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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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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. Independent of the econometric methodology applied, 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 economic implications associated with migration flows.

JEL Classification: D73; F22; O15

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 out-migrants. One may speculate that persistent corruption in a country makes corrupt behavior a general attitude among citizens and that emigrants from a corruption-ridden country may carry some of this attitude into their destination country. That is, once substantial immigration from more corrupt countries into less corrupt countries can be observed, will we – sooner or later – see increasing levels of corruption in the destination countries as well? Or, rather, will we see no significant (or even an opposite) effect on target countries' level of corruption because mostly honest citizens flee their corrupted home countries? In this vein, the ultimate impact of migration flows on the destination country's corruption is not immediately obvious as selection effects with varying outcomes take full effect simultaneously. 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 sustainable adverse effects on the targeted economy. So far, this coherence has yet not been examined by existing literature.

Anecdotic evidence from several branches of organized crime exemplifies the problem under consideration. In the late 19th century, hundred thousands of members of the Cosa Nostra migrated from Sicily to the United States, where they started their criminal activities. While in the beginning resorting 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 heading toward Europe. They settled mainly in larger German towns, where they soon got involved in criminal activities, allegedly including drug and arms trafficking, kidnapping and prostitution (cf. Albrecht, 1997). Similarly, having been mainly driven by contrasting attitudes and behavior patterns, Chinese immigration into Thailand and Indonesia triggered criminal activities over the last decades. In particular, the combination of severe government regulation and racially discriminatory policies compelled overseas Chinese to trigger 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 might skyrocket through a too generous immigration recently entered the international arena, when the G20 agreed to immigration policy measures targeting specifically corrupt immigrants and the proceeds of crime imported into the G20 countries proposed by the Anti-Corruption Working Group. 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 (selective) migration has on the development of corruption in the destination country. Our paper's aim is to shed light on both these issues. The paper will proceed as follows: Section 2 will elaborate on the theoretical assumptions underlying the migration process and derive some applicable hypotheses, which will be empirically tested and discussed in Section 3. We conclude in Section 4.

2. Theoretical Considerations

There are many reasons why individuals may want to leave their home countries and move abroad. On the one hand, better career and income prospects are typical *pull factors* which

attract migrants to come to a certain target country. On the other hand, unfavorable conditions at home, such as poverty or unemployment, constitute *push factors* which make people want to leave.⁴ What is more, politico-institutional factors seem to matter strongly as well. For instance, Dreher et al. (2011) show that people tend to leave terror-ridden countries, while Dimant et al. (2013) indicate a similar result for countries with a high level of corruption. 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 target country. At a first glance, there appear to be several arguments why any such effect is implausible. Firstly, migrants tend to assimilate (at least) in economic terms – although at different speeds – in the target country (cf. Chiswick, 1978). More generally, it is plausible to assume that even if immigrants stem from a highly corrupted country, once they enter the less corrupted target country they will most likely both follow the rules and align oneself to existing norms of this 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.*

On the contrary, the effect of selective migration could be traceable, thus allowing the destination-countries' corruption levels to evolve in either direction. To begin with, emigrants from a highly corrupted country may represent a positive selection. Following Dimant et al. (2013), 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

⁴ Cf. Zimmermann (1996) for a detailed description of the push-pull model of migration, including a discussion of a variety of these factors.

productive, these workers do not find employment because of corruption and nepotism. Jobs are given to insiders irrespective of their qualification, i.e., to those who are either close to the employer or who have sufficient funds to bribe them. What is more, migration could also be driven by a positive selection in the sense of an income differential effect, as the decision of (skilled) people to emigrate might be driven by the demand for better-paid jobs. If (skilled) outsiders leave the country, there ought to be a high probability that they are (far) less corruptible than the average citizens of the source country. In fact, they might even be less corruptible than the average person in the target country. This would imply a decreasing level of corruption after immigration takes place. 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 does approach immigrants for goods, services or other things which might require bribing them, there is no reason to believe that immigration will have a relevant effect 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 by a number of counter-arguments. 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, 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, 2013). 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 anecdotic evidence points into this direction. Secondly, 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). Value assimilation, thus, becomes unlikely in the short-run and corrupt behavior turns out to be persistent. Third, as Varese (2011) points out, 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 new host 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 of immigration from a more corrupt sending country to a less corrupt target country on the target country's level of corruption is positive. However, it might take some time before the effect finds expression.*

In the following section, we will test our hypotheses to investigate which effects dominate.

