further controls (trade openness, internal and external conflicts) to our baseline model and use alternative measures for development by using GDP growth as well as regime stability. The results are presented in Table 2, and again confirm our previous finding that the general stock of immigration in a country has no effect on its corruption level.²³ Only few of the alternative controls have significant signs. Specifically, the FE estimations suggest that larger governments, less restrictions on trade, and more stable regimes, boost the country's corruption levels. The latter speaks to the idea that stable regimes become increasingly more prone for corrupt behavior over time, while regime changes bring about new structures, thus induce both uncertainty and the deterioration of existing corrupt structures. This finding is also in line with Mancur Olson's (1982) concept of institutional sclerosis, indicating that stable regimes are more prone to corruption due to cheaper lobbying and bribing (cf. Berggren et al., 2007). However, these effects are not consistently detectable when applying the Difference-GMM approach.

A further control is GDP growth. The estimations yield no significant impact of GDP growth on corruption which is in line with the results of Mauro (1995), Brunetti et al. (1997), Ali and Isse (2003) and Berdiev et al. (2013). Considering trade openness, we can again identify a positive and significant effect on corruption, indicating that a high trade share increases the probability of corruption. This result supports the argument that the rents created by trade endowments induce opportunities for rents-related corruption (Tornell and Lane, 1999).

When applying the Difference-GMM approach, both the internal conflict risk and the external conflict level have a weaker significant impact, although the effects go in opposite directions. The results suggest that, in the medium run, inner country turmoil and social unrests might successfully trigger the implementation of more sophisticated institutional structures that re-

²³ Due to space restrictions we present only the results of the first and fifth lag of the immigration stock, yet, similar to the results of the baseline specification, the second, third and fourth lags are insignificant, too. The same applies to all the tables where we do not provide the intermediate lags, too.

duce opportunities for corruption, while the destabilizing effect of transnational conflicts – e.g. transnational terrorism – on the economy may indeed create opportunities (due to growing intelligence and military services which often operate outside public control). However, these effects are only weakly significant and should not be over interpreted, especially given that they do not remain consistently significant across different econometric methods.

Finally, the Difference-GMM estimations yield a significant and positive effect of regime stability, indicating that, in the short run, countries that are wealthier and possess a more stable regime structure are more prone to corruption. While the overall direction is the same, the effect's magnitude is more conservative than the coefficients derived from the FE approach and only show up significantly in the short run. We present the Difference-GMM results in Table 3.²⁴

²⁴ We also calculate a Tobit version of the regressions with and without alternative control variables. The results are in line with the fixed effect estimation and are presented in Table A3 in the Appendix.

Table 2: Migration and Corruption - Fixed Effects Baseline Regression with Alternative Controls

corruption	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)
migration _{t-1}	0.0079*** (0.0028)	0.0007 (0.0035)	-0.0004 (0.0037)	-0.0003 (0.0025)				
migration _{t-5}					0.0093** (0.0034)	0.0018 (0.0048)	0.0040 (0.0046)	0.0009 (0.0034)
GDP p.c. _{t-1}			1.8293*** (0.5131)	-0.1325 (0.9277)			1.5394*** (0.4985)	0.7642 (0.6353)
population _{t-1}	0.0000 (0.0000)	0.0000 (0.0000)	-0.0000 (0.0000)	-0.0000 (0.0000)	0.0001* (0.0001)	0.0001* (0.0001)	0.0001 (0.0000)	0.0001 (0.0000)
gov size _{t-1}	0.0737* (0.0407)	0.0840** (0.0369)	0.0644** (0.0302)	0.0347 (0.0320)	0.1063*** (0.0323)	0.1171*** (0.0289)	0.1243*** (0.0255)	0.1074*** (0.0295)
democracy _{t-1}	-0.0377 (0.0426)	-0.0930** (0.0352)	-0.1348*** (0.0322)		0.2731 (0.2143)	0.2163 (0.1758)	0.2266 (0.1678)	
econ freedom _{t-1}	0.1217*** (0.0253)	0.0544** (0.0242)	0.0520** (0.0234)	0.0413 (0.0277)	0.0983*** (0.0248)	0.0585** (0.0214)	0.0454** (0.0216)	0.0164 (0.0222)
religious tension _{t-1}	0.2275 (0.1676)	0.2090 (0.1589)	0.2473* (0.1337)	0.1951 (0.1505)	0.1667 (0.1240)	0.1379 (0.1305)	0.1698 (0.1124)	0.0954 (0.1205)
GDP p.c. growth _{t-1}	0.6949 (1.4672)				-0.2731 (1.1339)			
trade openness _{t-1}		0.0156*** (0.0035)				0.0119*** (0.0038)		
internal conflict _{t-1}			-0.0850 (0.0667)				-0.0605 (0.0641)	
external conflict _{t-1}			0.1203 (0.0966)				0.0724 (0.0821)	
regime stability _{t-1}				0.0613** (0.0234)				0.0433** (0.0208)
VIF	1.28	1.98	1.77	1.58	1.34	2.19	1.91	1.58
Adjusted R ²	0.310	0.379	0.396	0.411	0.443	0.483	0.489	0.493
AIC	696.9321	672.1169	661.6321	648.9388	420.2725	394.3588	392.0972	387.4652
BIC	725.3623	700.7084	698.3926	677.5303	447.2379	421.3242	426.7670	414.4306
Observations	429	439	439	439	348	348	348	348

