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**WHY DON'T MENA COUNTRIES TRADE MORE?
THE CURSE OF BAD INSTITUTIONS**

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Send correspondence to:

Chahir Zaki

Faculty of Economics and Political Science, Cairo University and ERF

chahir.zaki@feps.edu.eg

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Abstract

This paper explores the relation between institutions and trade in the Middle East and North Africa (MENA) region. Although most of the countries suffer from a clear deficit of “good” institutions, the MENA region was neglected in the literature on institutions and trade. This literature offers a broad consensus that bad institutions hamper trade, and that trade liberalization engenders institutional reforms. Taking into account the inverse relation between institutions and trade, we use a gravity model that explains bilateral trade for disaggregated goods and service sectors for 21 MENA countries over the period 1995-2014. Our results show that, in the presence of excessive zero trade observations, poor institutions can be considered as fixed export costs that help explain the zero probability of trade for some countries. Indeed, we find that institutions do matter for trade after controlling for the endogeneity problem between institutions and trade. Also, alternative aspects of institutions have different effects on trade in goods and trade in services.

JEL Classification: E02, F12, F14, F15.

Keywords: Trade, Gravity Model, Institutions, MENA.

ملخص

تستكشف هذه الورقة العلاقة بين المؤسسات والتجارة في منطقة الشرق الأوسط وشمال أفريقيا. وعلى الرغم من أن معظم البلدان تعاني من عجز واضح في وجود المؤسسات "الجيدة"، فإن منطقة الشرق الأوسط وشمال أفريقيا قد أهملت في الأدبيات المتعلقة بالمؤسسات والتجارة. وتقدم هذه الكتابات إجماعاً واسعاً على أن المؤسسات السيئة تعرقل التجارة، وأن تحرير التجارة يولد إصلاحات مؤسسية. ومع الأخذ في الاعتبار العلاقة العكسية بين المؤسسات والتجارة، فإننا نستخدم نموذجاً للجاذبية يفسر التجارة الثنائية للسلع المصنفة وقطاعات الخدمات لـ 21 بلداً في منطقة الشرق الأوسط وشمال أفريقيا خلال الفترة 1995-2014. وتبين نتائجنا أنه في ظل وجود ملاحظات مفرطة عن التجارة الصفرية، يمكن اعتبار المؤسسات الفقيرة تكاليف تصدير ثابتة تساعد على تفسير احتمال عدم إمكانية التجارة بالنسبة لبعض البلدان. في الواقع، نجد أن المؤسسات تهم التجارة بعد السيطرة على مشكلة التجانس بين المؤسسات والتجارة. كما أن للجوانب البديلة للمؤسسات آثار مختلفة على التجارة في السلع والتجارة في الخدمات.

1. Introduction

“Institutions are the rules of the game in a society” (North 1990, p.3). They shape the framework that facilitates economic transactions, hence reducing the uncertainty associated with such transactions. International trade involves a large number of uncertainties. Trading partners are often located far from each other, operating in different jurisdictions, different currencies and different languages. To decrease the uncertainty associated with international trade, trading partners sign an agreement and the institutional framework of both partners govern the enforcement of this contract. Thus, the security of international exchange depends on the strength of institutions. High quality institutions are expected to reduce transaction costs and thus have a positive effect on international trade. Inefficient institutions, in contrast, can hamper trade: corruption, inadequate information about international trading opportunities and imperfect contract enforcement dramatically increase transaction costs associated with international trade. Higher transaction costs harm the international competitiveness of domestic exporters and raise the final consumer price of imported goods.

The paper explores the relation between institutions and trade in the Middle East and North Africa (MENA) region. The quality of institutions in MENA countries is poor. Red tape and the proliferation of laws and regulations create opportunities for corruption. Not only has the quality of the administration been of some concern, but also the quality of political institutions such as political rights, civil liberties, and freedom of the press. These deficiencies have been reported as being responsible for the slow economic activity in the MENA region (Nabli, 2007). This unfortunate fact about MENA’s institutional quality can only leave you bewildered when you notice that the share of MENA’s trade in gross domestic product (GDP) is around 95%, well above the world average (60%) as well as the share of trade in GDP for high and middle-income countries (Authors’ calculations from the World Development Indicators, 2014). This should however not be surprising, as the MENA region accounts for a large share of world oil production and exports. A closer look to the data shows that MENA trade excluding oil is at about the world average while exports alone are below the world average. Behar and Freund (2011) show that, conditioning on GDP, distance and a number of other factors, a typical MENA country under-trades with other countries: exports to the outside world are at only a third of their potential.

The quality of institutions has received a great deal of attention in the trade literature. Part of that literature focused on the role of good institutions and trade openness for explaining growth (Chong et al., 2000; Acemoglu et al., 2001; Alcalá and Ciccone, 2001; Dollar and Kraay, 2002; Hall and Jones, 1999; Rodrik, 2000; Rodrik et al., 2002, etc.). The conclusion is that causality runs in all possible directions: first, good institutions matter for growth in the long run, and improves productivity. Accelerated growth and higher trade openness enhance the demand for a better institutional framework. Third, economic growth and good institutions enhance more trade openness.

More recent empirical studies investigate, in a gravity approach, the direct impact of institutions on trade. Anderson and Marcouiller (2002) show that bilateral trade is significantly affected by the trading countries’ institutional quality, with better institutions leading to larger trade volumes. Rauch and Trindade (2002) focus on the role of business and social networks in enforcing trade contracts and reducing information costs associated with international trade. They find that ethnic Chinese networks, increased bilateral trade more for differentiated than for homogeneous products. De Groot et al. (2004) find that the difference in the quality of domestic institutions explains why OECD countries trade disproportionately with each other, and with non-OECD countries. Koukhartchouk and Maurel (2003) show that institutions matter for bilateral trade. Furthermore, the convergence of institutional variables towards the European Union (EU)’s quality under the current process of EU enlargement and application of Russia to join the WTO - can be expected to deepen the level of the European trade

integration. In a different approach, Meon and Sekkat (2007) examine the extent to which different aspects of the institutional framework affect manufactured, exports, non-manufactured exports and total exports for a panel of countries over 1920-2000. They find that exports of manufactured goods are positively affected by the quality of institutions, but neither total exports nor non-manufactured exports are.

A newer theoretical and empirical strand of the literature explores trade in a context of imperfect contracts. Costinot (2005) and Acemoglu, Antràs and Helpman (2007) develop theoretical frameworks to show how institutional differences generate comparative advantage in an environment with imperfectly enforced contracts. Costinot (2005) predicts that when countries open up to trade, developed countries (with better institutions and higher workers' productivity) specialize in the more complex sectors, and developing countries in the less complex sectors. Berkowitz et. al. (2006)'s model concludes that good institutions located in the exporter's country enhance international trade and, in particular, trade in complex products. Those products are highly differentiated and their characteristics (size, design, material, and other specifications) are difficult to fully specify in a contract, rendering these contracts highly incomplete. Because contracts are less complete for complex than for simple products, it is more difficult for institutions to determine whether a contract for complex products has been breached or fulfilled. They argue that countries with high-quality institutions tend to export more complex products and import more simple products. Acemoglu, Antràs and Helpman (2007) show that greater contractual incompleteness leads to the adoption of less advanced technologies by the firm. Their model shows sizable productivity differences across countries with different contracting institutions. Matsuyama (2005) consider the role of institutions in alleviating problems with imperfect credit markets, and Voguel (2007) the role of institutions in alleviating moral hazard in imperfect labor markets. They both reach a similar conclusion that institutions can act as independent sources of comparative advantage. Nunn (2007) measures product's dependence to institutional (contracting) quality by constructing a variable measuring, for each good, the proportion of its intermediate inputs that require relationship-specific investments. Combining this measure with data on trade flows and judicial quality, he finds that countries with good contract enforcement specialize in the production of goods for which relationship-specific investments are most important. In Levchenko (2007), institutional differences are modelled within the framework of trade with incomplete contracts and are a source of comparative advantage, like productivity and factor endowments. Using data on U.S. imports disaggregated by country and industry, the author also provides evidence that institutional differences are an important determinant of trade flows.

Two main conclusions stem from the literature: institutions do matter for trade, but they more for more complex or contract-dependent sectors. Surprisingly, the MENA region has not been the subject of much research on the relation between institutions and trade, although most of the countries suffer from a clear deficit of "good" institutions. World Bank Investment Climate Surveys reveal that cumbersome licensing processes, complex regulations, opaque bidding procedures, the time and financial costs of regulatory and administrative barriers are major obstacles to conducting business. Other obstacles also include regulations that slow customs clearance, and the deficiencies of judicial systems. The MENA region compares poorly with other regions in the complexity and time needed to initiate and complete a legal claim. Unpredictability of enforcement is an even more serious problem (Nabli, 2007). Page and Van Gelder (2001) also argue that the problem for MENA countries is both with an institutional framework that does not align prices with costs, and with lack of an enabling environment that would permit and entice private provision. Such bad institutions where corruption prevails will consequently hamper competition and trade liberalization. At the same time, MENA non-oil exports are below the world average. However, the regional picture hides big differences in the contribution of non-oil exports of goods and services within MENA – in particular, between

oil importing and oil exporting countries. In most oil importing countries, the share of non-oil exports of goods and services in total exports exceeds the region's average (43%) and compares favorably to the world average (88%), yet they are insignificant as a share of total exports in GCC countries (Authors' calculations from the World Development Indicators database, 2015).

This paper attempts to capture the heterogeneity in MENA exports when exploring the relation between institutions and trade in region, the reason why the analysis is performed with disaggregated trade data. We propose a gravity equation that models the effect on the institutional gap between the MENA exporting country and its trading partner (MENA and non-MENA) for bilateral trade flows in 99 industrial sectors and 21 MENA countries over the period 1995 – 2014. We follow a significant part of the literature and use the World Governance Indicators database (Kaufman et al., 1999; 2002a; 2002b; 2005), that cover different aspects of institutions and therefore give us the opportunity to separate the impact of alternative measures of institutions on trade. Since our dataset for trade in goods shows excessive zero trade flows, we use a Zero-Inflated Poisson (ZIP) model that allows us to model the institutional gap between a MENA exporter and its trading partner as a fixed export cost that explains the zero probability of trade in specific sectors for some MENA countries. Given the key differences between trade in goods and trade in services - mainly that services have an intangible nature, so they cannot be stored, their characteristics are not observable before purchase, their consumption is often coincident to production and they do not physically move – we believe that the relation between institutions and trade may differ between goods and services. However, since bilateral trade flows in services is not available at a disaggregated level, we propose, like in van Lynden (2011), an adaptation of the gravity model, using unilateral variants of the variables that influence bilateral trade, for 17 service sectors over 2000 - 2014. These unilateral variants will be country-specific, instead of country-pair-specific. As the service trade database doesn't contain excessive zeros, we run a Poisson Pseudo-Maximum Likelihood Estimator (PPML) to capture the zero flow of trade in specific service sectors. For all regressions, we control for the endogenous characteristic of the institutional variable, by using a set of instruments that are exogenous to trade. Our results show that institutions do matter for trade after controlling for the endogeneity problem between institutions and trade. Also, alternative aspects of institutions exert different effect on trade in goods and services.

The paper is organized as follows: Section 2 describes some stylized facts of trade and institutions in the MENA region. Section 3 presents the data and explains the econometric specifications. Section 4 shows the empirical results and Section 5 concludes.

2. Trade and Institutions in the MENA Region

Although institutions matter for trade, quantifying institutional quality is a difficult task because many aspects of institutional structure are not easily observed. The literature tries to address this problem by using proxies for some aspects of institutional quality. Examples include the frequency of coups and revolutions as a proxy for government stability (Barro, 1991), the size of the black market and the percentage of national income in "contract intensive" activities as proxies for the effectiveness of economic institutions (Clague et al. 1996). Other studies use survey information on country risk (such as the risk of nationalization, the prevalence of corruption, the efficiency of dispute resolution procedures, etc.) collected by private firms from professionals who have done business in the country (Mauro, 1995; Knack and Keefer, 1995). Empirical studies on the direct impact of institutions on trade use various data on institutional quality such as survey data from businessmen by the World Economic Forum on contractual enforcement and corruption (respectively Meon and Sekkat, 2007; Anderson and Marcouiller, 2002; Levchenko, 2007), institutional quality database compiled by Kaufmann et al. (1999), (2002a and 2002b) and (2005) (De Groot et al., 2004;) and data

from the Heritage Foundation, Index of Economic Freedom (Koukhartchouk and Maurel, 2003).

Wood and Yang (2016) argue that World Governance Indicators¹ (WGI) scores for MENA countries are much lower than the scores of other countries, and significantly less than the scores of upper middle and high-income countries in five out of the six governance indicators. Moreover, among the six WGI indicators, MENA countries perform the worst in “Voice and Accountability”, given their level of development.

Figure 1 shows the percentile rank of all MENA countries on the six governance indicators covered by the WGI in 2013. It is quite obvious from Figure 1 that the United Arab Emirates, Qatar, Malta and Israel are the region’s top performers in “Control of Corruption”, “Government Effectiveness”, “Regulatory quality” and “Rule of Law”, holding a percentile rank of 70 and above. Israel drops down in the ranking to a percentile rank of 15.64 in “Political stability and absence of violence/Terrorism”, due to the Palestinian conflict. Malta is the region’s top performer in “Voice and accountability” (86.26), followed by Israel (66.35) and both countries rank far away from other MENA countries. It is noteworthy that Saudi Arabia that performs well or relatively well in all the WGI holds the last percentile rank in “Voice and accountability”. Similarly, Bahrain that performs well or relatively well in all the WGI holds the 8.53 percentile rank in “Political stability and absence of violence/terrorism” and 12.32 percentile rank in “Voice and accountability”. Iran, Iraq, Syria and Libya are generally bad performers in all indicators.

The WGI ranking for MENA countries has been quasi-static over years with only few exceptions. Data from WGI show that Egypt, that was initially an “average” performer, dropped drastically down in the percentile ranking between 1996 and 2013, losing 20 to 25 points in each indicator. The same applies to Libya, Syria and Yemen although those were initially “below average” performers. Iraq showed an average of 10 points improvement in all indicators except “Political stability” and “Rule of law” but still holds lower percentile ranks. Qatar, that used to hold “average” positions, went 25 to 30 points up in the ranking to become among the top performers in all indicators, except “Voice and accountability”.

Other institutional indicators and indexes such as the Global Competitiveness Index², the Index of Economic Freedom³ and the ease of “doing business ranking”, although measuring various

¹ The Worldwide Governance Indicators, the World Bank consist of six composite indicators of broad dimensions of governance covering over 200 countries since 1996: Voice and Accountability, Political Stability and Absence of Violence/Terrorism, Government Effectiveness, Regulatory Quality, Rule of Law, and Control of Corruption. These indicators are based on several hundred variables obtained from 31 different data sources, capturing governance perceptions as reported by survey respondents, non- governmental organizations, commercial business information providers, and public sector organizations worldwide. Control of Corruption captures perceptions of the extent to which public power is exercised for private gain, including both petty and grand forms of corruption, as well as "capture" of the state by elites and private interests. Government Effectiveness captures perceptions of the quality of public services, the quality of the civil service and the degree of its independence from political pressures, the quality of policy formulation and implementation, and the credibility of the government's commitment to such policies. Political Stability and Absence of Violence/Terrorism captures perceptions of the likelihood that the government will be destabilized or overthrown by unconstitutional or violent means, including politically-motivated violence and terrorism. Regulatory Quality captures perceptions of the ability of the government to formulate and implement sound policies and regulations that permit and promote private sector development. Rule of Law captures perceptions of the extent to which agents have confidence in and abide by the rules of society, and in particular the quality of contract enforcement, property rights, the police, and the courts, as well as the likelihood of crime and violence. Voice and Accountability captures perceptions of the extent to which a country's citizens are able to participate in selecting their government, as well as freedom of expression, freedom of association, and a free media.

² The Global Competitiveness Index has been used since 2005 by the World Economic forum as a comprehensive tool that measures the microeconomic and macroeconomic foundations of national competitiveness. It is a weighted average of many different components, each measuring a different aspect of competitiveness, all grouped in 12 pillars of competitiveness: institutions, infrastructure, macroeconomic environment, health and primary education, higher education and training, goods market efficiency, labor market efficiency, financial market development, technological readiness, market size, business sophistication, innovation.

³ The Index of Economic Freedom, the Heritage foundation evaluates countries in four broad policy areas that affect economic freedom: rule of law, government size, regulatory efficiency, and market openness. There are 10 specific categories: property

aspects of institutional quality, all agree on the fact that at least the majority of MENA countries are cursed with bad institutions, condemning them to suffer from authoritarianism, economic stagnation, state weakness, and other ills⁴. Yet, one might be surprised to know that in 2013, the MENA region witnessed the highest share of trade – and goods exports - in GDP (95%), outpacing developed regions like North America (32%) as well as developing ones like Sub-Saharan Africa (63%) (Figure 2). Nevertheless, a closer look to the data shows that the high level of exports, and therefore trade, is mainly explained by oil and petroleum exports, that account for more than 50% of total exports (Figure 3), and that MENA exports excluding oil is not only below the world average but also about half that average. Studies on the region also seem to agree that non-oil exports in MENA countries are only one-third of their expected levels, conditioning on country characteristics (Iqbal and Nabli, 2007; Bhattacharya and Wolde, 2010; Behar and Freund, 2011)

Figure 4 depicts the anatomy of non-oil manufacturing exports for the MENA region and shows that natural and precious stones has the highest share of non-oil exports (10.66% of total exports), followed by electrical machinery and equipment (7.45% of total exports), plastics (5.92% of total exports), machinery and mechanical appliances (4.74% of total exports), organic chemicals (3.72% of total exports), vehicles other than railway and parts (3.39% of total exports), aluminum (2.37% of total exports). The share of all remaining non-oil sectors is less than 2% of total exports and those that are less than 1% of total exports were dropped from Figure 4 for the sake of brevity and clarity.

The conclusion that we can draw from the discussion above is that MENA exports are insufficient, highly concentrated and less diversified. The picture doesn't look much brighter at the country level: Figure 3b shows that most GCC countries as well as Libya, Algeria, Iraq and Iraq are highly dependent on oil exports, with oil exports accounting for more than 90% of total exports for Libya and Iraq and for almost 80% for Kuwait and Algeria. By contrast, the share of oil exports in total exports is zero for Lebanon, Jordan and Israel, and below 20% for Egypt, Morocco and Tunisia.

For those less oil-dependent countries, Figure 5 looks at the manufacturing sectors that account for the biggest shares in the country's total exports. A common feature between most countries is that exports are skewed towards low-value added goods, such as food and beverage, articles of apparel and clothing, and other basic manufactured products (aluminum, iron and steel, natural or cultured pearls, fertilizers, plastics, optical and photographic). Exceptions to that are: Israel where electrical machinery, pharmaceutical products, and chemical products stand right after natural and cultural pearls as top exporting sectors, with respective shares of 13%, 9%, and 8% of total exports; Tunisia where electrical machinery alone accounts for 25% of total exports; Morocco where the share of electrical machinery in total exports is 16% and the share of vehicles is 10%; Malta where electrical machinery alone accounts for 35% of total exports and pharmaceutical products for 11%.