3. Empirical Analysis

In this section, we describe the data and econometric methods before moving to the results of our empirical investigation. First, we discuss the dependent and the main explanatory variable. Then, we discuss the set of control variables employed in this study before introducing our empirical methodology. Our data set covers the period 1984-2008 and contains annual data for

the OECD countries.⁵ Additional information and the summary statistics of all variables are reported in Table 1.

3.1 Data

Dependent Variable

We use the cross-national corruption rating produced by the Political Risk Service (PRS) published in its International Country Risk Guide (ICRG). It is an experts-based measure relying on the subjective assessment of country experts typically operating within international non-governmental organization. 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.⁶ 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 go along with a higher extent of corruption. The main advantage of this index is that it is available annually for a large sample of countries since the early 1980s and so enables us to analyze the corruption-migration nexus within a panel framework.⁷

⁵ Because of a lack of migration data, the countries Australia, Chile, Israel, Mexico and New Zealand have to be dropped from the analysis.

⁶ http://www.prsgroup.com/ICRG_Methodology.aspx.

⁷ Other common corruption measures like the Corruption Perceptions Index (CPI) constructed by the Transparency International or the Control of Corruption Rating published by the World Bank are available first in 1995 respectively 1996, what reduces the coverage of a time-series cross-sectional analysis. However Svensson (2005) and Treisman (2007) showed that all three measures are highly correlated.

Table1: 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	1441.83	3235.22	7.271	22741.15	Immigration stock; 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.

Independent Variable

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 great advantage of this data source is that it provides bilateral data and so allows distinguishing between countries of destination and countries of origin, so that we can not only analyze the general effect of migration on corruption but also selection effects of migration from highly corrupt countries. Since different countries use different definitions of immigration⁸ 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 have to be considered. The “country of birth” approach takes into account the foreign-born population, i.e., the first generation of immigrants, including also immigrants that have obtained citizenship. The “nationality” approach includes second and higher generations of foreigners, but do 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. First, this variable is available for more country time observations than the immigration stock by “country of birth”. Second, we act on the assumption that naturalized citizens should be put on an equal footing with the domestic population.

⁸ 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 define an immigrant by self-reported nationality (Pedersen et al., 2008).

Controls

To avoid the problem of spurious relationships between the dependent and the independent variable we employ several control variables commonly identified as potential determinants of corruption. However, given that most of the determinants are explored on general cross-country level, we reckon with differences in results due to the limitation of our sample on OECD countries.

In our baseline specification we control for the impact of *economic development measured by (logged) real per capita income*. It is a commonly-used variable to explain corruption. A multiplicity of empirical studies (e.g., La Porta et al., 1999; Serra, 2006; Treisman, 2007) find a robust negative correlation between economic development and perceived corruption, concluding that poorer countries exhibit higher corruption rates. 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 increases also corruption, so the literature remains inconclusive and the results depend on the analytical methodology.

Second, we 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. While a cross-country study by Tavares (2003) shows a negative impact of population on corruption, Root (1999) finds that a larger population is significantly associated with more corruption indicating that smaller countries are less corrupt than larger ones. Goel and Nelson (2010) point to the idea that large countries suffer from the inability to sufficiently monitor potential bribe-takers. However, Knack and Azfar (2003) show that there is in fact no clear

relationship between country size and corruption and the existing results suffer from selection bias.

Another important factor influencing corruption that we account for in our baseline specification is *government size*. For instance, Ali and Isse (2003) argue that a large government sector may create opportunities for corruption. That is the larger the size and scope of the bureaucracy, the more likely it is to find corrupt behavior.