* $p < 0.10$, ** $p < 0.05$, *** $p < 0.01$; robust standard errors in parentheses; migration stock is weighted by population.

Table 3: Migration and Corruption - Difference-GMM Regression with Alternative Controls

corruption	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)
corruption _{t-1}	0.4531*** (0.1466)	0.4341*** (0.1587)	0.4909*** (0.1740)	0.5372** (0.2237)	0.3699* (0.1919)	0.3327* (0.1975)	0.3743* (0.2000)	0.6012*** (0.0921)
migration _{t-1}	0.0006 (0.0038)	-0.0026 (0.0061)	-0.0006 (0.0047)	-0.0040 (0.0056)				
migration _{t-5}					0.0075 (0.0053)	0.0050 (0.0037)	0.0064* (0.0038)	0.0030 (0.0032)
GDP p.c. _{t-1}			-0.0115 (0.5432)	-1.0297*** (0.3747)			-0.1208 (0.2843)	-0.9525 (0.7889)
population _{t-1}	0.0000 (0.0000)	0.0000 (0.0000)	0.0000 (0.0000)	0.0000 (0.0000)	0.0000 (0.0000)	0.0000 (0.0000)	0.0000 (0.0000)	-0.0000 (0.0000)
gov size _{t-1}	-0.0115 (0.0337)	0.0006 (0.0288)	-0.0102 (0.0328)	-0.0189 (0.0337)	-0.0096 (0.0259)	0.0087 (0.0288)	0.0042 (0.0260)	-0.0257 (0.0278)
democracy _{t-1}	-0.0131 (0.0251)	-0.0182 (0.0237)	0.0068 (0.0313)		0.0207 (0.0950)	-0.0259 (0.1338)	0.0672 (0.0821)	
econ freedom _{t-1}	0.0669*** (0.0254)	0.0604** (0.0242)	0.0567** (0.0222)	0.0406** (0.0162)	0.0464*** (0.0127)	0.0382*** (0.0131)	0.0423*** (0.0154)	0.0192 (0.0137)
religious tension _{t-1}	0.0418 (0.0861)	0.0520 (0.0740)	0.0792 (0.0865)	0.0707 (0.0913)	0.0674 (0.0583)	0.0735 (0.0612)	0.0555 (0.0708)	0.1102* (0.0609)
GDP p.c. growth	-0.5576 (0.8686)				-0.7175 (0.7638)			
trade openness _{t-1}		0.0033 (0.0043)				0.0021 (0.0030)		
internal conflict _{t-1}			-0.0129 (0.0380)				-0.0896* (0.0458)	
external conflict _{t-1}			0.0311 (0.0384)				0.0822* (0.0430)	
regime stability _{t-1}				0.0457** (0.0201)				0.0397 (0.0250)
Sargan (p-Value)	0.5787	0.6018	0.7435	0.6894	0.7741	0.7274	0.7305	0.7374
AR (2) (p-value)	0.2176	0.2107	0.2153	0.1494	0.5403	0.5610	0.6099	0.4782
Instruments	30	31	33	31	27	27	29	27
Observations	396	406	406	406	319	319	319	319

* p < 0.10, ** p < 0.05, *** p < 0.01; robust standard errors in parentheses; GMM results based on the two-step Difference-GMM estimator, second lag of the dependent variable used as GMM-style instrument; AR (2) refers to the Arelano Bond test for autoregressive correlation (order 2); Sargan refers to the Sargan test of over identification restrictions; migration stock is weighted by population.