The share of service trade in MENA GDP is low with nearly 16%, although this percentage is higher than the other developed and developing regions (Figure 2a). Figure 2b shows that the share of service exports in GDP is much lower, around 6%, although it is very close to the world average and exceeds the shares for the majority of the other regions. Sectors like tourism, transportation, remittance, and to a lower extent, financial, transportation and

rights, freedom from corruption, fiscal freedom, government spending, business freedom, labor freedom, monetary freedom, trade freedom, investment freedom, and financial freedom. Scores in these categories are averaged to create an overall score. Based on an average score, each of 178 countries graded in the 2015 *Index* is classified as “free” (i.e., combined scores of 80 or higher); “mostly free” (70-79.9); “moderately free” (60-69.9); “mostly unfree” (50-59.9); or “repressed” (under 50).

⁴ For the sake of brevity, the discussion of the performance of MENA countries on institutional indicators/indexes such as the Index of Economic Freedom, the Global Competitiveness Index and the Ease of Doing Business ranking has been moved to Appendix 1.

telecommunication services are the driving forces behind this stylized fact. At the country level, Malta shows the highest share of service exports in GDP (120%), followed by Lebanon (35%), Djibouti (25%) and Jordan (around 20%). Egypt, West Bank and Gaza, Bahrain, Tunisia, Israel and Morocco all exceed the region's average, with a share of service exports in GDP between 7% and 13% (Figure 6).

Figure 7 looks at the anatomy of service exports for selected less-oil-dependent countries and shows that commercial services account for more than 90% of total service exports by country. More importantly, the share of commercial services in total service exports is 100% for Israel, Lebanon and Malta. Travel is on the top of the list of commercial services, accounting for 61% of commercial service exports in Jordan, 50% in Tunisia, 45% in Morocco and 44% in Lebanon. Transport accounts for 45% of Egypt's commercial service exports, 25% in Tunisia, 22% in Jordan and 20% in Morocco. Financial Services, Other Business Services and Telecommunication Services are next on the list, with Financial Services being particularly important in Malta (29% of commercial service exports) and Lebanon (12%); Telecommunication Services being significant in Israel (29% of commercial service exports) and Morocco (10%); Other Business Services being considerable in Israel (33%), Malta (24%), and Lebanon (20%).

Understanding the anatomy of MENA exports is essential in that dependence on institutions tends to be a sectoral characteristic. In other words, and as agreed upon in the literature, some sectors rely on institutions more than others: complex goods require a large number of inputs needed in the production process, and since each input entails a contract in order to be acquired, then complex goods rely more on the quality of contract enforcement, and on the country's institutional quality.

3. Methodology

The methodology used in this article draws on the pioneering work of Tinbergen (1962) and Anderson (1979): the gravity model. Standing as an essential tool in the empirics of international trade to predict bilateral trade flows using multiple determinants of trade, the gravity model has undergone over years significant theoretical and empirical improvements (Mac Callum, 1995; Feenstra et al., 2001; Feenstra, 2002; Anderson and van Wincoop, 2003; Evenett and Keller, 2002; Santos Silva and Tenreyro, 2006), enforcing its theoretical base and narrowing the gap between theoretical and empirical findings.

Referring to the literature, we would expect good institutions to reduce the level of uncertainty inherent to the interaction between trading partners and thus decrease the transaction costs associated with international trade. By contrast, inefficient institutions, both in the home and the foreign country, can lead to serious obstacles for trade. To control for institutional quality, we follow a significant strand of the literature and use the WGI that report aggregate and individual governance indicators for over 200 countries and territories over the period 1996–2015, for six dimensions of governance: Voice and Accountability, Political Stability and Absence of Violence/Terrorism, Government Effectiveness, Regulatory Quality, Rule of Law, and Control of Corruption. In line with recent trade theory under incomplete contracts (Costinot, 2005; Matsuyama, 2005; Vogel, 2006; Acemoglu et al., 2007; Levchenko, 2007; Nunn, 2007), we test for the effect of the institutional quality gap on trade, that is the difference of institutional quality captured by each of the six governance indicators between the MENA exporter and its trading partner (MENA or non-MENA). We also take into consideration another finding in the literature, that some sectors rely on institutions more than others, and run the regressions at a disaggregated sectoral level for both manufacturing and service sectors.

For bilateral trade in manufacturing, we use the UN Comtrade database with 99 sectors (two-digit HS commodities) for the period 1995 – 2014⁵. Our estimable equation is:

$$\ln X_{ijkt} = \beta_0 + \beta_1 \ln GDP_{it} + \beta_2 \ln GDP_{jt} + \beta_3 \ln Dist_{ij} + \beta_4 Contig_{ij} + \beta_5 Comcol_{ij} + \beta_6 Col_{ij} + \beta_7 Col.45_{ij} + \beta_8 RTA_{ij} + \beta_9 Com.Lang_{ij} + \beta_{10} OilRent_{it} + \beta_{11} Inst.Gap_{ijt} + \sigma t + \varepsilon_{ijkt} \quad (1)$$

where X_{ijkt} is the bilateral trade flow between country i (MENA country) and country j (MENA/non-MENA) in year t for sector k ; $\ln GDP_{it}$ and $\ln GDP_{jt}$ are country i and j 's real gross domestic product in year t ; $\ln Dist_{ij}$ is the bilateral distance between the two countries; $Contig_{ij}$, $Comcol_{ij}$, Col_{ij} , $Col.45_{ij}$, RTA_{ij} and $Com.Lang_{ij}$ are dummy variables that take the value of 1 if the two countries share common borders, have been colonized by the same colonizer, had previous colonial links, are members of a regional trade agreement and share common languages; $OilRent_{it}$ is the share of oil rent in GDP for the MENA exporting country, to control for the stylized fact discussed in Section 2, that the inflation in MENA exports is explained by oil and petroleum exports; $Inst.Gap_{ijt}$ is the institutional gap between the MENA exporting country and its trading partner, that is for each of the 6 WGI indicators, the difference of the score between MENA country i and its trading partner country j in year t . In other words, we have 6 institutional gap variables, that are entered separately in the equation because they tend to be highly correlated with each other; σ is year dummies and ε_{ijkt} is the discrepancy term.

Equation (1) suffers for two important technical problems:

1. First, in line with the literature on trade and institutions, institutions are inherently endogenous, as causality runs in both directions. On the one hand, good institutions improve productivity and thus enhance trade. On the other hand, higher trade openness reinforces the demand for a better institutional framework. Therefore, the coefficient of the institutional variable in Equation (1) tends to be biased. Indeed, the Durbin (1954) and Wu-Hausman (Wu 1974; Hausman 1978) statistics for Equation (1) are significant, and accordingly institutions must be treated as endogenous. One of the many methods of correcting the bias includes instrumental variable regression. We opt for the following instrumental variables for the institutional gap:
 - Capped potential settler mortality: As argued in Acemoglu et al. (2001), Europeans used various types of colonization policies, which created different sets of institutions. In places where the European mortality rate from disease was relatively high, Europeans created extractive institutions to transfer resources from a colony to themselves, that is, economic institutions supporting slavery, monopolies, legal discrimination, and insecure property rights. By contrast, in places where the European mortality rate from disease was relatively low, Europeans settled and tried to replicate, or improve over, European institutions. This led to inclusive institutions, which were much better for economic growth. These colonial institutions, once set up, have tended to persist. “Based on this reasoning, Acemoglu et al. (2001) suggest that the potential mortality rates expected by early European settlers in the colonies could be an instrument for current institutions in these countries. The basic idea of their theory can be summarized as follows:
 - Potential mortality of European settlers ->settlements->past institutions->current institutions” (Acemoglu et al., 2014). Since high mortality estimates could have resulted from epidemics, unusual idiosyncratic conditions, or small sample variation, and thus could be potentially unrepresentative of mortality rates that would ordinarily have been expected by settlers, Acemoglu et al. (2012) use an

⁵ For a description of the list of countries and sectors included in the dataset, kindly refer to Appendix 2.

alternative formulation of the instrument, capping potential settler mortality estimates at 250 per 1,000.

- Population density in 1500: Acemoglu et al. (2002) argues that the expansion of European overseas empires starting at the end of the fifteenth century caused an "institutional reversal": European colonialism led to the development of inclusive institutions in previously poor areas (where the population density was low), while introducing extractive institutions in previously prosperous areas (where the population density was high). The main reason for the institutional reversal is that in relatively poor regions, Europeans develop institutions encouraging investment. In contrast, in prosperous regions, they developed extractive institutions that are more profitable for the colonizers.
 - The same legal origin of the country's law: One strand of the political economy literature suggests that colonization by the British led to better outcomes than colonization by the French or by the smaller colonial powers, because of either the adaptability of British legal institutions to the market economy or the higher levels of personal freedom provided by British culture (Lee and Schultz, 2012). Therefore, having the same legal origin of the country law is expected to decrease the institutional gap between the exporter and importer.
 - Primary school enrollment rates in 1900 (relative to the population aged between 6 and 14): variation in this variable reflects certain institutional and idiosyncratic differences across colonies (Acemoglu et al., 2014). A higher primary school enrollment rate in 1900 is expected to increase the institutional gap between the exporter and importer.
 - The share of the Muslim population in 1900: as our sample include several countries with a Muslim majority, we include the share of Muslim population to control for the effect of religion on institutions as we believe that this variable is exogenous.
2. Second, the risk associated with disaggregated trade data is the existence of zero-valued trade flows, as all countries do not produce all available goods, nor do they all have an effective demand for all available goods. One of the shortcomings of the log-normal specification of the gravity equation is that it cannot deal well with zero-valued trade flows, since the logarithm of zero is undefined (Burger et al., 2009), which justifies the use of alternative regression techniques. To deal with the zero-bilateral trade issue, (Santos Siliva and Tenreyro, 2006) suggest a Poisson pseudo-maximum likelihood (PPML) regression. The PPML estimator offers several desirable properties for gravity models. First, it is consistent in the presence of fixed effects, which can be entered as dummy variables as in simple Ordinary Least Squares (OLS) regressions. Second, the Poisson estimator naturally includes observations for which the observed trade value is zero. Third, the interpretation of the coefficients from the Poisson model is straightforward, and follows exactly the same pattern as OLS. However, one of its important limitations is that it is vulnerable to the problem of excessive zeros in the trade observations.

How excessive are the zero trade flows in our database? Figure 8 shows the share of zero trade flows by country. This share is above 50% for all MENA countries, exceeds 70% for 13 out of the 21 MENA countries, and sometimes goes beyond 90% for few of them (Djibouti, Iraq and Libya). Figures 9a and 9b look at the share of zero trade flows by sector, displaying the sectors with the lowest and highest share of zero trade flows, respectively. From Figure 9a, we note that the lowest share of zero trade flows is as high as 60-65%, for sectors like "machinery, mechanical appliances" and "electrical machinery and equipment". This share can go up to 80-85% for sectors like "tin and articles thereof", and "arm and ammunition" (Figure 9b). Therefore, those excessive zeros in our database should be treated cautiously. Burger et al.

(2009) propose the usage of the zero-inflated models, as they are noted to be consistent in the presence of excessive zeros.

To deal with our excessive zeros, we opt for a zero-inflated Poisson regression analysis. The zero-inflated Poisson model (Lambert, 1992; Greene, 1994) considers two different kinds of zero-valued trade flows: countries that never trade and countries that do not trade now, but potentially could trade in the future (based on the latent probability to trade according to dimensions like distance, institutional proximity, and other). Therefore, a distinction is made between pairs of countries with exactly zero probability of trade, pairs of countries with a non-zero trade probability who still happen not to be trading in a given year, and pairs of countries that are trading. Accordingly, the estimation process of the zero-inflated Poisson model consists of two parts: a logit regression of the probability that there is no bilateral trade at all, and a Poisson regression of the probability of each count for the group that has a non-zero probability or interaction intensity other than zero. Hence, the profitability of trade, which reflects the trade potential, is separated from the volume of trade as stemming from two different processes. Although both processes may depend on the same variables, as the profitability will generally rise if the potential size of trade gets larger, this does not imply that profitability only reflects the potential size of the flow. In fact, some variables may be more important in determining the profitability of bilateral trade rather than the potential volume of bilateral trade (Burger et al, 2009).

This discussion is particularly important for developing countries, where the concern of excessive zeros arises from the fact that many of the zero trade observations may reflect inability to trade due to the lack of technical and financial capability, as well as the capacity to comply with importing countries standards. This inability to trade may also be explained by a poor institutional framework that increases the uncertainty of international transactions and thus the cost of international economic exchange (North, 1981). These costs are largely independent of the size of the transaction, vary across countries, and are quite persistent over time. In short, they are potentially good candidates for fixed export costs. Therefore, it would be interesting to show first, the extent to which poor institutions can explain the “certain zero” trade flows. Indeed, Figure 10 shows that all the composite indicators of the WGI, except “Political Stability” are highly and negatively correlated with the share of zero trade flows, that is any improvement of each of those indicators decreases the probability of zero trade.

Our zero inflated Poisson model for bilateral trade in goods is specified as follows:

Logit regression:

$$P(\text{Trade} = 0)_{ijkt} = \beta_0 + \beta_1 \ln GDP_{it} + \beta_2 \ln GDP_{jt} + \beta_3 \ln Dist_{ij} + \beta_4 Contig_{ij} + \beta_5 Com\ col_{ij} + \beta_6 Col_{ij} + \beta_7 Col.45_{ij} + \beta_8 RTA_{ij} + \beta_9 Com.Lang_{ij} + \beta_{10} OilRent_{it} + \beta_{11} InstGap_{ijt} + \text{year dummies} + \epsilon_{it} \quad (2)$$

Poisson regression:

$$X_{ijkt} = \beta_0 + \beta_1 \ln GDP_{it} + \beta_2 \ln GDP_{jt} + \beta_3 \ln Dist_{ij} + \beta_4 Contig_{ij} + \beta_5 Com\ col_{ij} + \beta_6 Col_{ij} + \beta_7 Col.45_{ij} + \beta_8 RTA_{ij} + \beta_9 Com.Lang_{ij} + \text{year dummies} + \epsilon_{it} \quad (3)$$

The endogeneity of the institutions variable is accounted for with a two-stage analysis for all the regressions. The first step predicts the institutional gap between the MENA exporter country and its trading partner (MENA or non-MENA), for each of 6 composite indicators of the WGI, according to the following equation:

$$InstGap_{ijt} = \beta_0 + \beta_1 SameLeg_{ij} + \beta_2 lcapped_exp_{it} + \beta_3 lpd1500s_exp_i + \beta_4 prienr1900_i + \beta_5 musl1900_i + \sigma t + \epsilon_{it} \quad (4)$$

$SameLeg_{ij}$ is a dummy variable equal to 1 if both countries share the same legal origin the law; $lcapped_exp_{it}$ represents the logged capped settler mortality in the MENA exporter country at year t ; $lpd1500s_exp_i$ is the log population density in 1500 in the MENA exporter country; $priorenr100_i$ is the primary school enrollment rates in 1900 and $musl199_i$ the share of the Muslim population in 1900 in the MENA exporting country, and ε_{ijt} is the discrepancy term. We also add year dummies to control for any year unobservable characteristic.

In the second step, the predicted value of the institution gap is introduced in Equation (3). As discussed earlier, the Logit regression represents the probability of zero trade. Therefore, the gravity variables having a positive effect on bilateral trade are expected to decrease the probability of zero trade between two countries at a given year, namely the exporter and importer's GDP, the contingency, the variables on colonial links, common language and RTA. By contrast, the institutional gap between the exporter and importer as well as distance and oil rent are expected to increase the probability of zero trade. Finally, the Vuong test (Vuong, 1989) shows that the zero-inflated Poisson model is favored above its non-zero inflated counterpart, due to the existence of excessive zero counts.

For services, bilateral trade data is only available for few MENA countries in the UN Comtrade database, and to our knowledge, is not available at a disaggregated level elsewhere. Therefore, the dependent variable is total exports in 17 service sectors for 21 countries over the period 2000 – 2014⁶. Domestic institutions are also expected to affect a country's overall level of openness, in the sense that countries with better institutions trade more. Inefficient institutions represent a cost factor for domestic exporters and thus lower their international competitiveness with negative repercussions on total export flows. Unlike manufacturing sectors, our services database doesn't show excessive zeros, and the Vuong test (Vuong, 1989) does not give support to the ZIP model over the regular Poisson model. Therefore, for services, we opt for a PPML model. Our estimable equation is as follows:

$$X_{ikt} = \beta_0 + \beta_1 GDP_{it} + \beta_2 Lat_i + \beta_3 Arabic_i + \beta_4 France_i + \beta_5 UK_i + \beta_6 OilRent_{it} + \beta_7 InstExp_{it} + \sigma t + \varepsilon_{it} \quad (5)$$

X_{ikt} is total exports of country i in sector k at year t . Our explanatory variables are the natural log of country i 's GDP and unilateral variants of the gravity-type variables: a dummy variable taking the value of 1 if twenty percent of the population speak Arabic and zero otherwise (*Arabic*). We also include two dummy variables to determine whether a country has been colonized by France or the United Kingdom. We capture the effect of distance by taking the average distance between each country and its trade partners (*Lat*). *OilRent_{it}* is the share of oil rent in GDP for the MENA exporting country. *Instexp_{it}* represents the institutional quality in country i measured in turn by each of the 6 WGI indicators; σ is year dummies and ε_{ijt} is the discrepancy term.

As *Instexp_{it}* is treated as endogenous, we follow the same two-stage analysis discussed above where we first predict the institutional quality of the MENA exporter country according to the following equation:

$$InstExp_{it} = \beta_0 + \beta_1 LegalFr_i + \beta_2 LegalUK_i + \beta_3 lcapped_exp_{it} + \beta_4 lpd1500s_exp_i + \beta_5 priorenr1900_i + \beta_6 musl199_i + \sigma t + \varepsilon_{it} \quad (6)$$

where *LegalFr_i* and *LegalUK_i* represent the legal origin of the country's law (whether French or UK). In the second step, the predicted values of institutions are introduced in Equation (5).

4. Empirical Findings

Our findings for goods trade are presented in Tables 1-3. Table 1 displays the ZIP regressions for goods trade without instrumental variables. The gravity variables have the expected sign.

⁶ For a description of the list of countries and sectors included in the dataset, kindly refer to Appendix 2.

In particular, the gravity variables having a positive effect on bilateral trade decrease, as expected, the probability of zero trade between two countries at a given year (Logit regression), namely the exporter and importer's GDP, the contingency, the variables on colonial links, common language and RTA. By contrast, Distance and oil rent also increases the probability of zero trade. More importantly, the institutional gap exerts a positive effect on the probability of zero trade, for 5 out of the six composite indicators of the WGI.