As a further determinant of corruption we control for *democracy*. Following the multiplicity of empirical studies coming to the conclusion that the presence of democracy can reduce the level of corruption (e.g., Knack and Azfar, 2003; Braun and di Tella, 2004; Kunicová and Rose-Ackerman, 2005), we expect a negative impact of the democracy variable. 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. However, the study by 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.

We also account for *economic freedom* as a factor possibly affecting corruption.⁹ Graef and Mehlkop (2003) argue that especially in modern economies many restrictions of economic free-

⁹ Alternatively, we employ the „Economic Freedom“ index provided by the Fraser Institute (Gwartney and Lawson, 2008). The index covers five broad categories of market-oriented policies and institutions and measures the extent to which economic agents are free to use the market mechanism for the allocation of resources and the

dom – in particular restrictions of capital and financial markets – provide opportunities for corruption. 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 that countries with much regulation and little economic freedom have a larger potential for rent seeking resulting in higher 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 measure economic freedom by the investment profile variable of the ICRG, arguing that a high investment risk accompanies lower economic freedom. The index is made of ratings of three separate elements, each receiving equal weight: contract viability (risk of expropriation), profit repatriation and payment delays.

Finally, *religion* may also matter for explaining corruption. Countries with predominant protestant religion tend to have lower corruption levels, while hierarchical forms of religion, such as Catholicism, Eastern Orthodoxy and Islam, tend to increase corruption. It is further argued that countries, in which more hierarchical religions are predominant, observe less efficient bureaucracies, inferior infrastructure and higher tax evasion, which all closely relates to the extent of corruption (e.g., La Porta et al., 1999; Paldam, 2001). We use religious tensions 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 argumentation is that a dominant religion in a country creates differential access to power leading to the situation that less powerful religious groups resort to corruption for leveling the political and economic landscape.

extent to which property rights are protected. It ranges from 0 to 10, with 10 indicating the highest level of economic freedom. However, data are available on a yearly basis since 2000 and in five-year for the earlier period only, and so restrict the coverage of our panel, though the results support our main findings.

While the former variables enter our baseline model, we run additional specifications that include further controls to assess the robustness of our findings. Specifically, we analyze the influence of economic growth, trade openness, domestic and international conflict and political stability on corruption.

Besides the level of development, a number of studies also investigate the effect of *economic growth* on corruption. Ali and Isse (2003) argue that if countries with lower corruption levels grew faster, this positive experience might lead them to fight corruption even more in the future, so that economic growth should be negatively correlated with corruption in the future. However, the results of empirical studies are mixed. While Leite and Weidmann (1999) find a positive effect, Berdiev et al. (2013) investigate the relationship in a panel and find that GDP per capita growth significantly increases corruption. However, for the subset of OECD countries their results remain insignificant. Brunetti et al. (1997) find no significant effect at all.

We furthermore assess the impact of *trade openness* – measured by exports and imports as a share of GDP – as an indicator of competition.¹⁰ 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 corruption. Similar results have also been provided by Sandholtz and Koetzle (2000) who find that economic integration decreases corruption activity, albeit not directly.¹¹

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

¹⁰ 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 Haan, 2006).

¹¹ However, Knack and Azfar (2003) argue that trade share and import share of GDP is 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.

on the economy. 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 matter to the extent of 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 finds evidence that actual democracy is weakly interrelated with corruption, whereas political stability measured by uninterrupted democracy results in reducing corruption.

3.2 Econometric Methodology and Results

In our statistical analysis, we use a fixed-effects panel regression 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 and X'_{it-1} is a conditioning set of lagged control variables. This specification allows for including individual fixed effects for each country. Hence, the disturbance term is composed of the individual effect η_i and the stochastic white noise disturbance ε_{it} .

Since we assume the migration variable to have a time-shift effect on corruption, we let the independent variable enter the model with a time lag q , which may take values from one to five,

i.e., the maximum lag is five years. This lag structure allows us to differentiate between immediate and delayed effects.¹² Additionally, the lagged structure of the independent variable dampens the problem of a possible endogenous relationship between corruption and migration by eliminating the correlation between the explanatory variables and the error term. All other control variables enter the model with a lag of t-1.