After we could not identify a consistent and significant effect of general immigration on corruption supporting *H1*, we now turn to the question raised in hypothesis *H2*, whether corruption migrates and how long it may take to infiltrate the destination country. More specifically, we explore whether immigrants from highly corrupt countries carry over their behavior, so that immigration from countries with a level of corruption that is higher than the average leads to an increase of corruption in the destination country. The results of this exercise are shown in Table 4. Again, we present the FE and Difference-GMM estimations jointly. The results are based on a calculation of the total average of corruption levels over all countries for each year from which we then derive the most corrupt countries at the top 50% level.²⁵

Overall, the results indicate that immigration from highly corrupt countries boosts the corruption level in the host country, thus supporting our hypothesis *H2*. According to the FE estimation, we find a significant and positive effect of selected migration on host countries' corruption levels. The coefficient rises to a value of 0.0099 (for a lag of three periods), which means that an increase in the migration stock of one hundred migrants per one thousand citizens affects corruption significantly, increasing the corruption value by 0.99 points (out of 7). This is a raise of 14.1% of the maximum scale. As it has previously been the case, the results of the Difference-GMM estimations are more conservative, thus representing a lower bound result with a raise of up to 4.4% of the maximum scale for the same increase in the migrants-to-citizens ratio. Conversely, the results of the alternative Tobit regressions point to an upper bound result, indicating a raise of up to 18.1% of the maximum scale. In general, the Difference-GMM results are more conservative and turn out to be significant less often compared to the FE and Tobit estimations. We trace this back to the limited amount of cross-sections,

²⁵ Our findings do not change when we consider migration from even more corrupt countries at the top 40% (30%, 20% and 10%) level.

which is a problem inherent to our focus on OECD countries.²⁶ Future research might potentially overcome this drawback by extending the research scope beyond OECD countries.

Noticeably, while we initially observe an escalating effect of selective migration on corruption levels, the results are indicative of an assimilation process over time. These observations are in line with the previously discussed arguments presented by Chiswick (1978), which are supportive of the idea that the migrants' assimilation happens at different speeds.²⁷ Moreover, the results of the control variables are broadly in line with our previous findings presented in Tables 1 and 2.

²⁶ Further possible explanations are offered in the beginning of this section.

²⁷ The results of the Tobit regression are presented in Table A4 in the Appendix. The results are coherent and survive when using the alternative set of control variables.

Table 4: Migration from Corrupt Countries and Corruption - Fixed Effects and GMM Regression