However, those results are not reliable due to the endogeneity of the institutional variables. As discussed in the previous section, we control for the inverse causality between trade and institutions through a two-step analysis, where we first run equation (5), then introduce the predicted value of the institutional gap between the exporter and importer in Equation (3). The instruments that we used following Acemoglu et al. (2014), namely the same legal origin the law, the logged capped settler mortality in the MENA exporter country, the log population density in 1500 in the MENA exporter country, the primary school enrollment rates in 1900 and the share of the Muslim population in 1900 in the MENA exporting country, are all significant in explaining the institutional gap for the 6 WGI indicators, and we reject the null hypothesis according to which instruments are weak. Then, the predicted value of the institutional gap for each of the 6 WGI indicators is implemented in Equation (3), the Logit regression of the zero-inflated Poisson model. Table 2 shows that the variables have the expected signs in the Logit regression. Indeed, the exporter and importer's GDP as well as variables such contingency, common language RTA, and colonial links all have a significant negative effect on the probability of zero trade, while distance and oil rent has a positive significant impact on the probability of zero trade. Our variable of concern, namely the institutional gap between the MENA exporter country and its partner, exerts a significant positive impact on the probability of zero trade. And the magnitude of this effect varies according to the aspect of the institutions that is taken into account:

- If the institutional gap based calculated based on “Government Effectiveness” increases by one point, the odds that trade would be “certain zero” increases by a factor of $\exp(0.105)=1.11$.
- If the institutional gap based on “Control of Corruption” increases by one point, the odds that trade would be “certain zero” increases by a factor of $\exp(0.0877)=1.09$.
- If the institutional gap based on “Regulatory Quality” increases by one point, the odds that trade would be “certain zero” increases by a factor of $\exp(0.0543)=1.06$.
- If the institutional gap based on “Rule of Law” increases by one point, the odds that trade would be “certain zero” increases by a factor of $\exp(0.0523)=1.05$.
- If the institutional gap based on “Political Stability” increases by one point, the odds that trade would be “certain zero” increases by a factor of $\exp(0.0163)=1.02$.
- If the institutional gap based on “Voice and Accountability” increases by one point, the odds that trade would be “certain zero” increases by a factor of $\exp(0.00730)=1.01$.

The classical gravity variables entered in the Poisson regression have the expected sign and significance level, i.e., the coefficients of the exporter and importer's GDP are both positive and significant; the coefficient of the distance is negative and significant; RTA, colonial variables, contingency and common language have positive and significant coefficients.

Finally, as dependence on institutions differs among sectors, we run the regressions for each manufacturing sector. For the sake of brevity and clarity for the reader, the results are moved to Appendix 3 (Tables A1 to A3) and we summarize the main findings in Table 3, by providing a ranking for the magnitude of the effect of the 6 aspects of the institutional variables on exports in different manufacturing sectors. In other words, when we run the regressions for a given manufacturing sector, we report the highest significant coefficient of the institutional gap in Rank 1, the second highest in Rank 2 and so on, for the 6 institutional variables. Three remarks

are worth to be mentioned: first, the coefficient of the institutional quality gap is positive and significant for all manufacturing sectors, except for mineral fuels and mineral oils, aircraft, arms and ammunition, that appear not to be affected by any aspect of the institutional gap. Second, the rank of the effect of the 6 aspects of the institutional gap on bilateral exports is very close to what has been discussed above in Table 2, that is “Government Effectiveness” has the highest positive impact on the probability of zero trade flows in the majority of manufacturing sectors, followed by “Control of Corruption”, then “Rule of Law” and “Regulatory Quality”. “Political Stability” and “Control of Corruption” seem to affect the least the probability of zero trade flows. Third, homogeneous and low value-added goods (processed food and beverage) as well as differentiated and high value-added products are both affected by the quality of institutions, but the rationale behind this finding is different for both categories of goods: although food and beverages are not complex goods by nature, and therefore do not require a large number of contracts to acquire inputs – and, as discussed in the literature, should be less affected by the quality of institutions than more complex goods -, such products are perishable and require proper food storage to maintain food quality and reduce the chance of contracting a food-borne illness. Therefore, institutions involved in food control play a crucial role in ensuring that the food put on the market is of good quality and safe for consumption, and not a source of disease and infection. The rationale through which the quality of institutions affects trade in differentiated and high value-added products is different and documented in the literature. Because of their heterogeneity, diverse varieties of a differentiated product (machines, high technology equipment, etc.) cannot be compared on the basis of prices alone and cannot be traded on organized exchanges. They are traded through search and match between traders, customers and suppliers. The process of search is facilitated by the quality of the institutional framework that improves the information flow and knowledge of foreign markets (Rauch, 1999; Rauch and Trindade, 2002).

As bilateral trade data is not available for disaggregated service sectors, we use the unilateral variant of the gravity model specified in the previous section (Equation 6). Table 4 shows the results of the PPML model without instrumentation. The gravity variables have their expected signs: GDP and colonial dummies (France and UK) have a significant positive impact on service exports and oil rent a significant negative impact on those exports. Most importantly, the quality of the exporter’s institutions has a positive significant impact on service exports. However, as institutions are treated as endogenous, those results are not reliable.

Table 5 displays the results with instrumental variables. All the instruments namely, the legal origin the law, the logged capped settler mortality, the log population density in 1500, the primary school enrollment rates in 1900 and the share of the Muslim population in 1900 in the MENA exporting country are significant in explaining the 6 institutional variables, and we reject the null hypothesis according to which instruments are weak. Then, the predicted value of the institutional quality for each of the 6 WGI indicators is implemented in Equation (5), the PPML model. All the gravity variables are significant and have the expected signs. Most importantly, only 2 of the 6 institutional variables have a positive and significant impact on service exports: “Political Stability” and “Rule of Law”. As “Rule of Law” improves by 1%, service exports increase by 0.377%. As “Political Stability” improves by 1%, service exports increase by 1.16%.

Similar to manufacturing sectors, we run the regressions by for each service sector (Table A4 in Appendix 3) and we summarize our findings in Table 6, by providing a ranking for the effect of each aspect of the institutional quality on service sectors. Three remarks are worth to be highlighted: first, only “Other Business Services” and “Personal Remittances” are affected by all aspects of the institutional quality. “Travel” and “Financial Services” are affected by all aspects of institutions except one: “Voice and Accountability” for “Travel” and “Rule of Law” for “Financial Services”. Second, “Voice and Accountability” is the only aspect of institutions

exerting a significant positive impact on “Communications services”, “Computer and information services” and “Royalties and license fees”. Third, “Political Stability” exerts the highest positive impact on service exports in the majority of sectors. Then come “Rule of Law” and “Voice and Accountability” in the ranking, followed by “Control of Corruption”, “Government Effectiveness” and “Regulatory Quality”.

In a nutshell, we can summarize our main findings in five main points. First, the institutional gap between the MENA exporter and its trading partner helps explain the probability of bilateral zero trade flows in manufacturing sectors. Second, the magnitude of the effect on the probability of zero trade flows depends on the aspect of the institutions that is considered, that is “Control of Corruption” exerts the highest positive impact on the probability of zero trade flows, followed by “Regulatory Quality”, then “Rule of Law”, “Political Stability”, then “Voice and Accountability”. Third, at the sectoral level, both low and high value-added manufacturing products appear to be affected by the quality of institutions. Fourth, only two measures of institutions exert a significant positive impact on service exports, “Political Stability” and “Rule of Law”. Fifth, at the sectoral level, service sectors such as “Remittances”, “Other service sectors”, “Travel” and “Financial Services” are the most sensitive to alternative aspects of the institutional quality.

5. Conclusion and Policy Recommendations

This paper explores the relation between institutions and trade in the MENA region. There is a common consensus that the quality of institutions in MENA countries is poor. At the same time, the region hides big differences in the contribution of non-oil exports of goods and services within MENA – in particular, between oil importing and oil exporting countries. In most oil importing countries, the share of non-oil exports of goods and services in total exports exceeds the region’s average (43%) and compares favorably to the world average (88%), yet they are insignificant as a share of total exports in GCC countries (Authors’ calculations from the World Development Indicators database, 2015). In an attempt to capture the heterogeneity in MENA exports, we run the regressions for disaggregated data. We propose a gravity equation that models the effect on the institutional gap between the MENA exporting country and its trading partner for bilateral trade flows in 99 industrial sectors and 21 MENA countries over the period 1995 – 2014, and take into account different aspects of institutions, as covered by the WGI. Since our dataset for trade in goods shows excessive zero trade flows, we use a ZIP model that allows us to model the institutional gap between a MENA exporter and its trading partner as a fixed export cost that explains the zero probability of trade in specific sectors for some MENA countries. Since bilateral trade flows in services is not available at a disaggregated level, we propose, like in van Lynden (2011), an adaptation of the gravity model, using unilateral variants of the variables that influence bilateral trade, for 17 service sectors over 2000 - 2014. These unilateral variants will be country-specific, instead of country-pair-specific. As the service trade database doesn’t contain excessive zeros, we run a Poisson Pseudo-Maximum Likelihood Estimator (PPML) to capture the zero flow of trade in specific service sectors. For all regressions, we control for the endogenous characteristic of the institutional variable, by using a set of instruments that are exogenous to trade.

We find that the institutional gap between the MENA exporter and its trading partner helps explain the probability of bilateral zero trade flows in manufacturing sectors. In addition, the magnitude of the effect on the probability of zero trade flows depends on the aspect of the institutions that is considered, that is “Control of Corruption” exerts the highest positive impact on the probability of zero trade flows, followed by “Regulatory Quality”, then “Rule of Law”, “Political Stability”, then “Voice and Accountability”. For services, only two measures of institutions exert a significant positive impact on service exports, “Political Stability” and “Rule of Law”.

The main conclusion that stems from the paper is that institutions do matter for trade. Therefore, to reap the benefits of trade liberalization on growth, improving the quality of institutions should be the first item on the liberalization agenda for the MENA region. It is crucial that the region's countries become aware of the penalizing effect of bad institutions on their trade performance - and therefore on growth - and dispose of the factors that lie behind the bad quality of their institutions such as corruption and political instability.

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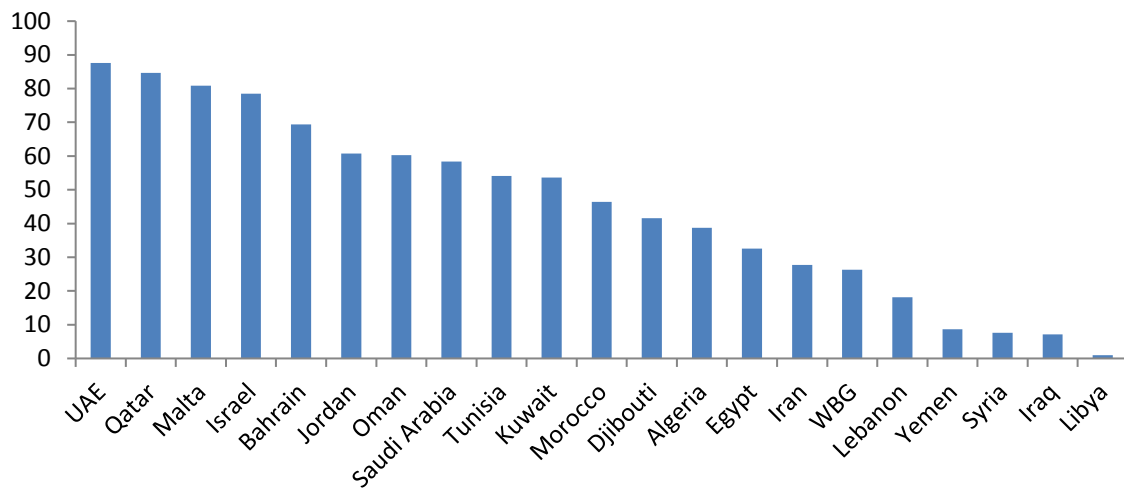
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Figure 1: Worldwide Governance Indicators for MENA Countries in Percentile Rank, 2013

(a) Control of Corruption



(b) Government Effectiveness

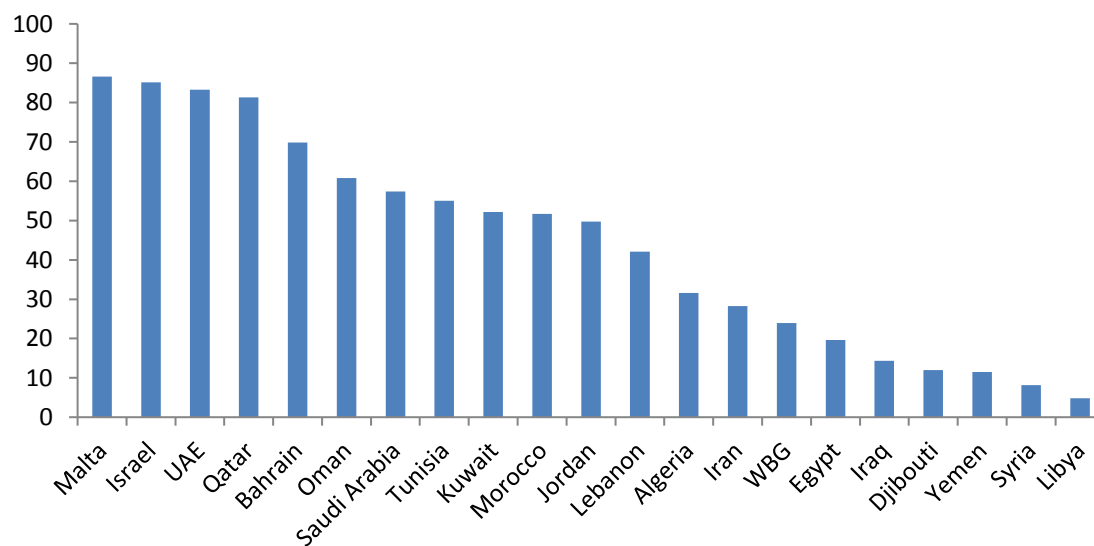
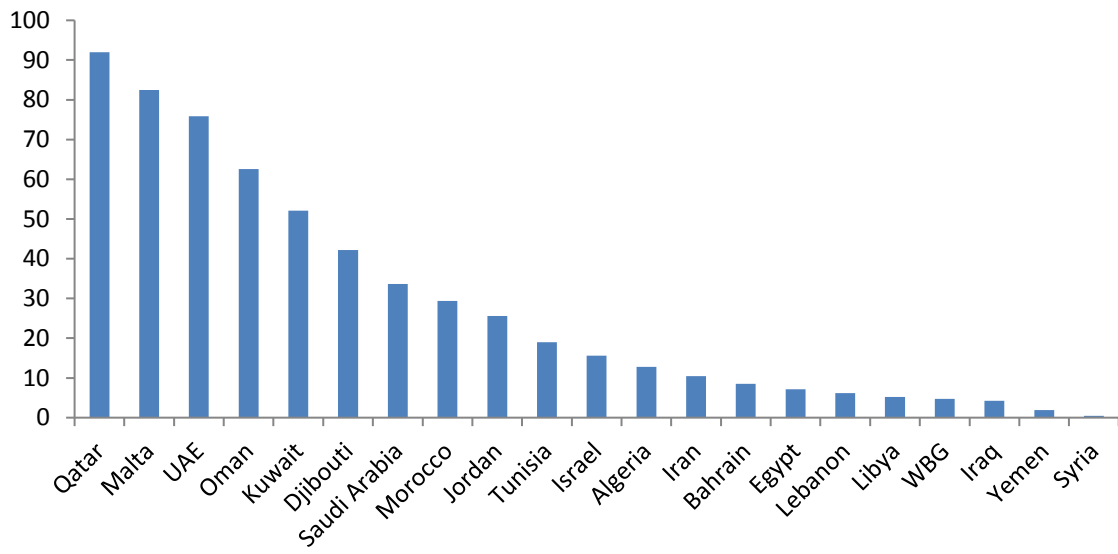


Figure 1: Continued

(c) Political Stability and Absence of Violence/Terrorism



(d) Regulatory Quality

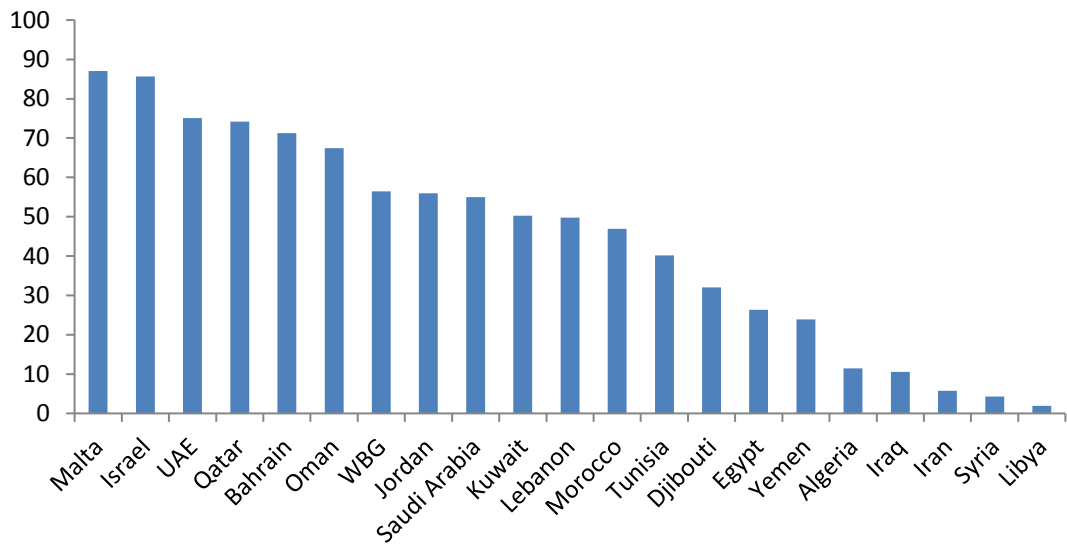
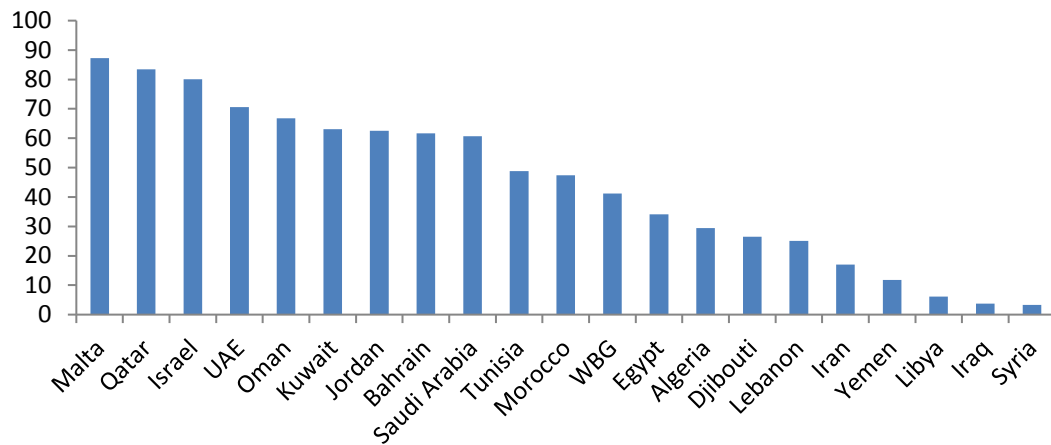
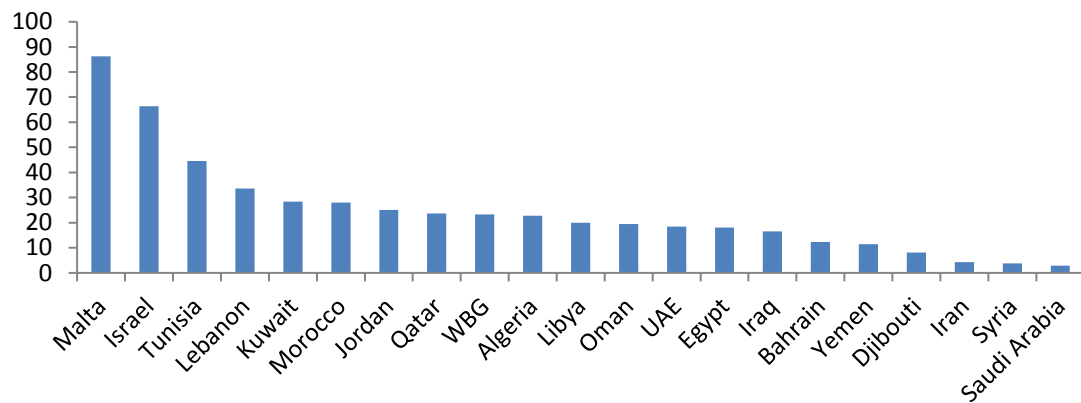