Table 2: Migration and Corruption - Fixed Effects Baseline Regression

corruption	(1)	(2)	(3)	(4)	(5)
migration _{t-1}	0.000101 (0.0002)				
migration _{t-2}		0.000092 (0.0002)			
migration _{t-3}			0.000114 (0.0003)		
migration _{t-4}				0.000208 (0.0002)	
migration _{t-5}					0.000295* (0.0002)
GDP p.c. _{t-1}	1.9250*** (0.4354)	1.7546*** (0.4764)	1.6611*** (0.5186)	1.7762*** (0.4456)	2.0949*** (0.3572)
population _{t-1}	-0.0000 (0.0000)	-0.0000 (0.0001)	-0.0000 (0.0001)	-0.0000 (0.0001)	-0.0000 (0.0001)
gov size _{t-1}	0.0776** (0.0342)	0.0983*** (0.0327)	0.1228*** (0.0256)	0.1482*** (0.0253)	0.1508*** (0.0252)
democracy _{t-1}	-0.1592*** (0.0312)	-0.0807 (0.0525)	0.0966 (0.1575)	0.1651 (0.1619)	0.2359 (0.1649)
econ freedom _{t-1}	0.0562* (0.0291)	0.0621* (0.0311)	0.0623* (0.0308)	0.0545* (0.0268)	0.0315 (0.0192)
religious tension _{t-1}	0.2370 (0.1441)	0.2125 (0.1363)	0.2179 (0.1369)	0.1854 (0.1329)	0.1666 (0.1236)
VIF	2.08	2.07	2.02	1.96	1.90
Adjusted R ²	0.385	0.369	0.397	0.441	0.494
Observations	439	418	392	370	348

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

Note: Robust standard errors in parentheses.

¹² Plümpner 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 R², the AIC (Akaike Information Criterion) and the BIC (Bayesian Information Criterion) that facilitate the choice.

Table 2 presents the results for the baseline model with alternative lag length. To allow for the possibility of existing heteroscedasticity, standard errors are White-corrected. To rule out the problem of multicollinearity we present the mean VIF statistics of the corresponding regression.

Our results show that our hypothesized main effect, the impact of immigration on corruption, is insignificant. Only when the immigration variable is lagged by five periods, we find a weakly significant and positive effect. This result supports our hypothesis *H1* that there is no general effect of immigration on the host country's level of corruption.

Turning to the control variables, we find that corruption is more likely in more developed (in terms of GDP per capita) and non-democratic countries that have a high level of economic freedom, religious tensions and a large government. Neither religion nor population size exert a relevant impact on corruption. These findings are mostly in line with the existing literature. Two exceptions should be mentioned. For one, our results indicate that religious tensions have no significant impact on the extent of corruption, which is in contrast to the existing literature. As suggested by Paldam (2001), in general, an existing misbalance of religious groups is conducive to the spread of corruption in a given country. However, this seems not to be true for OECD countries. Provided that OECD countries dispose of more 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. For another, the positive association between economic freedom and corruption is contrary to the empirical mainstream. This result is supportive of the hypothesis that economic freedom deals with a country's link to the global markets and that this link could be beneficial for illegal actors for example in terms of an exploitation of economic rents (cf. Graef and Mehlkop, 2003). However, this effect is weakly significant and should not be overstated as the effect vanishes over time.

To check the robustness of our findings we estimate the models using (i) an alternative estimation method and (ii) an alternative set of control variables. Considering the alternative estimator, we ran a Panel Tobit estimation that accounts for the censored structure of our dependent variable, which is bounded in a positive interval due to its underlying structure. The results support our previous findings and confirm an insignificant effect of general immigration on the level of corruption. The results for the controls tend to be very similar for both estimation techniques. Here, the results of economic freedom and religious tensions turn out significant more often.¹³

Additionally, 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 instead of democracy. The results are presented in Table 3 and again confirm our previous finding that the general stock of immigration in a country has no effect on its corruption level.¹⁴ Only some of the alternative controls have significant signs. In contrast to the highly significant GDP level in the baseline regression, GDP growth does not show an effect on corruption. This 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 identify a positive and significant effect on corruption indicating that a high trade share increases the probability that corruption will occur. This result supports the argument that the rents created by trade endowments create an opportunity for the phenomenon of rents-related corruption (Tornell and Lane, 1999).