corruption	Fixed Effects					GMM				
	(1.1)	(1.2)	(1.3)	(1.4)	(1.5)	(2.1)	(2.2)	(2.3)	(2.4)	(2.5)
corruption _{t-1}						0.5278*** (0.1875)	0.4694** (0.1974)	0.5085*** (0.1926)	0.3542** (0.1716)	0.3792* (0.2219)
migration _{t-1}	0.0087** (0.0037)					-0.0016 (0.0014)				
migration _{t-2}		0.0095*** (0.0033)					0.0026* (0.0014)			
migration _{t-3}			0.0099*** (0.0030)					0.0031** (0.0015)		
migration _{t-4}				0.0073*** (0.0023)					-0.0004 (0.0008)	
migration _{t-5}					0.0040* (0.0020)					-0.0007 (0.0011)
GDP p.c. _{t-1}	1.0742* (0.5622)	1.0156 (0.5998)	1.0565 (0.6270)	1.2442** (0.5403)	1.6372*** (0.4360)	-0.3686 (0.5195)	-0.3201 (0.3661)	-0.4154 (0.4664)	-0.1656 (0.3887)	0.1622 (0.5569)
population _{t-1}	0.0001 (0.0001)	0.0001 (0.0001)	0.0001 (0.0001)	0.0001 (0.0001)	0.0001 (0.0001)	0.0001 (0.0001)	0.0001 (0.0001)	0.0001 (0.0001)	0.0001 (0.0001)	0.0001 (0.0001)
gov size _{t-1}	0.0522 (0.0388)	0.0734** (0.0338)	0.0855*** (0.0290)	0.0997*** (0.0273)	0.0989*** (0.0250)	-0.0109 (0.0332)	-0.0078 (0.0265)	-0.0171 (0.0353)	-0.0013 (0.0272)	0.0050 (0.0358)
democracy _{t-1}	-0.1738*** (0.0295)	-0.1251** (0.0512)	0.0682 (0.1657)	0.1052 (0.1667)	0.1565 (0.1573)	0.0332 (0.0887)	0.0210 (0.2159)	-0.0095 (0.1567)	0.0446 (0.1538)	-0.0003 (0.1068)
econ freedom _{t-1}	0.0741** (0.0327)	0.0721** (0.0348)	0.0672* (0.0363)	0.0616* (0.0313)	0.0425* (0.0229)	0.0505** (0.0212)	0.0382* (0.0230)	0.0410** (0.0160)	0.0393** (0.0171)	0.0433** (0.0192)
religious tension _{t-1}	0.2573* (0.1401)	0.2462* (0.1341)	0.2584* (0.1303)	0.2035 (0.1209)	0.1564 (0.1077)	-0.0273 (0.0807)	-0.0234 (0.0752)	-0.0104 (0.0795)	-0.0405 (0.0418)	-0.0564 (0.0480)
VIF	1.24	1.26	1.27	1.26	1.27					
Adjusted R ²	0.382	0.381	0.423	0.459	0.494					
AIC	625.1091	579.3207	501.4671	432.3486	367.1703					
BIC	653.2051	607.0477	528.7663	459.2535	393.6571					
Sargan (p-value)						0.7940	0.9690	0.8070	0.8624	0.6690
AR (2) (p-value)						0.3989	0.3811	0.6287	0.6532	0.8664
Instruments						31	30	29	28	27
Observations	409	388	365	345	325	379	358	338	318	298

* p < 0.10, ** p < 0.05, *** p < 0.01; robust standard errors in parentheses; GMM results based on the two-step Difference-GMM estimator, second lag of the dependent variable used as GMM-style instrument; AR (2) refers to the Arelano Bond test for autoregressive correlation (order 2); Sargan refers to the Sargan test of over identification restrictions; migration stock is weighted by population.

6. Conclusions

In this paper, we shed light on the impact of migration on corruption in the destination country. Capitalizing on a comprehensive dataset consisting of annual series on migration flows and stocks into OECD countries from 207 sending countries for the period 1984-2008, we explored different channels through which corruption might migrate. Initially, the implications might go into various directions as different effects are in place at the same time. On one side, the existing literature suggests that migration could be the result of a positive selection. For example, highly skilled people might leave their home countries as they expect their individual living conditions to improve. On the contrary, however, poor socio-economic conditions typically constitute push factors of migration, not only for a small positive selection of honest people, but also for the corruptible average individual.

Independent of the econometric methodology applied, we consistently find that (i) general migration has an insignificant effect on the destination country's corruption level, and (ii) that immigration from corruption-ridden countries boosts corruption in the destination country. This holds even after controlling for potential endogeneity by means of a Difference-GMM estimation.

Hence, the fear by international legislators (as expressed in recent agreements by the G20 group) that immigration may cause a problematic inflow of corruption appears justified. Policy-makers will therefore have to take precautions to avoid this problem. However, it is not immediately obvious what the optimal response will be. One possibility could be to restrict immigration by only selecting immigrants originating from non-corrupt countries. Alternatively, very careful checks *ad personam* could be conducted. The downside of this policy is that the remaining inflow of migrants could be rather small, which might not be optimal given that most OECD countries face a severe ageing problem and are in need of immigration to keep their social security systems sustainable. An arguably better strategy could be to immun-

ize the domestic population against a corrupt attitude brought into the country by some immigrants. This would be in line with Varese's (2011) argument which we may rephrase as follows: successful corruption needs both a corrupt mind and an opportunity.