Figure 1: Continued

(e) Rule of Law



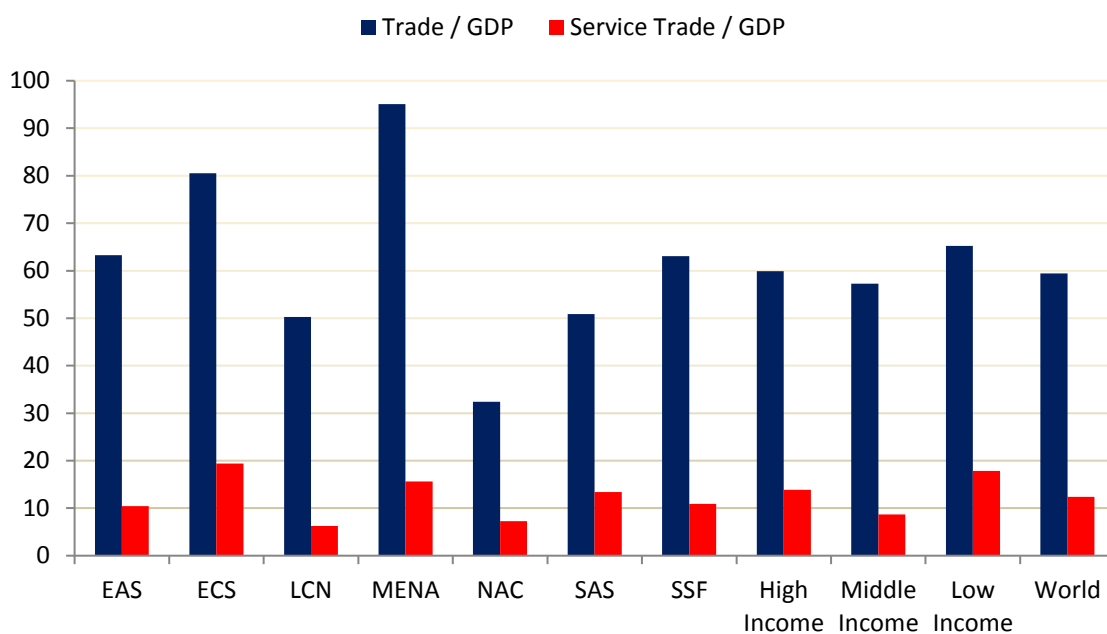
(f) Voice and Accountability



Note: Percentile rank indicates the country's rank among all countries covered by the aggregate indicator, with 0 corresponding to lowest rank, and 100 to highest rank.

Source: World Governance Indicators, the World Bank.

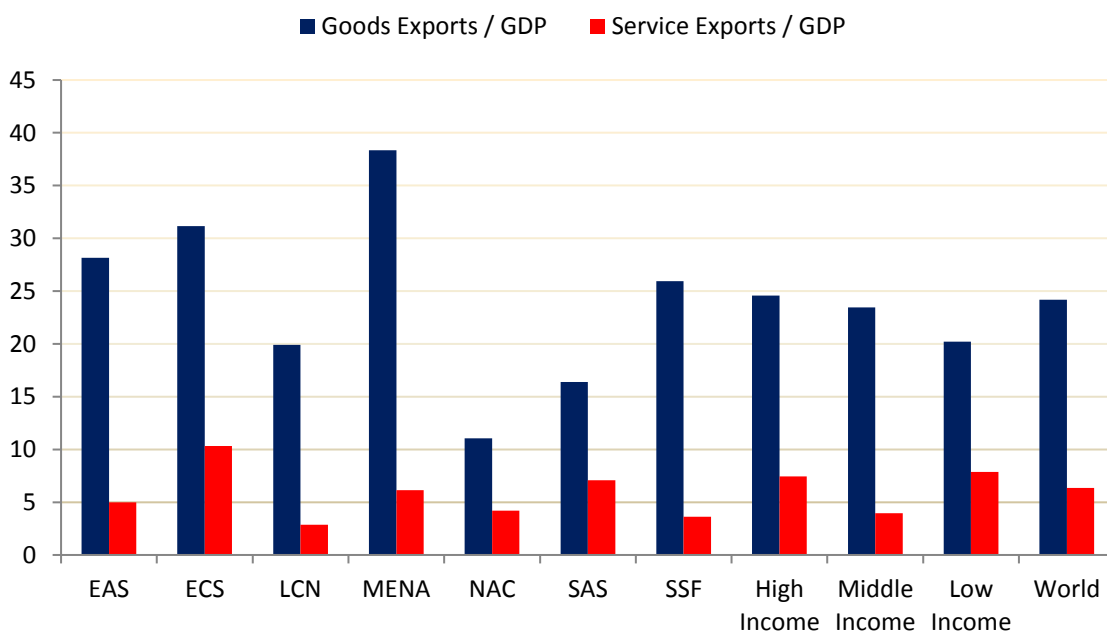
Figure 2a: Trade as a Percentage of GDP, 2013



Note: (i) Trade is the sum of exports and imports of goods and services measured as a share of gross domestic product. (ii) EAS: East Asia & Pacific; ECS: Europe & Central Asia; LCN: Latin America & Caribbean; MENA: Middle East & North Africa; NAC: North America; SAS: South Asia; SSF: Sub-Saharan Africa.

Source : World Bank, World Development Indicators database online, 2015.

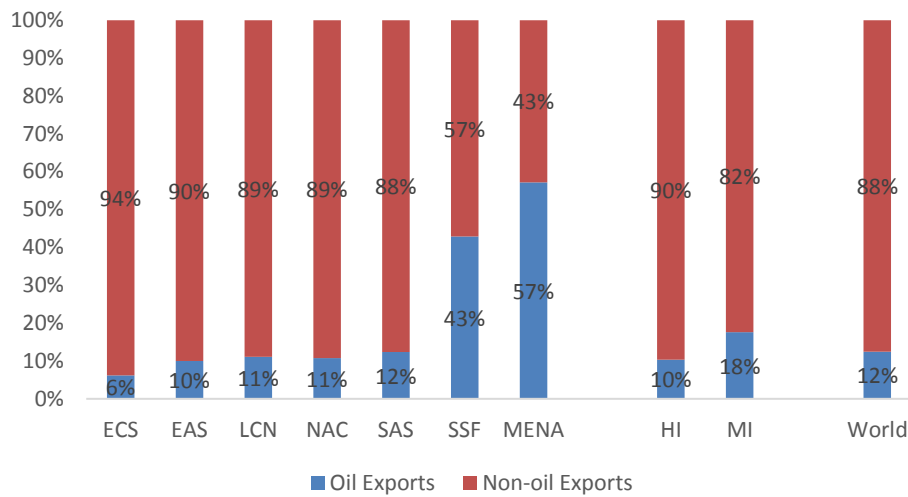
Figure 2b: Exports as a Percentage of GDP, 2013



Note: EAS: East Asia & Pacific; ECS: Europe & Central Asia; LCN: Latin America & Caribbean; MENA: Middle East & North Africa; NAC: North America; SAS: South Asia; SSF: Sub-Saharan Africa.

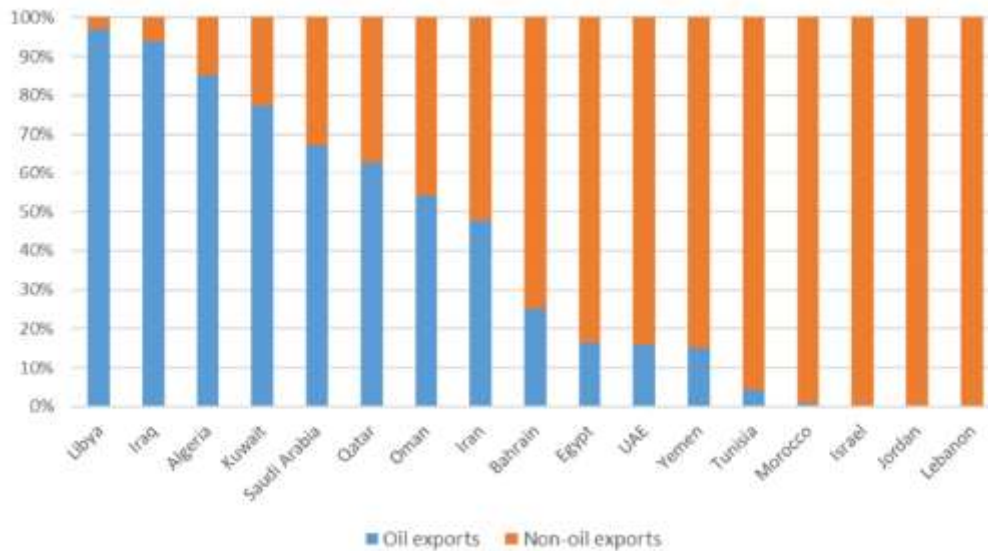
Source: Authors' Calculations from World Bank, World Development Indicators database online, 2015.

Figure 3a: Oil v/s Non-Oil Exports as a Percentage of Total Exports, 2014



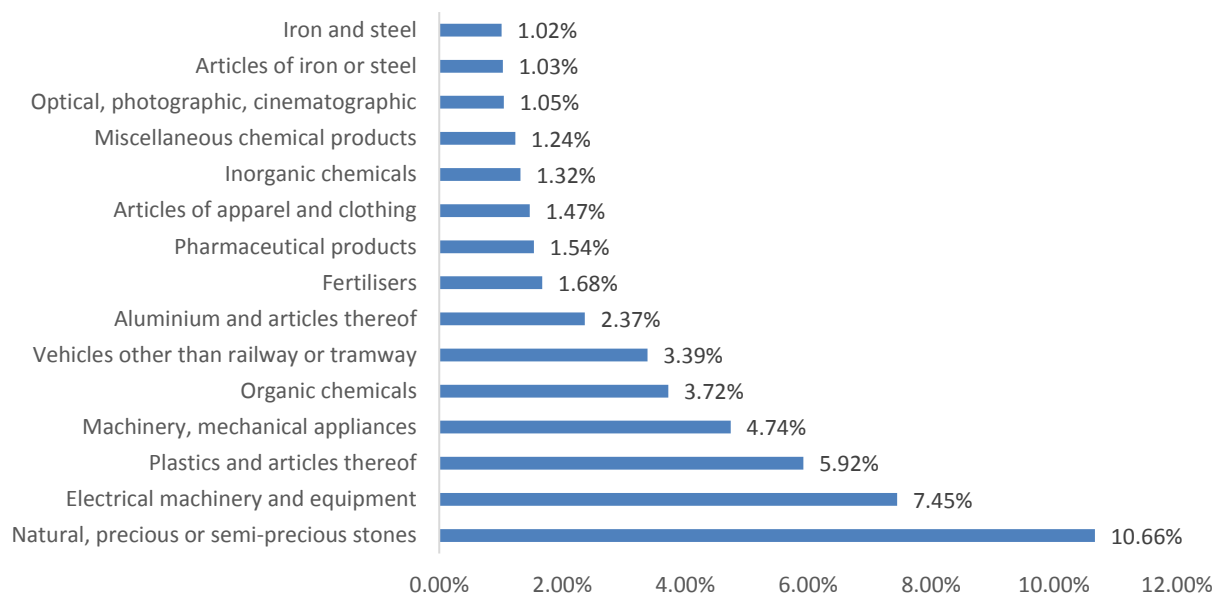
Note: EAS: East Asia & Pacific; ECS: Europe & Central Asia; LCN: Latin America & Caribbean; MENA: Middle East & North Africa; NAC: North America; SAS: South Asia; SSF: Sub-Saharan Africa; MI: Middle income; HI: High income.
 Source: World Development Indicators database online, 2015.

Figure 3b: Oil v/s Non-Oil Exports as a Percentage of Total Exports by MENA Country, 2014



Source: World Development Indicators database online, 2015.

Figure 4: Share of Selected Non-Oil Manufacturing Sectors in MENA Total Exports, 2014

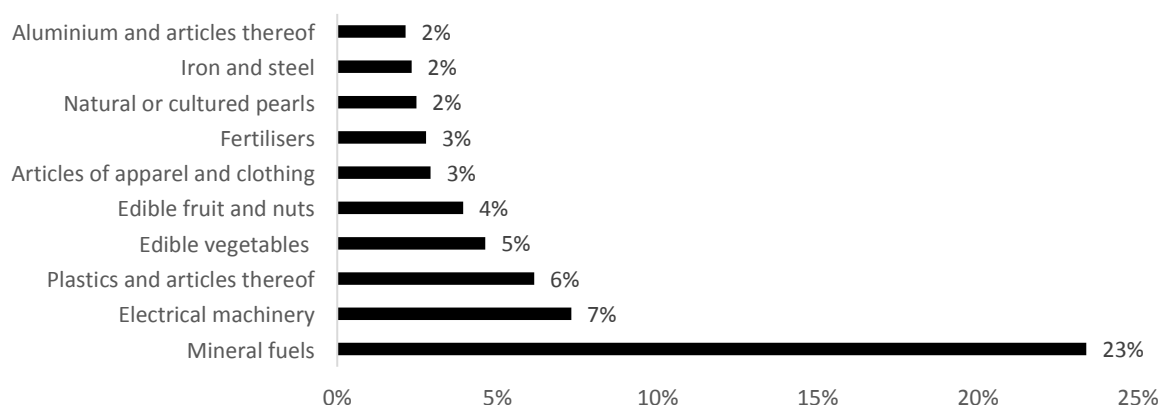


Note: - The share of oil exports in total exports is around 50%. The share of the excluded non-oil manufacturing sectors in total exports is less than 1%.

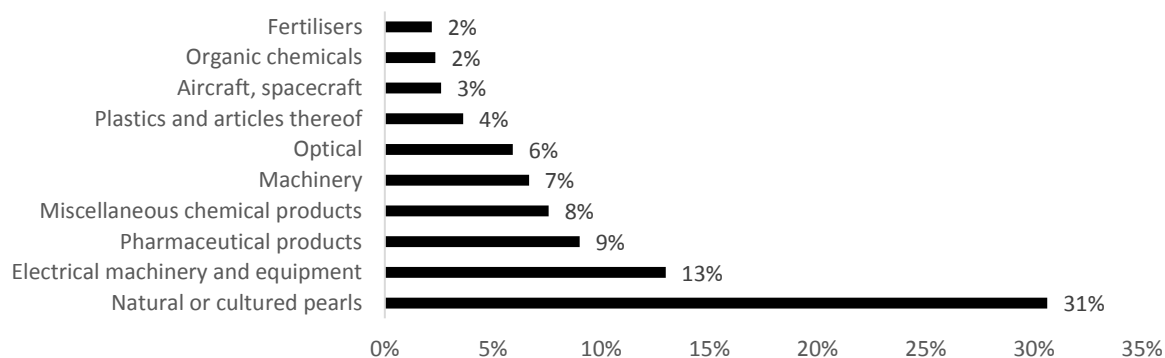
Source: Constructed by the authors using COMTRADE.

Figure 5: Share of Selected Manufacturing Sectors in Total Exports for Less-Oil-Dependent Countries, 2014

Egypt



Israel



Jordan

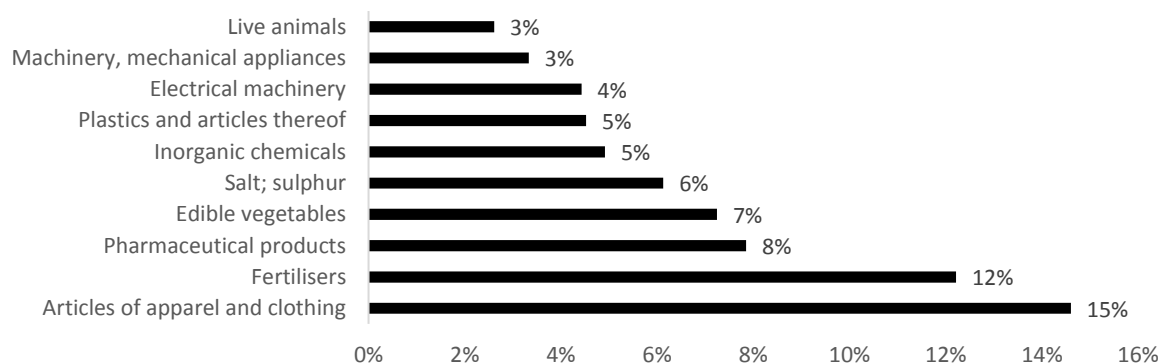
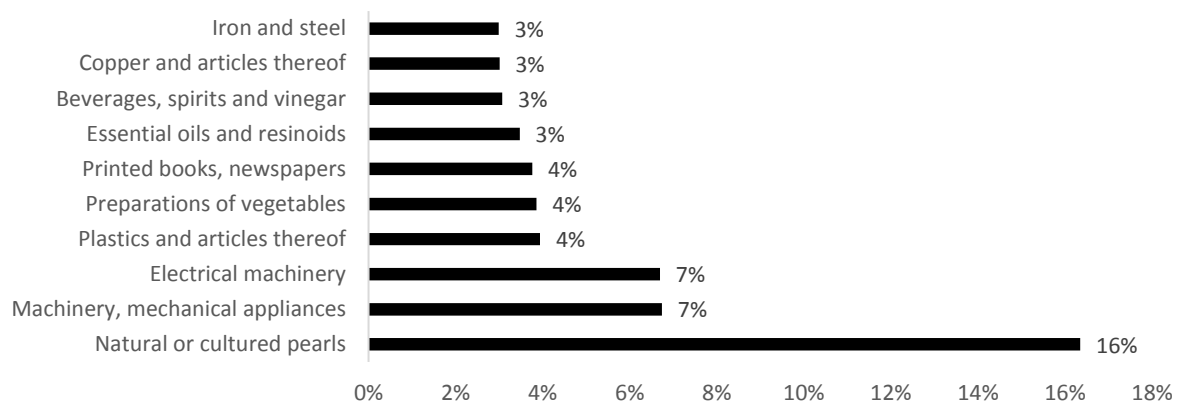
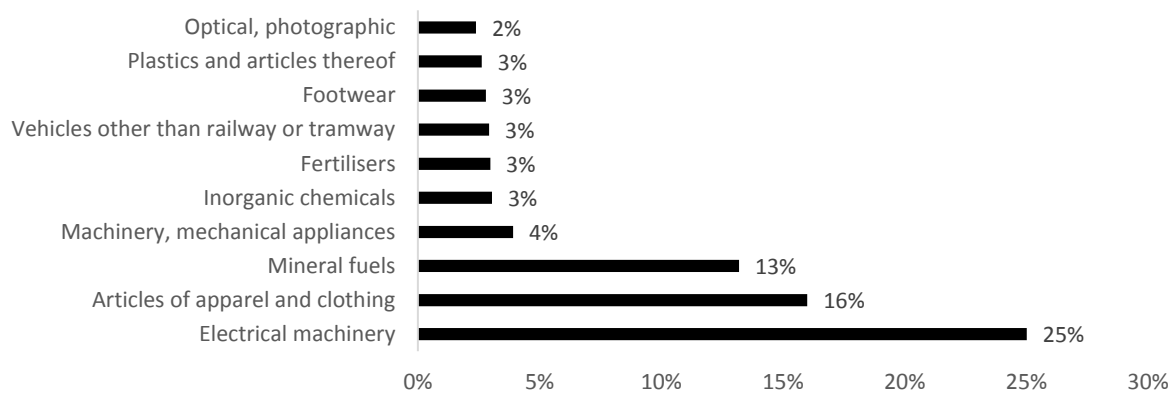