While the internal conflict risk does not show a significant effect on corruption, in Column 3 the external conflict level is significant and positive, suggesting that the destabilizing effect of transnational conflicts – e.g. transnational terrorism – on the economy may create opportunities

¹³ The results of the Tobit regression are presented in Table A1 in the Appendix.

¹⁴ For lack of space we present only the results of the first and fifth lag of the immigration stock, yet, like in the baseline specification, the second, third and fourth lag are insignificant, too.

for corrupt behavior. Finally and surprisingly, the effect of regime stability is positive and significant indicating that with longer existence of a regime the corruption rates tend to increase. This might be an indication that over time stable regimes evolve breeding grounds for corrupt behavior, while regime changes bring about new structures and thus induce both uncertainty and the deterioration of existing corrupt structures.¹⁵

¹⁵ We also calculate a Tobit version of the regression with additional control variables. The results are in line with the fixed effect estimation and are presented in Table A2 in the Appendix.

Table 3: Migration and Corruption - Fixed Effects Baseline Regression with Alternative Controls

corruption	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)
migration _{t-1}	0.000050 (0.0001)	0.000115 (0.0002)	-0.000013 (0.0002)	0.000077 (0.0001)				
migration _{t-5}					0.000119 (0.0002)	0.000129 (0.0002)	0.000269 (0.0002)	0.000140 (0.0002)
GDP p.c. _{t-1}			1.8012*** (0.4293)	-0.0684 (0.8858)			1.9972*** (0.3446)	1.0199 (0.7148)
population _{t-1}	0.0000 (0.0001)	-0.0000 (0.0001)	-0.0000 (0.0001)	-0.0001 (0.0000)	0.0001 (0.0001)	0.0001 (0.0001)	-0.0000 (0.0001)	0.0000 (0.0001)
gov size _{t-1}	0.0831** (0.0390)	0.0854** (0.0370)	0.0635** (0.0288)	0.0351 (0.0318)	0.1193*** (0.0339)	0.1232*** (0.0302)	0.1430*** (0.0262)	0.1174*** (0.0336)
democracy _{t-1}	-0.0405 (0.0449)	-0.0833** (0.0363)	-0.1339*** (0.0311)		0.2915 (0.2209)	0.2368 (0.1829)	0.2552 (0.1701)	
econ freedom _{t-1}	0.1361*** (0.0240)	0.0504** (0.0233)	0.0526** (0.0228)	0.0399 (0.0261)	0.1108*** (0.0223)	0.0549** (0.0215)	0.0319* (0.0186)	0.0115 (0.0201)
religious tension _{t-1}	0.2410 (0.1741)	0.2031 (0.1625)	0.2475* (0.1344)	0.1918 (0.1514)	0.1769 (0.1348)	0.1386 (0.1340)	0.1740 (0.1195)	0.0989 (0.1256)
GDP p.c. growth	0.0422 (1.5103)				0.3486 (1.5075)			
Trade openness		0.0162*** (0.0033)				0.0130*** (0.0028)		
internal conflict			-0.0857 (0.0722)				-0.0515 (0.0628)	
external conflict			0.1214 (0.1069)				0.0621 (0.0827)	
regime stability				0.0593** (0.0236)				0.0400* (0.0244)
VIF	2.02	2.24	2.19	2.16	1.81	2.06	2.16	1.89
Adjusted R ²	0.281	0.381	0.396	0.412	0.409	0.485	0.495	0.496
Observations	429	439	439	439	348	348	348	348

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

Note: Robust standard errors in parentheses.