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Appendix: To be published as “supporting information” on the journal homepage only

Table A1: Summary statistics

Variable	Obs.	Mean	S.D.	Min	Max	Operationalization and Source
corruption	669	2.4246	1.1920	1	5	Corruption index [1;6] ; source: International Country Risk Guide *
migration	484	0.0659	0.0807	0.0010	0.4434	Immigration stock weighted by population in thousands; source: OECD International Migration Database
GDP p.c.	704	25801.60	11266.13	5713.72	80215.48	Real GDP per capita; source: Penn World Table
population	725	34026.94	53566.13	239.5	304374.8	Population in 1000; source: Penn World Table
government size	695	19.0963	4.1585	7.5156	28.8381	Government expenditure/GDP; source: World Development Indicators
democracy	662	9.2734	2.4070	-7	10	Polity2 index [-10;10]; source: PolityIV
economic freedom	669	4.1654	2.3794	1	10	Investment profile index [1;12]; source: International Country Risk Guide
religious tension	669	1.6276	0.8332	1	6	Religion in politics index [1;6]; source: International Country Risk Guide*
GDP p.c. growth	675	0.0239	0.0336	-0.2453	0.1187	GDP per capita growth; source: Penn World Table
trade openness	704	72.0642	47.7115	12.92	326.54	(exports + imports)/GDP; source: Penn World Table
internal conflict	668	2.1139	1.3649	1	8.75	Internal conflict index [1;12]; source: International Country Risk Guide*
external conflict	669	2.0179	1.2788	5.5	12	External conflict index [1;12]; source: International Country Risk Guide*
political stability	662	49.8172	45.4271	0	199	Regime durability; source: PolityIV project

* We rescale the variable from the International Country Risk Guide. Originally, a high value represents low risk and good conditions. To simplify the interpretation we transpose the series, so that a higher value represents higher risk. Since we use the investment risk variable to measure economic freedom, a high risk refers to low economic freedom, so here we keep the original scaling.

Table A2: Migration and Corruption - Tobit Baseline Regression

corruption	(1)	(2)	(3)	(4)	(5)
migration _{t-1}	0.0028 (0.0026)				
migration _{t-2}		0.0032 (0.0027)			
migration _{t-3}			0.0050* (0.0027)		
migration _{t-4}				0.0069** (0.0027)	
migration _{t-5}					0.0081*** (0.0028)
GDP p.c. _{t-1}	2.3986*** (0.3266)	2.0869*** (0.3471)	1.7697*** (0.3470)	1.7815*** (0.3570)	2.1169*** (0.3774)
population _{t-1}	-0.0000 (0.0000)	0.0000 (0.0000)	0.0000 (0.0000)	0.0000 (0.0000)	0.0000 (0.0000)
gov size _{t-1}	0.0391 (0.0283)	0.0489 (0.0313)	0.0706** (0.0318)	0.0995*** (0.0309)	0.1099*** (0.0305)
democracy _{t-1}	-0.2604*** (0.0560)	-0.1865** (0.0765)	-0.0046 (0.0931)	0.0758 (0.0898)	0.1651* (0.0890)
econ freedom _{t-1}	0.0835*** (0.0199)	0.0982*** (0.0211)	0.1059*** (0.0211)	0.0979*** (0.0204)	0.0765*** (0.0203)
religious tension _{t-1}	0.2986*** (0.0797)	0.2902*** (0.0819)	0.2935*** (0.0815)	0.2417*** (0.0771)	0.1985*** (0.0723)
AIC	848.5506	817.9309	744.7075	670.7195	606.6819
BIC	889.3956	858.2857	784.4202	709.8545	645.2039
Observations	439	418	392	370	348

* $p < 0.10$, ** $p < 0.05$, *** $p < 0.01$; robust standard errors clustered on countries in parentheses; migration stock is weighted by population.

Table A3: Migration and Corruption - Tobit Baseline Regression with Alternative Controls