Figure 5: Continued

Lebanon



Tunisia



Morocco

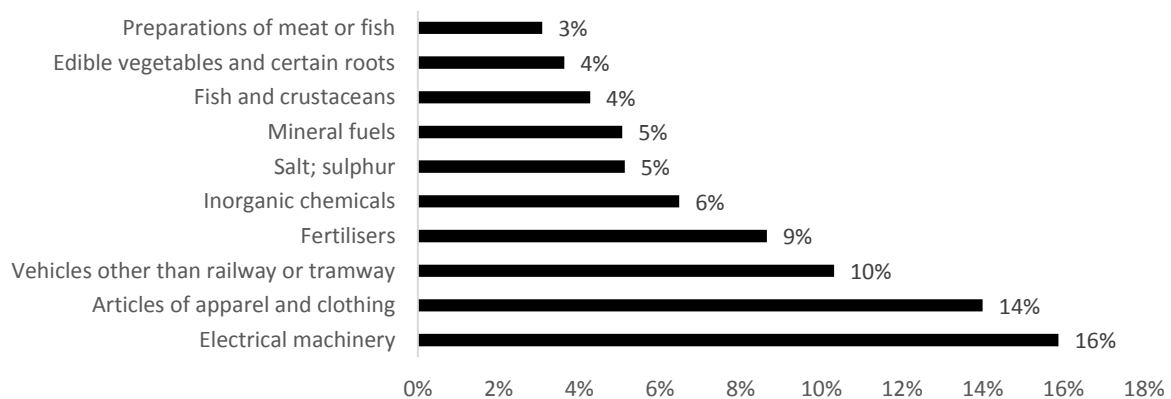
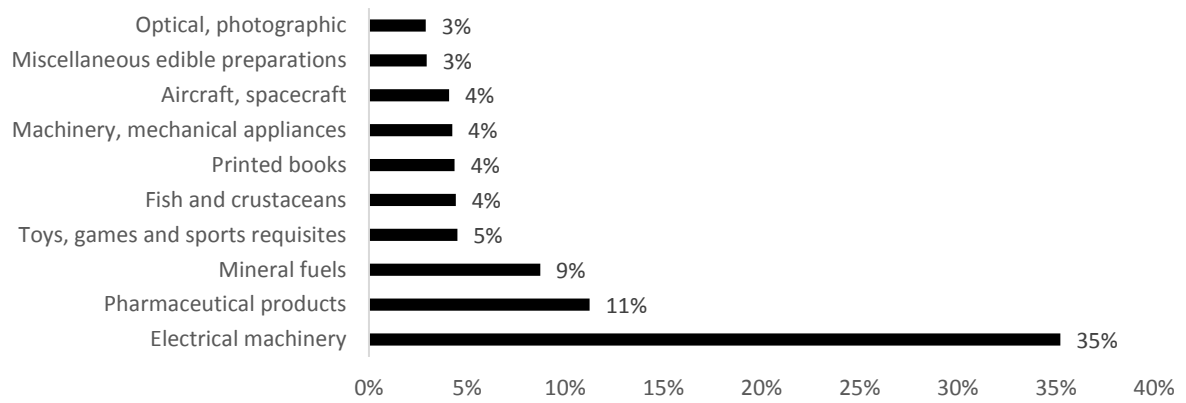


Figure 5: Continued

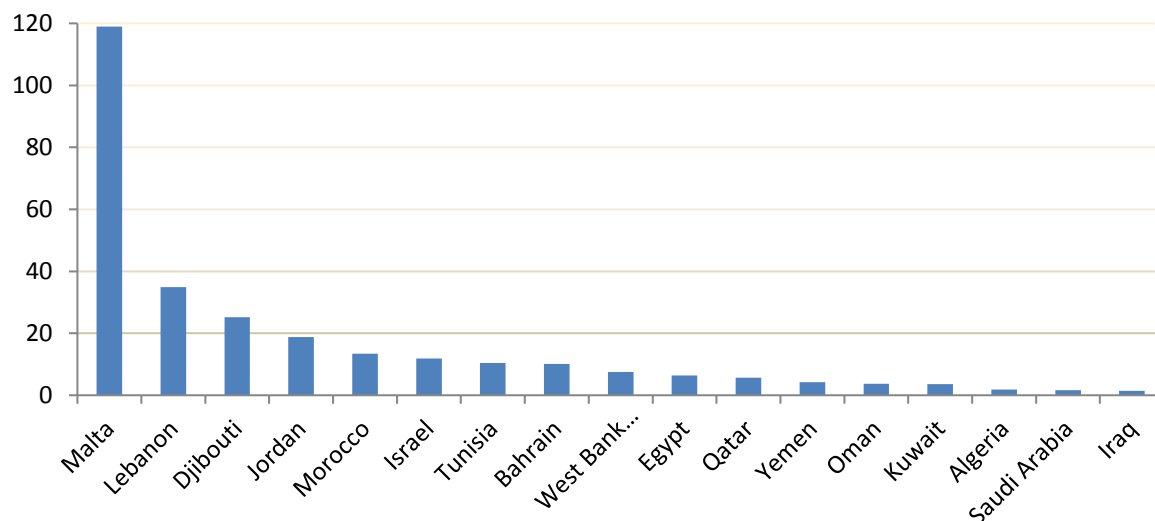
Malta



Note: The share of the excluded manufacturing sectors in total exports is less than 2%.

Source: Author's calculations using the International Trade Center dataset.

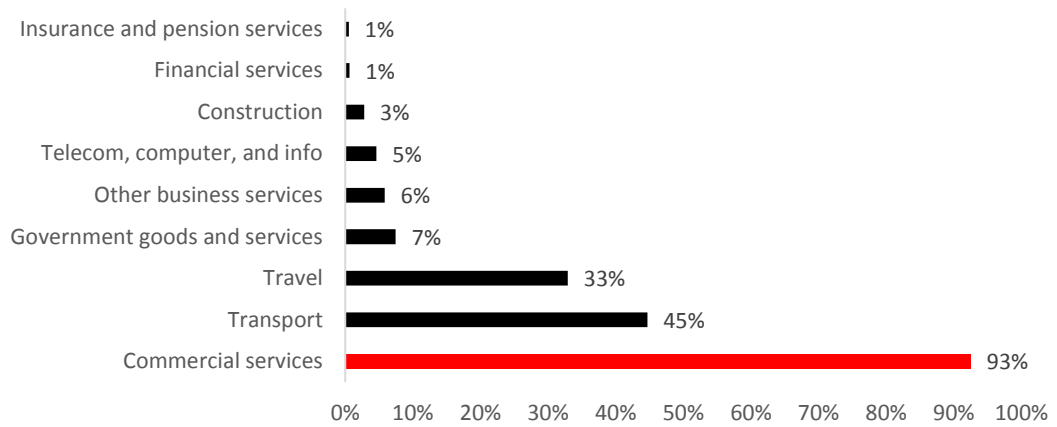
Figure 6: Service Exports as a Percentage of GDP for MENA countries, 2013



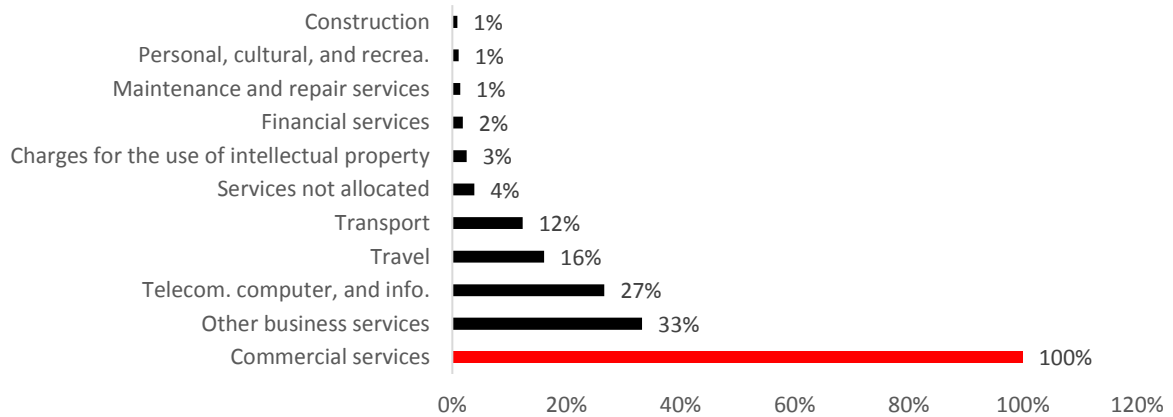
Source: Authors' Calculations from World Bank, World Development Indicators database online, 2015.

Figure 7: Share of Commercial Services in Total Service Exports for Selected MENA countries, 2014

Egypt



Israel



Jordan

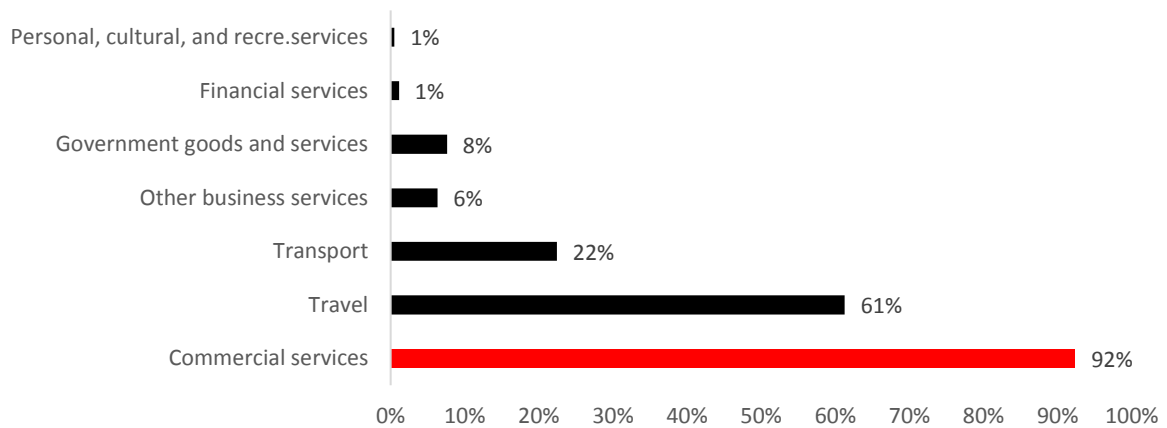
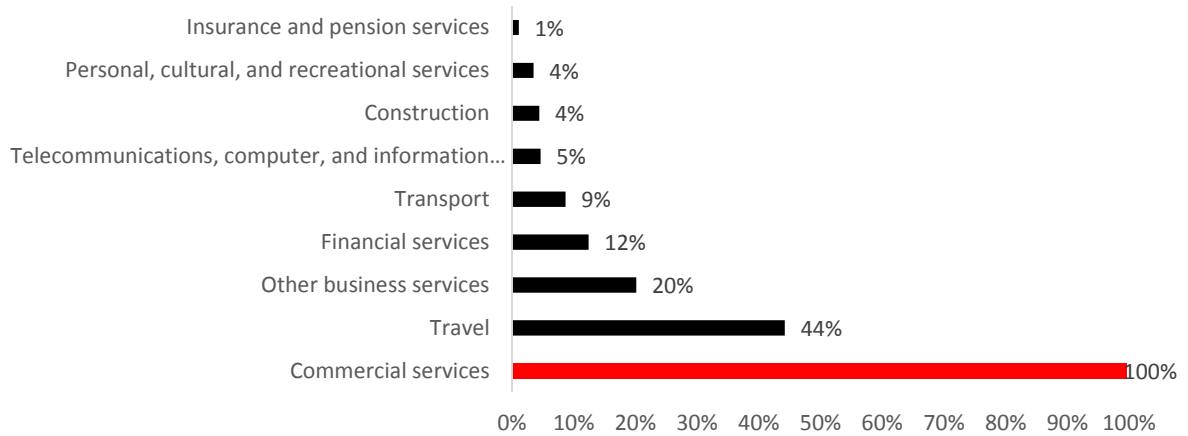
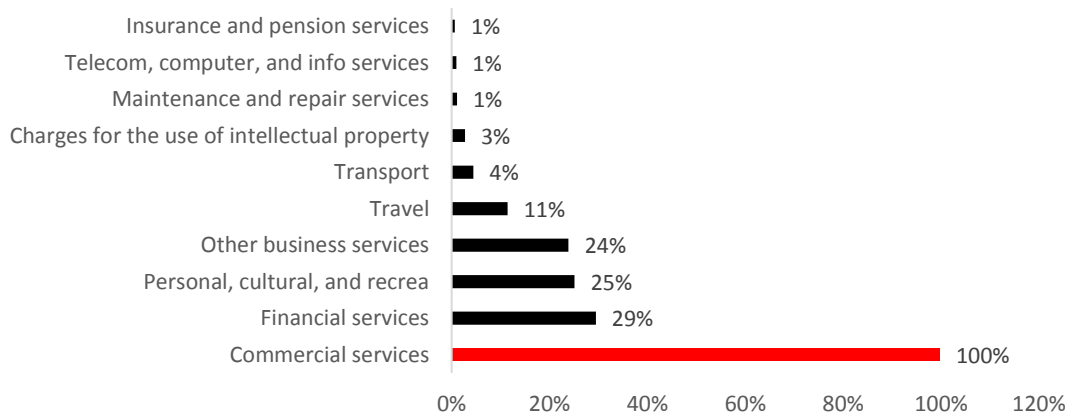


Figure 7: Continued

Lebanon



Malta



Tunisia

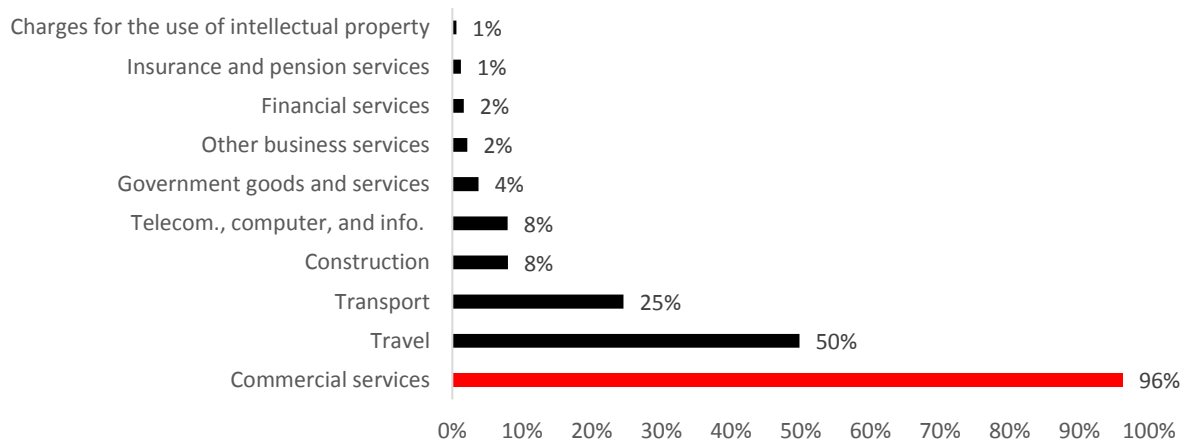
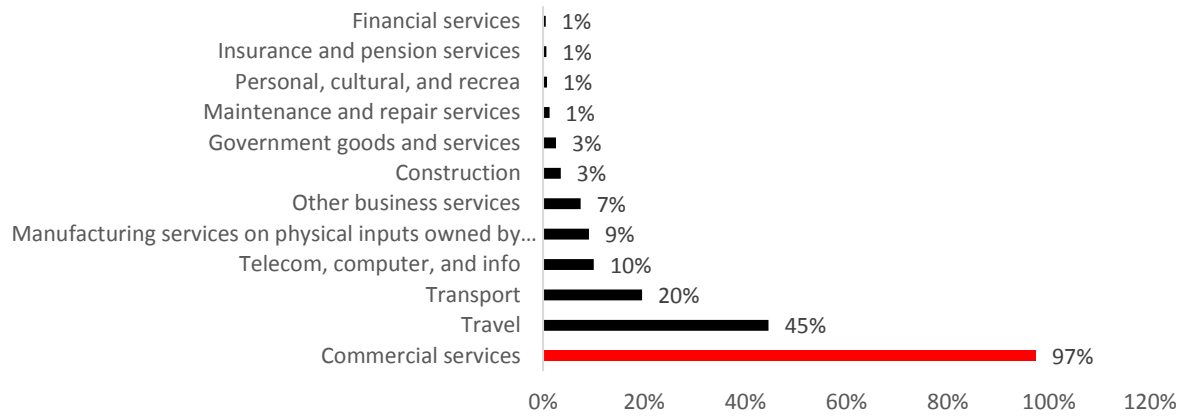