After we could not identify a general effect of immigration on corruption, which provides evidence for our first hypothesis, in a second step we want to explore whether corruption migrates. 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 4.¹⁶

While the coefficient of immigration lagged by one period in Column (1) shows an insignificant effect on corruption, the regressions including the remaining four lags in Columns (2)-(5) show a highly significant positive effect on corruption. What is more, the coefficient value – hence, the magnitude of the effect on corruption – increases with increasing lag structure. The results indicate that immigration from highly corrupt countries boosts the corruption level in the host country. The corruption spillover does not occur immediately but with a delay, supporting Hypothesis *H2*. Imported corruption obviously requires some time to soak through society. This is in line with both Varese's (2011) point that adaptation to the new environment takes some time and the idea that OECD countries entail more sophisticated institutional structures, both requiring more time and effort to successfully circumvent the underlying structures in order to engage in successful corruption (cf. Dreher et al., 2009).

¹⁶ The results of the Tobit regression are presented in Table A3 in the Appendix. As it was previously the case, these results survive when using the alternative set of control variables.

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

corruption	(1)	(2)	(3)	(4)	(5)
migration _{t-1}	0.000059 (0.0001)				
migration _{t-2}		0.000170*** (0.0000)			
migration _{t-3}			0.000196*** (0.0001)		
migration _{t-4}				0.000248*** (0.0000)	
migration _{t-5}					0.000285*** (0.0000)
GDP p.c. _{t-1}	1.6397** (0.7416)	1.4224* (0.8187)	1.3207 (0.8830)	1.4982* (0.7389)	1.9629*** (0.5860)
population _{t-1}	0.0000 (0.0001)	0.0000 (0.0001)	0.0000 (0.001)	0.0000 (0.001)	0.0001 (0.001)
gov size _{t-1}	0.0883*** (0.0302)	0.1075*** (0.0291)	0.1195*** (0.0315)	0.1328*** (0.0341)	0.1333*** (0.0317)
democracy _{t-1}	-0.1932*** (0.0299)	-0.1342** (0.0503)	0.0803** (0.1624)	0.1235 (0.1622)	0.1723 (0.1538)
econ freedom _{t-1}	0.0652* (0.0368)	0.0705* (0.0409)	0.0705 (0.0415)	0.0627* (0.0342)	0.0358 (0.0232)
religious tension _{t-1}	0.2304 (0.1426)	0.2157 (0.1373)	0.2284 (0.1391)	0.1861 (0.1279)	0.1538 (0.1131)
VIF	1.29	1.31	1.32	1.31	1.31
Adjusted R ²	0.391	0.376	0.398	0.442	0.486
Observations	391	370	347	327	307

4. Summary

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 countries of origin for the period 1975-2011, 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 in response to existing unfavorable conditions such as poverty or unemployment. Given that migrants tend to assimilate in economic terms in the sense of aligning oneself with existing rules and norms in the target country, corruption

levels are likely to be relatively invariant against migration. On the contrary, poor socio-economic conditions typically constitute push factors of migration not only for a small positive selection of honest people, but also to the corruptible average individual. Consequently, favorable institutional settings of the target countries could thus be conducive to corruption levels in the wake of negative selection migration.

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. Our findings provide a more profound understanding of the economic implications associated with migration flows. Immigration policy should keep these in mind.

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Appendix

Table A1: Migration and Corruption - Tobit Baseline Regression

corruption	(1)	(2)	(3)	(4)	(5)
migration _{t-1}	-0.000099 (0.0001)				
migration _{t-2}		-0.000098 (0.0001)			
migration _{t-3}			-0.000050 (0.0001)		
migration _{t-4}				0.000045 (0.0001)	
migration _{t-5}					0.000171** (0.0001)
GDP p.c. _{t-1}	2.5831*** (0.3048)	2.2781*** (0.3232)	2.0030*** (0.3260)	2.0899*** (0.3339)	2.4952*** (0.3495)
population _{t-1}	0.0000 (0.0000)	0.0000 (0.0000)	0.0000 (0.0001)	0.0000 (0.0009)	-0.0000 (0.0000)
gov size _{t-1}	0.0503* (0.0288)	0.0603* (0.0317)	0.0775** (0.0324)	0.1012*** (0.0315)	0.1081*** (0.0307)
democracy _{t-1}	-0.2768*** (0.0558)	-0.2094*** (0.0754)	-0.0278 (0.0928)	0.0535 (0.0900)	0.1487* (0.0886)
econ freedom _{t-1}	0.0868*** (0.0201)	0.1009*** (0.0212)	0.1083*** (0.0214)	0.0962*** (0.0208)	0.0674*** (0.0207)
religious tension _{t-1}	0.3162*** (0.0803)	0.3065*** (0.0825)	0.3084*** (0.0820)	0.2546*** (0.0776)	0.2140*** (0.0724)
Observations	439	418	392	370	348