corruption	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)
migration _{t-1}	0.0083*** (0.0025)	0.0007 (0.0026)	0.0022 (0.0026)	0.0020 (0.0026)				
migration _{t-5}					0.0000 (0.0000)	0.0000** (0.0000)	0.0000 (0.0000)	-0.0000 (0.0000)
GDP p.c. _{t-1}			2.2891*** (0.3298)	-0.1661 (0.4447)			1.9775*** (0.3938)	1.8586*** (0.4756)
population _{t-1}	0.0000 (0.0000)	0.0000*** (0.0000)	-0.0000 (0.0000)	-0.0000*** (0.0000)	0.0000 (0.0000)	0.0000** (0.0000)	0.0000 (0.0000)	-0.0000 (0.0000)
gov size _{t-1}	0.0384 (0.0309)	0.0695** (0.0282)	0.0264 (0.0289)	0.0072 (0.0286)	0.0917*** (0.0339)	0.1060*** (0.0306)	0.0982*** (0.0319)	0.1070*** (0.0306)
democracy _{t-1}	-0.0851 (0.0518)	-0.1577*** (0.0515)	-0.2396*** (0.0573)		0.2862*** (0.0934)	0.1979** (0.0890)	0.1661* (0.0909)	
econ freedom _{t-1}	0.1728*** (0.0182)	0.0738*** (0.0207)	0.0717*** (0.0213)	0.0414** (0.0211)	0.1542*** (0.0170)	0.0938*** (0.0187)	0.0708*** (0.0209)	0.0553** (0.0244)
religious tension _{t-1}	0.3212*** (0.0856)	0.2693*** (0.0809)	0.3072*** (0.0795)	0.2180*** (0.0778)	0.2143*** (0.0781)	0.1681** (0.0744)	0.2072*** (0.0727)	0.1528** (0.0743)
GDP p.c. growth	0.1501 (1.7995)				-0.2512 (1.6491)			
trade openness		0.0211*** (0.0028)				0.0169*** (0.0029)		
internal conflict			-0.0106 (0.0461)				0.0102 (0.0516)	
external conflict			0.0984* (0.0512)				0.0583 (0.0490)	
regime stability				0.0873*** (0.0163)				0.0217 (0.0172)
AIC	872.6408	844.6843	848.8124	845.0031	637.1553	603.6526	608.9257	607.7596
BIC	913.2554	885.5293	897.8264	885.8481	675.6773	642.1746	655.1521	646.2817
Observations	429	439	439	439	348	348	348	348

* $p < 0.10$, ** $p < 0.05$, *** $p < 0.01$; robust standard errors clustered on countries in parentheses; migration stock is weighted by population.

Table A4: Migration from Corrupt Countries and Corruption - Tobit Regression

corruption	(1)	(2)	(3)	(4)	(5)
migration _{t-1}	0.0120*** (0.0030)				
migration _{t-2}		0.0127*** (0.0030)			
migration _{t-3}			0.0127*** (0.0029)		
migration _{t-4}				0.0094*** (0.0027)	
migration _{t-5}					0.0053** (0.0025)
GDP p.c. _{t-1}	1.7316*** (0.3209)	1.5437*** (0.3389)	1.5242*** (0.3407)	1.7744*** (0.3559)	2.2130*** (0.3758)
population _{t-1}	0.0000 (0.0000)	0.0000* (0.0000)	0.0000* (0.0000)	0.0000* (0.0000)	0.0000* (0.0000)
gov size _{t-1}	0.0286 (0.0281)	0.0381 (0.0303)	0.0475 (0.0295)	0.0670** (0.0287)	0.0687** (0.0292)
democracy _{t-1}	-0.2394*** (0.0584)	-0.1853** (0.0772)	0.0068 (0.0917)	0.0660 (0.0897)	0.1522* (0.0894)
econ freedom _{t-1}	0.1098*** (0.0217)	0.1122*** (0.0223)	0.1092*** (0.0221)	0.1006*** (0.0214)	0.0836*** (0.0213)
religious tension _{t-1}	0.3425*** (0.0824)	0.3454*** (0.0835)	0.3493*** (0.0820)	0.2762*** (0.0782)	0.2095*** (0.0740)
AIC	790.2611	751.1217	679.7662	619.2637	564.9103
BIC	830.3983	790.7318	718.7652	657.6991	602.7485
Observations	409	388	365	345	325

* $p < 0.10$, ** $p < 0.05$, *** $p < 0.01$; robust standard errors clustered on countries in parentheses; migration stock is weighted by population.

Table A5: DOLS Regression and Error-Correction

DOLS		Error correction model					
	Long run		Long run			Short run	
			FE	GMM		FE	GMM
migration	-0.0026 (0.0088)	ECT	-0.1832*** (0.0299)	-0.8690*** (0.0085)	Δ migration t-1	-0.0087 (0.0084)	-0.0010 (0.0013)
					Δ migration t-2	-0.0030 (0.0084)	0.0101*** (0.0016)
					Δ migration jointly equal to zero	0.80 0.4501	49.24*** 0.0000

* $p < 0.10$, ** $p < 0.05$, *** $p < 0.01$; robust standard errors in parentheses; GMM results based on the two-step Difference-GMM estimator, second lag of the dependent variable used as GMM-style instrument; migration stock is weighted by population.