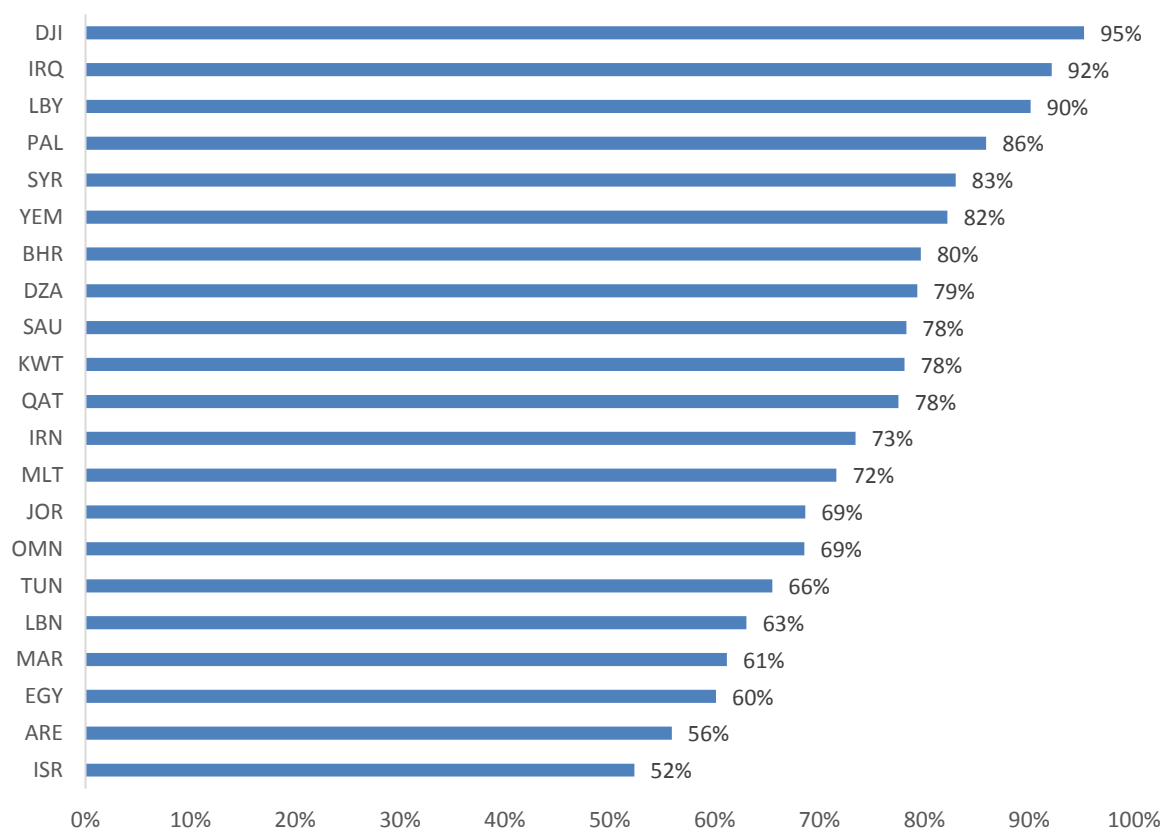
Figure 7: Continued

Morocco



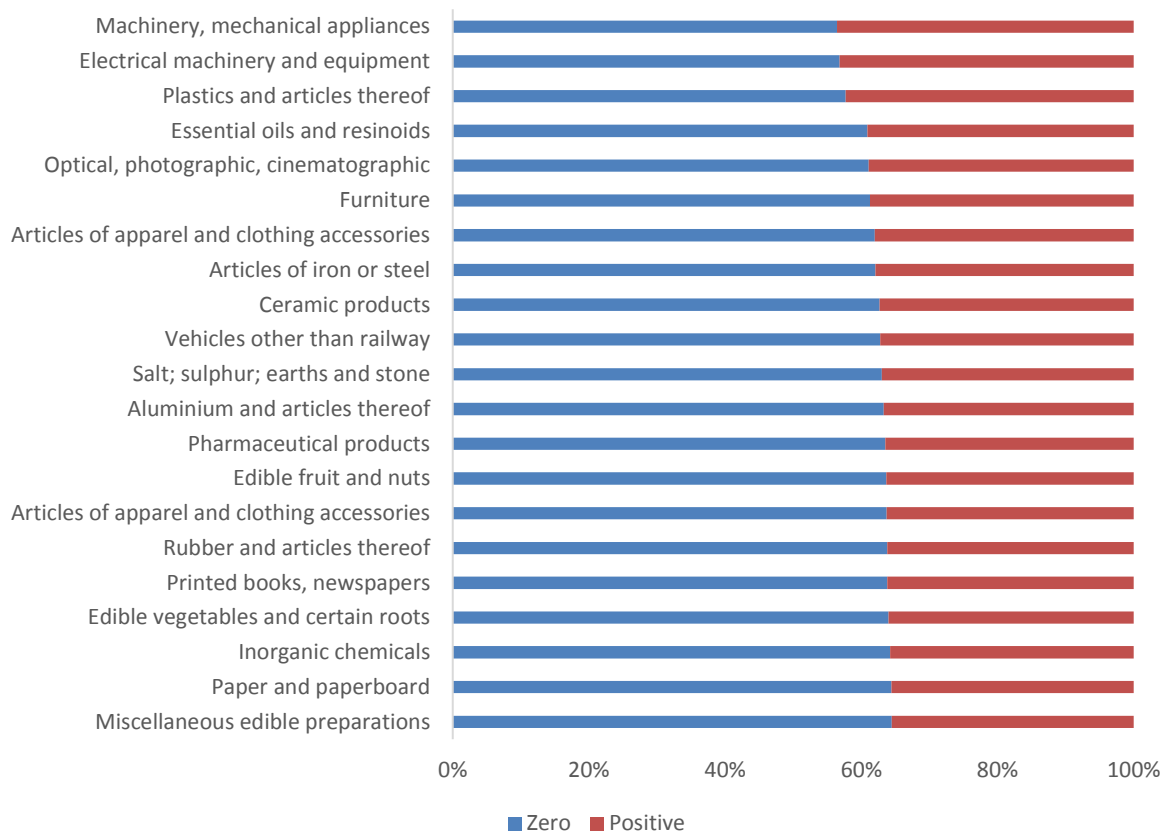
Source: Author's calculations using the International Trade Center dataset.

Figure 8: Share of Zero Trade Flows by Country



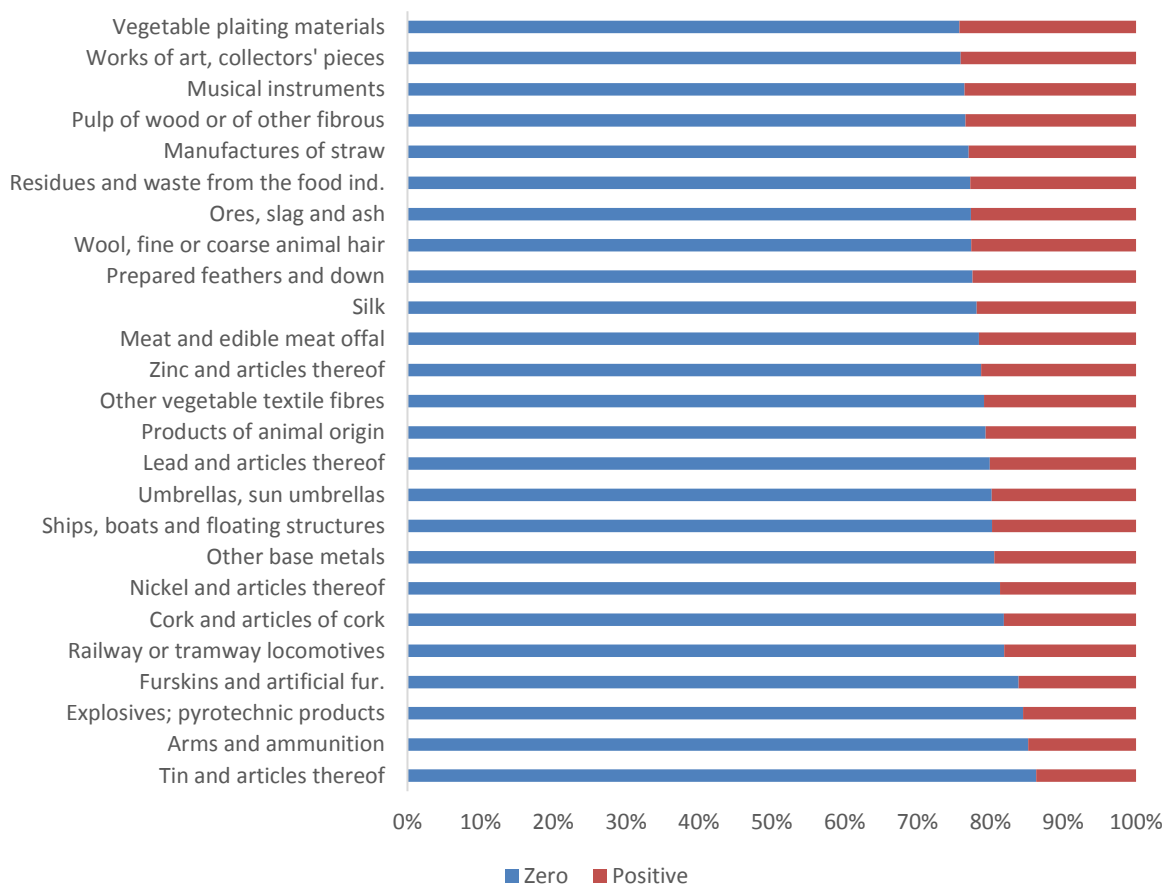
Source: Authors' calculations using the International Trade Center dataset.

Figure 9a: Sectors with Lowest Share of Zero Trade Flows



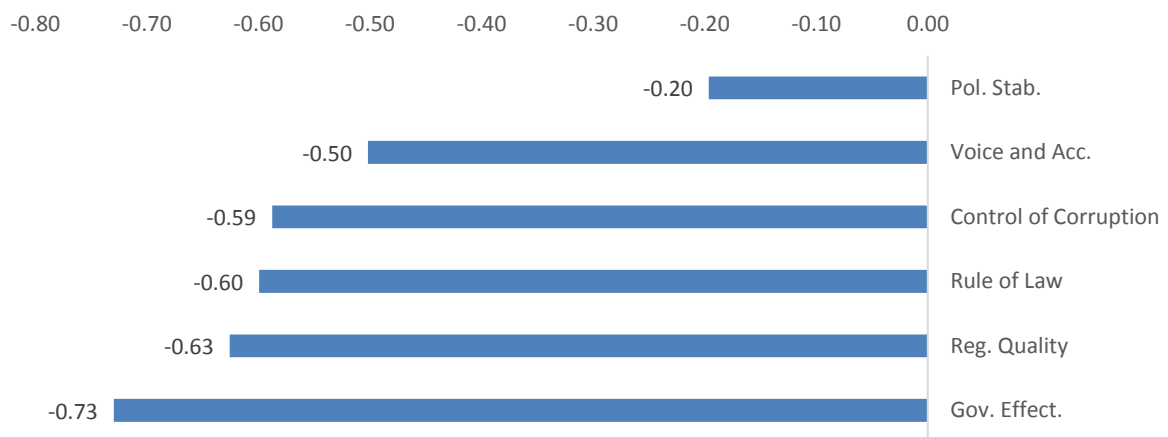
Source: Authors' calculations using the International Trade Center dataset.

Figure 9b: Sectors with Highest Share of Zero Trade Flows



Source: Authors' calculations using the International Trade Center dataset.

Figure 10: Correlation Coefficients between the WGI and the Share of Zero Trade Flows



Source: Calculated by the authors.

Table 1: ZIP Regressions for Bilateral Trade in Goods Without Instrumentation

	(1)		(2)		(3)		(4)		(5)		(6)	
	Trade	P(Zero)	Trade	P(Zero)	Trade	P(Zero)	Trade	P(Zero)	Trade	P(Zero)	Trade	P(Zero)
Ln(GDP exp)	0.698*** (5.60e-07)	-0.444*** (0.00164)	0.698*** (5.60e-07)	-0.436*** (0.00163)	0.698*** (5.60e-07)	-0.435*** (0.00162)	0.698*** (5.60e-07)	-0.436*** (0.00163)	0.698*** (5.60e-07)	-0.435*** (0.00163)	0.698*** (5.60e-07)	-0.438*** (0.00163)
Ln(GDP imp)	0.760*** (3.34e-07)	-0.220*** (0.000826)	0.760*** (3.34e-07)	-0.218*** (0.000827)	0.760*** (3.34e-07)	-0.217*** (0.000828)	0.760*** (3.34e-07)	-0.219*** (0.000824)	0.760*** (3.34e-07)	-0.219*** (0.000824)	0.760*** (3.34e-07)	-0.239*** (0.000870)
Ln(Dist)	-0.395*** (6.91e-07)	0.414*** (0.00224)	-0.395*** (6.91e-07)	0.408*** (0.00223)	-0.395*** (6.91e-07)	0.408*** (0.00223)	-0.395*** (6.91e-07)	0.406*** (0.00223)	-0.395*** (6.91e-07)	0.409*** (0.00223)	-0.395*** (6.91e-07)	0.404*** (0.00224)
Contig.	0.0920*** (2.23e-06)	0.214*** (0.00883)	0.0920*** (2.23e-06)	0.191*** (0.00881)	0.0920*** (2.23e-06)	0.177*** (0.00883)	0.0920*** (2.23e-06)	0.209*** (0.00884)	0.0920*** (2.23e-06)	0.192*** (0.00882)	0.0920*** (2.23e-06)	0.217*** (0.00882)
Colony	0.155*** (3.51e-06)	-0.215*** (0.0213)	0.155*** (3.51e-06)	-0.205*** (0.0213)	0.155*** (3.51e-06)	-0.206*** (0.0213)	0.155*** (3.51e-06)	-0.207*** (0.0213)	0.155*** (3.51e-06)	-0.196*** (0.0213)	0.155*** (3.51e-06)	-0.188*** (0.0212)
Com. Lang.	0.217*** (1.24e-06)	-0.563*** (0.00409)	0.217*** (1.24e-06)	-0.577*** (0.00407)	0.217*** (1.24e-06)	-0.579*** (0.00407)	0.217*** (1.24e-06)	-0.571*** (0.00408)	0.217*** (1.24e-06)	-0.578*** (0.00407)	0.217*** (1.24e-06)	-0.507*** (0.00418)
Com. Col.	0.769*** (1.49e-06)	-0.265*** (0.00474)	0.769*** (1.49e-06)	-0.271*** (0.00474)	0.769*** (1.49e-06)	-0.266*** (0.00474)	0.769*** (1.49e-06)	-0.259*** (0.00474)	0.769*** (1.49e-06)	-0.270*** (0.00474)	0.769*** (1.49e-06)	-0.260*** (0.00474)
RTA	1.179*** (3.53e-06)	0.150*** (0.0210)	1.179*** (3.53e-06)	0.154*** (0.0210)	1.179*** (3.53e-06)	0.191*** (0.0211)	1.179*** (3.53e-06)	0.120*** (0.0210)	1.179*** (3.53e-06)	0.150*** (0.0210)	1.179*** (3.53e-06)	0.0371* (0.0211)
Col 45	-0.280*** (4.06e-06)	-0.281*** (0.0271)	-0.280*** (4.06e-06)	-0.271*** (0.0271)	-0.280*** (4.06e-06)	-0.270*** (0.0271)	-0.280*** (4.06e-06)	-0.281*** (0.0271)	-0.280*** (4.06e-06)	-0.269*** (0.0270)	-0.280*** (4.06e-06)	-0.357*** (0.0270)
Oil Rent. Exp.		0.0270*** (0.000119)		0.0270*** (0.000119)		0.0269*** (0.000119)		0.0270*** (0.000120)		0.0269*** (0.000119)		0.0266*** (0.000119)
Reg. Qual.		0.00430** *										
		(8.04e-05)										
Gov. Eff.				0.00150** *								
				(8.25e-05)								
Pol. Stab.						0.00160** *						
						(7.12e-05)						
Rule of Law								0.00425** *				
								(8.37e-05)				
Cont. Corr.									0.000290* **			
									(7.88e-05)			
Voice and acc.												0.00569** *
												(7.71e-05)
Constant	-19.16*** (1.69e-05)	13.62*** (0.0495)	-19.16*** (1.69e-05)	13.49*** (0.0494)	-19.16*** (1.69e-05)	13.54*** (0.0493)	-19.16*** (1.69e-05)	13.45*** (0.0495)	-19.16*** (1.69e-05)	13.52*** (0.0494)	-19.16*** (1.69e-05)	13.96*** (0.0500)
Year dummies	YES		YES		YES		YES		YES		YES	
Observations	1,881,949	1,881,949	1,881,515	1,881,515	1,881,579	1,881,579	1,883,145	1,883,145	1,881,515	1,881,515	1,883,145	1,883,145

Notes: Standard errors in parentheses. *** p<0.01, ** p<0.05, * p<0.1

Table 2: ZIP Regressions for Bilateral Trade in Goods (Second Step)

	(1)		(2)		(3)		(4)		(5)		(6)	
	Trade	P(Zero)	Trade	P(Zero)	Trade	P(Zero)	Trade	P(Zero)	Trade	P(Zero)	Trade	P(Zero)
Ln(GDP exp)	0.686*** (5.28e-07)	-0.441*** (0.00155)	0.686*** (5.28e-07)	-0.430*** (0.00156)	0.686*** (5.28e-07)	-0.432*** (0.00160)	0.686*** (5.28e-07)	-0.414*** (0.00161)	0.686*** (5.28e-07)	-0.433*** (0.00156)	0.686*** (5.28e-07)	-0.445*** (0.00157)
Ln(GDP imp)	0.742*** (3.08e-07)	-0.229*** (0.000790)	0.742*** (3.08e-07)	-0.227*** (0.000789)	0.742*** (3.08e-07)	-0.226*** (0.000788)	0.742*** (3.08e-07)	-0.225*** (0.000788)	0.742*** (3.08e-07)	-0.229*** (0.000791)	0.742*** (3.08e-07)	-0.226*** (0.000790)
Ln(Dist)	-0.396*** (6.43e-07)	0.400*** (0.00214)	-0.396*** (6.43e-07)	0.401*** (0.00215)	-0.396*** (6.43e-07)	0.402*** (0.00214)	-0.396*** (6.43e-07)	0.399*** (0.00215)	-0.396*** (6.43e-07)	0.400*** (0.00214)	-0.396*** (6.43e-07)	0.403*** (0.00214)
Contig.	0.0930*** (2.06e-06)	0.163*** (0.00846)	0.0930*** (2.06e-06)	0.159*** (0.00849)	0.0930*** (2.06e-06)	0.183*** (0.00842)	0.0930*** (2.06e-06)	0.174*** (0.00845)	0.0930*** (2.06e-06)	0.164*** (0.00845)	0.0930*** (2.06e-06)	0.189*** (0.00841)
Colony	0.0815*** (3.44e-06)	-0.142*** (0.0203)	0.0815*** (3.44e-06)	-0.133*** (0.0204)	0.0815*** (3.44e-06)	-0.163*** (0.0203)	0.0815*** (3.44e-06)	-0.121*** (0.0204)	0.0815*** (3.44e-06)	-0.129*** (0.0204)	0.0815*** (3.44e-06)	-0.182*** (0.0204)
Com. Lang.	0.213*** (1.15e-06)	-0.572*** (0.00389)	0.213*** (1.15e-06)	-0.591*** (0.00389)	0.213*** (1.15e-06)	-0.570*** (0.00389)	0.213*** (1.15e-06)	-0.585*** (0.00388)	0.213*** (1.15e-06)	-0.558*** (0.00390)	0.213*** (1.15e-06)	-0.575*** (0.00390)
Com. Col.	0.743*** (1.38e-06)	-0.293*** (0.00455)	0.743*** (1.38e-06)	-0.308*** (0.00455)	0.743*** (1.38e-06)	-0.290*** (0.00454)	0.743*** (1.38e-06)	-0.307*** (0.00455)	0.743*** (1.38e-06)	-0.290*** (0.00455)	0.743*** (1.38e-06)	-0.288*** (0.00454)
RTA	1.242*** (3.24e-06)	0.0937*** (0.0202)	1.242*** (3.24e-06)	-0.261*** (0.0205)	1.242*** (3.24e-06)	0.116*** (0.0198)	1.242*** (3.24e-06)	-0.128*** (0.0202)	1.242*** (3.24e-06)	0.00829 (0.0200)	1.242*** (3.24e-06)	0.207*** (0.0196)
Col 45	-0.216*** (3.95e-06)	-0.318*** (0.0258)	-0.216*** (3.95e-06)	-0.349*** (0.0258)	-0.216*** (3.95e-06)	-0.304*** (0.0258)	-0.216*** (3.95e-06)	-0.361*** (0.0258)	-0.216*** (3.95e-06)	-0.329*** (0.0258)	-0.216*** (3.95e-06)	-0.281*** (0.0258)
Oil Rent. Exp.		0.0257*** (0.000115)		0.0250*** (0.000115)		0.0265*** (0.000115)		0.0260*** (0.000114)		0.0255*** (0.000115)		0.0268*** (0.000115)
Reg. Qual.		0.0543*** (0.000697)										
Gov. Eff.				0.105*** (0.00110)								
Pol. Stab.						0.0163*** (0.000418)						
Rule of Law								0.0523*** (0.000708)				
Cont. Corr.										0.0877*** (0.00110)		
Voice and acc.												0.00730** * (0.000511)
Constant	-18.83*** (1.59e-05)	12.55*** (0.0511)	-18.83*** (1.59e-05)	10.80*** (0.0585)	-18.83*** (1.59e-05)	13.24*** (0.0519)	-18.83*** (1.59e-05)	11.86*** (0.0557)	-18.83*** (1.59e-05)	11.38*** (0.0581)	-18.83*** (1.59e-05)	13.79*** (0.0519)
Year dummies	YES		YES		YES		YES		YES		YES	
Observations	2,100,395	2,100,395	2,100,395	2,100,395	2,100,395	2,100,395	2,100,395	2,100,395	2,100,395	2,100,395	2,100,395	2,100,395