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

Table A2: Migration and Corruption - Tobit Baseline Regression with Alternative Controls

corruption	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)
migration _{t-1}	-0.000049 (0.0001)	-0.000039 (0.0001)	-0.000153** (0.0001)	-0.000082 (0.0001)				
migration _{t-5}					0.000136 (0.0001)	0.000105 (0.0001)	0.000157* (0.0001)	0.000135 (0.0001)
GDP p.c. _{t-1}			2.4228*** (0.3087)	-0.1586 (0.4486)			2.3470*** (0.3710)	1.9878*** (0.4906)
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}	0.0316 (0.0318)	0.0731** (0.0287)	0.0366 (0.0290)	0.0135 (0.0289)	0.0723** (0.0357)	0.1031*** (0.0307)	0.0963*** (0.0321)	0.1038*** (0.0304)
democracy _{t-1}	-0.0971* (0.0541)	-0.1596*** (0.0513)	-0.2447*** (0.0568)		0.2716*** (0.0977)	0.1953** (0.0883)	0.1470 (0.0906)	
econ freedom _{t-1}	0.1959*** (0.0184)	0.0756*** (0.0211)	0.0743*** (0.0213)	0.0423** (0.0211)	0.1740*** (0.0177)	0.0874*** (0.0190)	0.0616*** (0.0213)	0.0429* (0.0237)
religious tension _{t-1}	0.3629*** (0.0879)	0.2753*** (0.0815)	0.3310*** (0.0798)	0.2269*** (0.0784)	0.2455*** (0.0817)	0.1716** (0.0741)	0.2214*** (0.0727)	0.1572** (0.0737)
GDP p.c. growth	-1.0604 (1.8176)				-0.7138 (1.7013)			
trade openness		0.0214*** (0.0025)				0.0182*** (0.0024)		
internal conflict			-0.0317 (0.0465)				0.0167 (0.0519)	
external conflict			0.1333** (0.0527)				0.0560 (0.0496)	
regime stability				0.0911*** (0.0160)				0.0289* (0.0167)
Observations	429	439	439	439	348	348	348	348

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

Table A3: Migration from Corrupt Countries and Corruption - Tobit Regression

corruption	(1)	(2)	(3)	(4)	(5)
migration _{t-1}	0.000057 (0.0001)				
migration _{t-2}		0.000152 (0.0001)			
migration _{t-3}			0.000165** (0.0001)		
migration _{t-4}				0.000236** (0.0001)	
migration _{t-5}					0.000263*** (0.0001)
GDP p.c. _{t-1}	2.0540*** (0.3474)	1.6422*** (0.3752)	1.4086*** (0.3868)	1.6846*** (0.4037)	2.2598*** (0.4270)
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}	0.0593** (0.0294)	0.0629* (0.0328)	0.0660** (0.0332)	0.0821** (0.0323)	0.0881*** (0.0322)
democracy _{t-1}	-0.2606*** (0.0584)	-0.1920** (0.0785)	0.0178 (0.0947)	0.0746 (0.0920)	0.1490 (0.0911)
econ freedom _{t-1}	0.1029*** (0.0211)	0.1178*** (0.0224)	0.1249*** (0.0229)	0.1110*** (0.0224)	0.0813*** (0.0227)
religious tension _{t-1}	0.3061*** (0.0812)	0.3059*** (0.0833)	0.3174*** (0.0839)	0.2574*** (0.0795)	0.2072*** (0.0747)
Observations	391	370	347	327	307

Note: * $p < 0.10$, ** $p < 0.05$, *** $p < 0.01$

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