Notes: Standard errors in parentheses. *** p<0.01, ** p<0.05, * p<0.1

Table 3: Summary of Sectoral Regressions: Aspects of Institutions and Their Effects on Manufacturing Sectors

		Reg. Qual.	Gov. Eff.	Pol. Stab.	Rule of Law	Cont. Corr.	Voice and acc.
'02	Meat and edible meat offal	4	1	5	2	3	No
'04	Dairy produce; birds' eggs; natural honey; edible products of animal origin, not elsewhere ...	4	1	5	2	3	6
'05	Products of animal origin, not elsewhere specified or included	5	1	5	2	3	6
'08	Edible fruit and nuts; peel of citrus fruit or melons	5	2	4	1	3	Negative
'09	Coffee, tea, maté and spices	4	1	5	2	3	6
'11	Products of the milling industry; malt; starches; inulin; wheat gluten	3	1	Negative	No	2	Negative
'12	Oil seeds and oleaginous fruits; miscellaneous grains, seeds and fruit; industrial or medicinal ...	4	1	5	2	3	6
'24	Tobacco and manufactured tobacco substitutes	No	2	No	3	1	No
'27	Mineral fuels, mineral oils and products of their distillation; bituminous substances; mineral ...	Negative	Negative	No	Negative	No	No
'39	Plastics and articles thereof	3	1	5	4	2	6
'40	Rubber and articles thereof	3	1	Negative	4	2	No
'51	Wool, fine or coarse animal hair; horsehair yarn and woven fabric	3	1	No	4	2	No
'52	Cotton	4	1	5	2	3	6
'53	Other vegetable textile fibres; paper yarn and woven fabrics of paper yarn	4	1	6	3	2	5
'54	Man-made filaments; strip and the like of man-made textile materials	3	1	6	4	2	5
'55	Man-made staple fibres	4	1	5	3	2	6
'56	Wadding, felt and nonwovens; special yarns; twine, cordage, ropes and cables and articles thereof	3	2	5	4	1	No
'57	Carpets and other textile floor coverings	4	1	5	2	3	6
'76	Aluminium and articles thereof	4	1	5	3	2	6
'61	Articles of apparel and clothing accessories, knitted or crocheted	3	1	No	4	2	Negative
'62	Articles of apparel and clothing accessories, not knitted or crocheted	3	1	5	4	2	6
'84	Machinery, mechanical appliances, nuclear reactors, boilers; parts thereof	3	1	5	4	2	No
'85	Electrical machinery and equipment and parts thereof; sound recorders and reproducers, television ...	3	1	5	4	2	No
'88	Aircraft, spacecraft, and parts thereof	No	No	Negative	Negative	No	Negative
'90	Optical, photographic, cinematographic, measuring, checking, precision, medical or surgical ...	3	1	Negative	4	2	Negative
'92	Musical instruments; parts and accessories of such articles	4	1	No	2	3	No
'93	Arms and ammunition; parts and accessories thereof	Negative	Negative	Negative	Negative	Negative	Negative
'94	Furniture; bedding, mattresses, mattress supports, cushions and similar stuffed furnishings; ...	4	1	5	3	2	6
'96	Miscellaneous manufactured articles	4	1	5	3	2	6
'99	Commodities not elsewhere specified	3	1	6	4	2	5
Average rank		3.6	1.1	5.1	3.0	2.3	5.8

Source: Constructed by the authors.

Table 4: PPML Regressions for Service Exports Without Instrumentation

	Trade	Trade	Trade	Trade	Trade	Trade
Ln(GDP exp)	0.469*** (0.0428)	0.449*** (0.0449)	0.489*** (0.0424)	0.456*** (0.0428)	0.446*** (0.0413)	0.515*** (0.0432)
Arabic	0.672*** (0.141)	0.647*** (0.145)	0.454*** (0.145)	0.506*** (0.150)	0.577*** (0.142)	0.710*** (0.131)
Col. FR	0.271** (0.135)	0.221 (0.137)	0.393*** (0.128)	0.235* (0.135)	0.303** (0.136)	0.207* (0.121)
Col. UK	0.766*** (0.142)	0.727*** (0.136)	0.921*** (0.128)	0.699*** (0.143)	0.710*** (0.130)	0.714*** (0.136)
Latitude	0.0123 (0.00807)	0.0129 (0.00856)	0.0113 (0.00799)	0.0233*** (0.00826)	0.00868 (0.00867)	0.00417 (0.00868)
Oil Rent. Exp.	-0.192*** (0.0161)	-0.175*** (0.0166)	-0.203*** (0.0159)	-0.156*** (0.0178)	-0.178*** (0.0165)	-0.174*** (0.0183)
Cont. Corr.	0.304*** (0.0684)					
Gov. Eff.		0.412*** (0.0752)				
Pol. Stab.			0.186*** (0.0498)			
Reg. Qual.				0.363*** (0.0704)		
Rule of Law					0.419*** (0.0641)	
Voice and acc.						0.250** (0.0983)
Constant	5.954*** (1.050)	6.068*** (1.098)	6.079*** (1.012)	5.941*** (1.093)	6.275*** (1.047)	5.423*** (0.993)
Year dummies	YES	YES	YES	YES	YES	YES
Observations	4,216	4,216	4,216	4,216	4,216	4,216
R-squared	0.063	0.065	0.064	0.067	0.067	0.065

Notes: Robust standard errors in parentheses. *** p<0.01, ** p<0.05, * p<0.1

Table 5: PPML Regressions for Service Exports (Second Step)

	Trade	Trade	Trade	Trade	Trade	Trade
Ln(GDP exp)	0.504*** (0.0393)	0.533*** (0.0430)	0.534*** (0.0362)	0.506*** (0.0402)	0.462*** (0.0382)	0.501*** (0.0433)
Arabic	0.560*** (0.135)	0.516*** (0.134)	0.690*** (0.127)	0.551*** (0.124)	0.647*** (0.130)	0.425*** (0.136)
Col. FR	0.475*** (0.119)	0.452*** (0.122)	0.879*** (0.117)	0.471*** (0.125)	0.558*** (0.120)	0.477*** (0.131)
Col. UK	1.012*** (0.132)	1.022*** (0.130)	0.976*** (0.118)	1.016*** (0.143)	0.944*** (0.133)	0.983*** (0.127)
Latitude	0.00573 (0.00740)	0.00107 (0.00752)	-0.00167 (0.00762)	0.00538 (0.00755)	0.0124* (0.00708)	0.00402 (0.00842)
Oil Rent. Exp.	-0.188*** (0.0153)	-0.193*** (0.0153)	-0.196*** (0.0155)	-0.189*** (0.0157)	-0.182*** (0.0154)	-0.193*** (0.0152)
Cont. Corr.	0.0156 (0.139)					
Gov. Eff.		-0.168 (0.149)				
Pol. Stab.			1.160*** (0.185)			
Reg. Qual.				-0.00619 (0.0794)		
Rule of Law					0.377*** (0.133)	
Voice and acc.						-0.865** (0.344)
Constant	6.306*** (1.118)	6.426*** (1.036)	1.467 (1.246)	6.359*** (1.023)	5.734*** (0.976)	9.244*** (1.719)
Year dummies	YES	YES	YES	YES	YES	YES
Observations	4,505	4,505	4,505	4,505	4,505	4,505
R-squared	0.063	0.063	0.065	0.063	0.063	0.066

Notes: Robust standard errors in parentheses. *** p<0.01, ** p<0.05, * p<0.1

Table 6: Summary of Sectoral Regressions: Aspects of Institutions and Their Effects on Service Sectors

	Cont. Corr.	Gov. Eff.	Pol. Stab.	Reg. Qual.	Rule of Law	Voice and acc.
205	No	Negative	1	No	2	Negative
236	3	4	1	5	2	No
245	Negative	Negative	Negative	No	Negative	1
249	Negative	Negative	1	Negative	No	No
253	3	5	1	4	2	Negative
260	4	3	1	5	No	2
262	Negative	Negative	Negative	No	Negative	1
266	No	Negative	Negative	No	Negative	1
268	4	1	5	6	2	3
287	Negative	Negative	1	Negative	2	Negative
291	No	Negative	1	No	2	Negative
REM	5	6	1	3	2	4
Average	3.8	3.8	1.4	4.6	2.0	2.0

Source: Constructed by the authors.

Appendix 1: Institutional Data on MENA countries.

The Index of Economic Freedom (IEF) shows that most of the 15 MENA countries graded are “moderately free” or “mostly unfree”, with Iran and Algeria being repressed. Iran is ranked 171 among the 178 countries graded. Yemen, Egypt, Tunisia and Lebanon are classified as “mostly unfree” while Morocco, Saudi Arabia, Kuwait, Oman and Jordan are classified as “moderately free”. By contrast, Bahrain, United Arab Emirates, Qatar and Israel are “mostly free”. Bahrain remained the region’s top performer in the IEF, despite a 1.7 point loss, and an overall score of 73.4 points. Israel posted a 2.1 point rise in its score, pulling it out of the ranks of the “moderately free”, while Morocco showed 1.8 point improvement in its score, pulling it out of the ranks of the “mostly unfree” (Table 1a). A closer look to the components of the IEF (Table 1b) shows that countries’ performance in various aspects of economic freedom entering the composition of the IFC is not necessarily consistent with the overall ranking. On the one hand, mostly free countries perform poorly in the following aspects: Bahrain in “Freedom from corruption”, Qatar and UAE in “Investment freedom” and “Financial freedom”, Israel in “Government spending”. On the other hand, repressed countries like Iran and Algeria perform well or relatively well in “Fiscal freedom” and “Business freedom”, in “Government spending” (Iran), in “Monetary freedom” and “Trade freedom” (Algeria). “Mostly unfree” countries perform very poorly in “Property rights” and “Freedom from corruption”, as well as in “Investment Freedom” and “Financial Freedom” (except Lebanon for the last two aspects). Finally, it is worth mentioning that 9 out of 15 MENA countries score above 90 on the “Fiscal freedom” aspect.

Table 1a: 2015 IFC for Selected MENA countries

	World Rank	Region Rank	2015 Score
Iran	171	15	41.8
Algeria	157	14	48.9
Yemen	133	13	53.7
Egypt	124	12	55.2
Tunisia	107	11	57.7
Lebanon	94	10	59.3
Morocco	89	9	60.1
Saudi Arabia	77	8	62.1
Kuwait	74	7	62.5
Oman	56	6	66.7
Jordan	38	5	69.3
Israel	33	4	70.5
Qatar	32	3	70.8
UAE	25	2	72.4
Bahrain	18	1	73.4

Note: - Countries (total of 178 countries graded) are classified as “free” for an IEF score of 80 or higher, “mostly free” for an IEF score between 70 and 79.9, “moderately free” between 60 and 69.9, “mostly unfree” between 50 and 59.9 or “repressed” for an IEF score under 50. UAE refers to United Arab Emirates.

Source: 2015 Index of Economic Freedom, the Heritage Foundation.

Table 1b: Performance in Aspects of Economic Freedom Entering the Composition of the IEF 2015 for Selected MENA Countries

	Property Rights	Freedom from Corruption	Fiscal Freedom	Government Spending	Business Freedom	Labor Freedom	Monetary Freedom	Trade Freedom	Investment Freedom	Financial Freedom
Algeria	30.0	36.0	80.0	38.7	66.6	50.5	71.2	60.8	25.0	30.0
Bahrain	60.0	48.0	99.9	73.1	72.5	83.1	74.2	78.6	65.0	80.0
Egypt	20.0	32.0	85.8	68.0	65.4	53.6	67.4	70.0	50.0	40.0
Iran	10.0	25.0	81.2	93.0	57.0	51.3	48.7	41.4	0.0	10.0
Iraq	N/A	16.0	N/A	43.8	57.7	74.4	73.6	N/A	N/A	N/A
Israel	75.0	61.0	61.9	47.8	72.4	67.1	81.6	88.6	80.0	70.0
Jordan	60.0	45.0	93.7	70.7	59.1	74.4	80.6	79.6	70.0	60.0
Kuwait	45.0	43.0	97.7	61.1	58.6	64.2	74.0	76.2	55.0	50.0
Lebanon	20.0	28.0	91.3	70.6	54.7	60.7	72.0	75.8	60.0	60.0
Libya	10.0	15.0	95.0	37.5	46.8	66.7	71.4	80.0	5.0	20.0
Morocco	40.0	37.0	70.9	61.0	68.8	33.4	81.9	78.2	70.0	60.0
Oman	55.0	47.0	98.5	44.2	68.4	76.1	76.2	76.8	65.0	60.0
Qatar	70.0	68.0	99.7	71.9	70.5	71.2	79.7	81.8	45.0	50.0
Saudi-Ar.	40.0	46.0	99.7	61.9	65.8	72.7	68.4	76.4	40.0	50.0
Syria	10.0	17.0	N/A	N/A	57.3	49.1	N/A	N/A	0.0	20.0
Tunisia	40.0	41.0	74.3	70.8	81.2	69.1	74.8	61.2	35.0	30.0
UAE	55.0	69.0	99.5	85.8	74.7	83.8	83.8	82.4	40.0	50.0
Yemen	30.0	18.0	91.5	59.9	54.0	57.1	68.5	77.6	50.0	30.0

Note: UAE refers to United Arab Emirates.

Source: 2015 Index of Economic Freedom, the Heritage Foundation.

Countries' performance on institutional indicators entering in the calculations of the Global Competitiveness Index (GCI) does not completely overlap with the IFC outcomes, as both do not cover the same aspects of institutional quality. Table 2 shows that Qatar is the regions' top performer in all the institutional indicators, with rankings going from 1 to 15 among 144 countries, except for the "Strength of investor protection" where Qatar holds the position 105 (Table 2). It is noteworthy that Qatar is ranked first in the following institutional indicators: "Favoritism in decisions of government officials", "Wastefulness of government spending", "Burden of government regulation", "Business costs of crime and violence". The United Arab Emirates is the region's second top performer, following closely Qatar's performance, and holding the first position in "Organized crime" and the second position in "Business costs of crime and violence". Oman holds good rankings in all institutional indicators except "Strength of investor protection". Then follows Bahrain that performs relatively well in all indicators except "Business costs and terrorism" (rank 120) and "Strength of investor protection" (rank 98). Saudi Arabia holds relatively good positions in all indicators. Israel is the region's best performer in "Strength of investor protection" (rank 6) but shows dimmer figures in other institutional indicators, particularly in "Burden of government regulation" (rank 116), "Business costs of terrorism" (rank 132) and "Efficacy of corporate boards" (rank 89). Libya, Lebanon, Egypt, Iran, Algeria and Yemen are the region's worst performers. Lebanon and Egypt hold respectively the ranks 140 and 143 (out of 144 countries) in "Business costs and terrorism" while Yemen is ranked last in the same category. Lebanon is ranked 141st in "Ethical behavior of firms", 142nd in "Favoritism in decisions of government officials" and 143rd in "Wastefulness of government spending". Libya is ranked 143rd in "Reliability of police services" and "Strength of investors' protection", 144th in each of "Strength of auditing and reporting standards", "Efficacy of corporate boards" and "Protection of minority shareholders' interests". Yemen is ranked 140th in "Diversion of public funds", "Reliability of police services" and "Efficacy of corporate boards", 143rd in "Strength of auditing and reporting standards", 144th in "Irregular payments and bribes".

Table 2: Rank on Institutional Indicators Entering the Composition of the GCI 2014-2015 for Selected MENA Countries

	Algeria	Bahrain	Egypt	Iran	Israel	Jordan	Kuwait	Lebanon	Libya	Malta	Morocco	Oman	Qatar	Saudi Arabia	Tunisia	UAE	Yemen
Property rights	97	29	104	86	43	34	51	108	131	36	41	30	7	32	76	23	129
Intellectual property protection	114	31	110	127	33	34	83	139	143	36	64	29	5	28	102	18	137
Diversion of public funds	112	35	101	84	39	43	57	137	133	40	47	24	4	25	56	7	140
Public trust in politicians	80	28	93	65	81	41	56	144	112	43	53	14	2	12	63	3	98
Irregular payments and bribes	120	28	65	97	33	46	57	142	122	59	53	29	5	22	77	4	144
Judicial independence	85	47	57	89	16	46	37	138	104	40	81	29	13	26	75	22	128
Favoritism in decisions of government officials	77	26	36	68	79	34	81	142	124	72	44	20	1	25	60	5	136
Wastefulness of government spending	74	17	130	82	77	32	92	143	136	34	41	6	1	12	64	2	141
Burden of government regulation	104	11	46	125	116	33	135	131	134	76	53	14	1	45	66	3	107
Efficiency of legal framework in settling disputes	108	40	105	94	46	31	65	132	135	37	73	27	6	34	75	17	141
Efficiency of legal framework in challenging regs.	104	39	82	130	35	22	45	139	127	50	73	37	4	27	63	15	123
Transparency of government policymaking	107	26	72	127	63	30	103	138	139	65	47	31	5	38	90	10	96
Business costs of terrorism	129	120	143	127	132	84	72	140	142	55	67	11	9	62	133	10	144
Business costs of crime and violence	93	68	137	112	49	41	30	113	138	13	28	5	1	17	107	2	139
Organized crime	94	14	127	121	75	37	43	88	116	26	33	3	2	10	103	1	133
Reliability of police services	74	36	111	80	69	31	57	132	143	33	41	27	3	34	70	7	140
Ethical behavior of firms	100	27	69	121	43	36	61	141	127	44	52	25	9	30	75	11	126
Strength of auditing and reporting standards	134	17	117	125	31	54	73	98	144	13	49	29	10	33	78	26	143
Efficacy of corporate boards	137	45	136	122	89	92	127	133	144	66	52	37	12	49	108	15	140
Protection of minority shareholders' interests	113	19	109	128	44	39	73	121	144	29	59	17	5	22	82	16	134
Strength of investor protection, 0–10 (best)*	83	98	117	117	6	130	68	83	143	57	98	83	105	22	45	83	113

Note: - Indicators that are derived from the World Economic Forum's annual Executive Opinion Survey. Indicators not derived from the Survey are identified by an asterisk (*). The value included in the table is the country's rank among the 144 economies included in the Index. UAE refers to United Arab Emirates.

Source: The Global Competitiveness Report 2014-2015, World Economic Forum.

The “ease of doing business” (EDB) ranking (Table 3) gives support to the stylized fact that the United Arab Emirates, Saudi Arabia, Qatar and Bahrain are the region’s top performers, holding respectively the rank 22, 49, 50 and 53 among 189 countries. Libya is the worst performer of the region, ranked 188th out of 189. Algeria, Djibouti, Iraq and Syria are in bad positions with respective ranks of 154, 155, 156 and 175. A closer look to the indicators shows that MENA countries holding the top ranks of the EDB do not perform well in all indicators. For instance, the United Arab Emirates and Bahrain don’t perform well in “Enforcing contracts”, Saudi Arabia in “Trading across borders” and “Solving Insolvency”, Qatar in “Getting credits” and Bahrain in “Start a business”. By contrast, bad performers in EDB have good scores in specific indicators: Oman in “Registering property”, Kuwait and Malta in “Protecting minority investors”, Egypt in “Getting credit” and Iran in “Enforcing contract”.

Table 3: Performance in Indicators Entering the Composition of the EDB Ranking 2015 for MENA Countries

	EDB Rank	Start a Business	Construction Permits	Getting Electricity	Registering Property	Getting Credit	Protecting Minority Investors	Paying Taxes	Trading Across Borders	Enforcing Contracts	Resolving Insolvency
UAE	22	2	1	1	1	3	1	1	1	12	6
Saudi Arabia	49	8	4	2	4	1	4	3	10	8	17
Qatar	50	7	5	5	5	12	9	1	8	5	1
Bahrain	53	11	2	9	2	5	7	4	9	13	5
Tunisia	60	6	9	4	8	7	5	14	4	2	2
Oman	66	10	6	11	3	7	9	5	7	15	8
Morocco	71	1	7	13	15	5	9	12	2	3	9
Kuwait	86	17	10	14	7	7	1	6	13	16	11
Malta	94	12	11	17	9	14	3	7	3	7	4
Lebanon	104	9	16	7	12	7	8	8	11	9	12
Egypt	112	4	14	15	10	1	13	18	12	18	10
Jordan	117	5	12	6	13	18	16	9	5	10	14
Iran	130	3	17	16	19	3	16	16	19	1	13
Yemen	137	13	8	18	6	18	18	17	16	4	16
WBG	143	19	18	12	11	7	14	10	14	6	18
Algeria	154	14	13	19	18	14	12	20	15	11	7
Djibouti	155	20	15	20	17	16	18	13	6	19	3
Iraq	156	15	3	3	14	16	15	11	20	17	18
Syria	175	18	19	10	16	13	5	15	18	20	15
Libya	188	16	19	8	20	18	20	19	17	14	18

Note: - Ease of doing business ranks economies from 1 to 189, with first place being the best. A high ranking (a low numerical rank) means that the regulatory environment is conducive to business operation. The index averages the country's percentile rankings on 10 topics covered in the World Bank's Doing Business. The ranking on each topic is the simple average of the percentile rankings on its component indicators. UAE refers to United Arab Emirates.

Source: Doing Business data, the World Bank.

Appendix 2: List of Countries and Sectors Included in The Database

List of countries

MENA Exporters		Importers					
Oil countries	Non-Oil countries						
Algeria	Djibouti	Afghanistan	Costa Rica	India	Mongolia	Sao Tome and Principe	
Bahrain	Egypt	Angola	Czech Rep.	Ireland	Mozambique	Suriname	
Iran	Israel	Albania	Germany	Iran	Mauritania	Slovakia	
Iraq	Jordan	United Arab Emirates	Djibouti	Iraq	Mauritius	Slovenia	
Kuwait	Lebanon	Argentina	Dominica	Iceland	Malawi	Sweden	
Libya	Morocco	Armenia	Denmark	Israel	Malaysia	Swaziland	
Oman	Malta	Antigua and Barbuda	Dom. Rep.	Italy	Namibia	Seychelles	
Qatar	Syria	Australia	Algeria	Jamaica	Niger	Syria	
Saudi Arabia	Tunisia	Austria	Ecuador	Jordan	Nigeria	Chad	
UAE	Yemen	Azerbaijan	Egypt	Japan	Nicaragua	Togo	
		Burundi	Eritrea	Kazakistan	Netherlands	Thailand	
		Belgium and Lux.	Spain	Kenya	Norway	Tajikistan	
		Benin	Estonia	Kyrgyzstan	Nepal	East Timor	
		Burkina Faso	Ethiopia	Cambodia	New Zealand	Tonga	
		Bangladesh	Finland	Kiribati	Oman	Trinidad and Tobago	
		Bulgaria	Fiji	St Kitts Nevis	Pakistan	Tunisia	
		Bosn. and Herzeg.	France	Korea	Panama	Turkey	
		Belarus	Micronesia	Kuwait	Peru	Taiwan	
		Belize	Gabon	Lao Rep.	Philippines	Tanzania	
		Bolivia	United Kingdom	Lebanon	Palau	Uganda	
		Brazil	Georgia	Liberia	Papua New Guinea	Ukraine	
		Brunei Darussalam	Ghana	Saint Lucia	Poland	Uruguay	
		Bhutan	Guinea	Sri Lanka	Puerto Rico	United States of America	
		Botswana	Gambia	Lesotho	Portugal	Uzbekistan	
		Cen. Afr. Rep	Guinea-Bissau	Lithuania	Paraguay	St Vinc. and Grenad	
		Canada	Greece	Luxembourg	Romania	Venezuela	
		Switzerland	Grenada	Latvia	Russia	Viet Nam	
		Chile	Guatemala	Morocco	Rwanda	Vanuatu	
		China	Guyana	Moldova	Saudi Arabia	Samoa	
		Côte d'Ivoire	Hong Kong	Madagascar	Sudan	Yemen	
		Cameroon	Honduras	Maldives	Senegal	Serbia and Mont.	
		Congo	Croatia	Mexico	Singapore	South Africa	
		Colombia	Haiti	Marshall Isl.	Solomon Islands	Congo Demo. Rep.	
		Comoros	Hungary	Macedonia	Sierra Leone	Zambia	
		Cape Verde	Indonesia	Mali	El Salvador	Zimbabwe	

List of sectors

Goods		Services	
Code	Sector	Code	Sector
'01	Live animals	236	Travel
'02	Meat and edible meat offal	205	Transportation
'03	Fish and crustaceans, molluscs and other aquatic invertebrates	245	Communications services
'04	Dairy produce; birds' eggs; natural honey; edible products of animal origin, not elsewhere ...	249	Construction services
'05	Products of animal origin, not elsewhere specified or included	253	Insurance services
'06	Live trees and other plants; bulbs, roots and the like; cut flowers and ornamental foliage	260	Financial services
'07	Edible vegetables and certain roots and tubers	262	Computer and information services
'08	Edible fruit and nuts; peel of citrus fruit or melons	266	Royalties and license fees
'09	Coffee, tea, maté and spices	268	Other business services
'10	Cereals	287	Personal, cultural and recreational services
'11	Products of the milling industry; malt; starches; inulin; wheat gluten	291	Government services, n.i.e.
'12	Oil seeds and oleaginous fruits; miscellaneous grains, seeds and fruit; industrial or medicinal ...	REM	Personal remittances
'13	Lac; gums, resins and other vegetable saps and extracts		
'14	Vegetable plaiting materials; vegetable products not elsewhere specified or included		
'15	Animal or vegetable fats and oils and their cleavage products; prepared edible fats; animal ...		
'16	Preparations of meat, of fish or of crustaceans, molluscs or other aquatic invertebrates		
'17	Sugars and sugar confectionery		
'18	Cocoa and cocoa preparations		
'19	Preparations of cereals, flour, starch or milk; pastrycooks' products		
'20	Preparations of vegetables, fruit, nuts or other parts of plants		
'21	Miscellaneous edible preparations		
'22	Beverages, spirits and vinegar		
'23	Residues and waste from the food industries; prepared animal fodder		
'24	Tobacco and manufactured tobacco substitutes		
'25	Salt; sulphur; earths and stone; plastering materials, lime and cement		
'26	Ores, slag and ash		
'27	Mineral fuels, mineral oils and products of their distillation; bituminous substances; mineral ...		
'28	Inorganic chemicals; organic or inorganic compounds of precious metals, of rare-earth metals, ...		
'29	Organic chemicals		
'30	Pharmaceutical products		

Goods	
Code	Sector
'31	Fertilisers
'32	Tanning or dyeing extracts; tannins and their derivatives; dyes, pigments and other colouring ...
'33	Essential oils and resinoids; perfumery, cosmetic or toilet preparations
'34	Soap, organic surface-active agents, washing preparations, lubricating preparations, artificial ...
'35	Albuminoidal substances; modified starches; glues; enzymes
'36	Explosives; pyrotechnic products; matches; pyrophoric alloys; certain combustible preparations
'37	Photographic or cinematographic goods
'38	Miscellaneous chemical products
'39	Plastics and articles thereof
'40	Rubber and articles thereof
'41	Raw hides and skins (other than furskins) and leather
'42	Articles of leather; saddlery and harness; travel goods, handbags and similar containers; articles ...
'43	Furskins and artificial fur; manufactures thereof
'44	Wood and articles of wood; wood charcoal
'45	Cork and articles of cork
'46	Manufactures of straw, of esparto or of other plaiting materials; basketware and wickerwork
'47	Pulp of wood or of other fibrous cellulosic material; recovered (waste and scrap) paper or ...
'48	Paper and paperboard; articles of paper pulp, of paper or of paperboard
'49	Printed books, newspapers, pictures and other products of the printing industry; manuscripts, ...
'50	Silk
'51	Wool, fine or coarse animal hair; horsehair yarn and woven fabric
'52	Cotton
'53	Other vegetable textile fibres; paper yarn and woven fabrics of paper yarn
'54	Man-made filaments; strip and the like of man-made textile materials
'55	Man-made staple fibres
'56	Wadding, felt and nonwovens; special yarns; twine, cordage, ropes and cables and articles thereof
'57	Carpets and other textile floor coverings
'58	Special woven fabrics; tufted textile fabrics; lace; tapestries; trimmings; embroidery
'59	Impregnated, coated, covered or laminated textile fabrics; textile articles of a kind suitable ...
'60	Knitted or crocheted fabrics
'61	Articles of apparel and clothing accessories, knitted or crocheted
'62	Articles of apparel and clothing accessories, not knitted or crocheted
'63	Other made-up textile articles; sets; worn clothing and worn textile articles; rags
'64	Footwear, gaiters and the like; parts of such articles
'65	Headgear and parts thereof
'66	Umbrellas, sun umbrellas, walking sticks, seat-sticks, whips, riding-crops and parts thereof
'67	Prepared feathers and down and articles made of feathers or of down; artificial flowers; articles ...
'68	Articles of stone, plaster, cement, asbestos, mica or similar materials
'69	Ceramic products
'70	Glass and glassware
'71	Natural or cultured pearls, precious or semi-precious stones, precious metals, metals clad ...
'72	Iron and steel
'73	Articles of iron or steel
'74	Copper and articles thereof
'75	Nickel and articles thereof
'76	Aluminium and articles thereof
'78	Lead and articles thereof
'79	Zinc and articles thereof
'80	Tin and articles thereof
'81	Other base metals; cermets; articles thereof
'82	Tools, implements, cutlery, spoons and forks, of base metal; parts thereof of base metal
'83	Miscellaneous articles of base metal
'84	Machinery, mechanical appliances, nuclear reactors, boilers; parts thereof
'85	Electrical machinery and equipment and parts thereof; sound recorders and reproducers, television ...

Goods	
Code	Sector
'86	Railway or tramway locomotives, rolling stock and parts thereof; railway or tramway track fixtures ...
'87	Vehicles other than railway or tramway rolling stock, and parts and accessories thereof
'88	Aircraft, spacecraft, and parts thereof
'89	Ships, boats and floating structures
'90	Optical, photographic, cinematographic, measuring, checking, precision, medical or surgical ...
'91	Clocks and watches and parts thereof
'92	Musical instruments; parts and accessories of such articles
'93	Arms and ammunition; parts and accessories thereof
'94	Furniture; bedding, mattresses, mattress supports, cushions and similar stuffed furnishings; ...
'95	Toys, games and sports requisites; parts and accessories thereof
'96	Miscellaneous manufactured articles
'97	Works of art, collectors' pieces and antiques
'99	Commodities not elsewhere specified

Appendix 3: Sectoral Regressions for Selected Manufacturing Products

Table A1: Sectoral Regressions for Selected Manufacturing Products

	'02	'04	'05	'08	'09	'11	'12	'24	'27	'39
Reg. Qual.	0.0315*** (0.0107)	0.0800*** (0.00722)	0.0821*** (0.0152)	0.0434*** (0.00529)	0.0946*** (0.00760)	0.0260*** (0.00792)	0.0516*** (0.00664)	0.00651 (0.00912)	-0.0107*** (0.00383)	0.0965*** (0.00465)
Gov. Eff.	0.0920*** (0.0178)	0.209*** (0.0125)	0.178*** (0.0250)	0.0958*** (0.00834)	0.197*** (0.0124)	0.0947*** (0.0129)	0.139*** (0.0110)	0.0433*** (0.0152)	-0.0228*** (0.00580)	0.179*** (0.00734)
Pol. Stab.	0.0188*** (0.00684)	0.0445*** (0.00473)	0.0821*** (0.00982)	0.0541*** (0.00428)	0.0614*** (0.00557)	-0.0209*** (0.00416)	0.0157*** (0.00461)	-2.47e-05 (0.00515)	-0.00157 (0.00295)	0.0181*** (0.00262)
Rule of Law	0.0794*** (0.0124)	0.140*** (0.00864)	0.177*** (0.0198)	0.114*** (0.00671)	0.185*** (0.0105)	-0.00217 (0.00709)	0.0970*** (0.00804)	0.0365*** (0.00947)	-0.00965** (0.00420)	0.0740*** (0.00435)
Cont. Corr.	0.0569*** (0.0169)	0.124*** (0.0113)	0.138*** (0.0217)	0.0940*** (0.00899)	0.134*** (0.0118)	0.0423*** (0.0124)	0.0914*** (0.0108)	0.0691*** (0.0140)	-0.00460 (0.00682)	0.154*** (0.00757)
Voice and acc.	-0.00827 (0.00800)	0.0256*** (0.00529)	0.0238*** (0.00895)	-0.0130*** (0.00455)	0.0152*** (0.00538)	-0.0211*** (0.00568)	0.0157*** (0.00509)	-0.00519 (0.00614)	-0.000233 (0.00399)	0.0134*** (0.00360)
Year dummies	YES	YES	YES	YES	YES	YES	YES	YES	YES	YES
Gravity Controls	YES	YES	YES	YES	YES	YES	YES	YES	YES	YES

Table A2: Sectoral Regressions for Selected Manufacturing Products (Cont'd)

	'40	'51	'52	'53	'54	'55	'56	'57	'61	'62
Reg. Qual.	0.0516*** (0.00519)	0.0745*** (0.0122)	0.0980*** (0.00902)	0.0756*** (0.0170)	0.0857*** (0.00859)	0.106*** (0.00954)	0.106*** (0.00918)	0.128*** (0.00718)	0.0539*** (0.00617)	0.106*** (0.00630)
Gov. Eff.	0.0970*** (0.00812)	0.118*** (0.0189)	0.188*** (0.0145)	0.267*** (0.0295)	0.110*** (0.0129)	0.169*** (0.0147)	0.131*** (0.0137)	0.258*** (0.0120)	0.137*** (0.0101)	0.204*** (0.0104)
Pol. Stab.	-0.0100*** (0.00313)	0.00922 (0.00768)	0.0366*** (0.00548)	0.0246** (0.00976)	0.0103** (0.00522)	0.0471*** (0.00629)	0.0579*** (0.00610)	0.0912*** (0.00532)	-0.00357 (0.00313)	0.0211*** (0.00319)
Rule of Law	0.0180*** (0.00513)	0.0440*** (0.0133)	0.145*** (0.0108)	0.183*** (0.0263)	0.0317*** (0.00874)	0.109*** (0.0110)	0.104*** (0.0104)	0.184*** (0.00952)	0.0227*** (0.00558)	0.0647*** (0.00574)
Cont. Corr.	0.0702*** (0.00841)	0.117*** (0.0183)	0.122*** (0.0130)	0.188*** (0.0221)	0.0815*** (0.0127)	0.117*** (0.0138)	0.143*** (0.0137)	0.181*** (0.0107)	0.0641*** (0.00931)	0.133*** (0.00924)
Voice and acc.	-0.00517 (0.00409)	0.0126 (0.00792)	0.0238*** (0.00536)	0.0287*** (0.00858)	0.0137** (0.00551)	0.0211*** (0.00586)	0.00682 (0.00596)	0.0509*** (0.00470)	-0.0353*** (0.00410)	0.00998** (0.00402)
Year dummies	YES	YES	YES	YES	YES	YES	YES	YES	YES	YES
Gravity Controls	YES	YES	YES	YES	YES	YES	YES	YES	YES	YES

Table A3: Sectoral Regressions for Selected Manufacturing Products (Cont'd)

	'76	'84	'85	'88	'90	'92	'93	'94	'96	'99
Reg. Qual.	0.101*** (0.00625)	0.0795*** (0.00430)	0.0831*** (0.00450)	0.00683 (0.00819)	0.0349*** (0.00457)	0.0533*** (0.0133)	-0.150*** (0.0231)	0.177*** (0.00615)	0.0992*** (0.00625)	0.158*** (0.0125)
Gov. Eff.	0.181*** (0.0101)	0.139*** (0.00668)	0.135*** (0.00701)	0.0148 (0.0130)	0.0747*** (0.00715)	0.131*** (0.0217)	-0.180*** (0.0376)	0.325*** (0.0104)	0.154*** (0.00963)	0.313*** (0.0230)
Pol. Stab.	0.0520*** (0.00362)	0.0158*** (0.00250)	0.00961*** (0.00257)	-0.0477*** (0.00438)	-0.0121*** (0.00282)	0.00802 (0.00773)	-0.0722*** (0.00881)	0.0830*** (0.00347)	0.0434*** (0.00385)	0.0599*** (0.00478)
Rule of Law	0.126*** (0.00642)	0.0581*** (0.00405)	0.0443*** (0.00422)	-0.0482*** (0.00755)	0.0189*** (0.00457)	0.0809*** (0.0160)	-0.123*** (0.0169)	0.177*** (0.00610)	0.103*** (0.00656)	0.126*** (0.00843)
Cont. Corr.	0.156*** (0.00965)	0.121*** (0.00712)	0.117*** (0.00731)	-0.0214 (0.0132)	0.0482*** (0.00756)	0.0594*** (0.0189)	-0.213*** (0.0311)	0.262*** (0.00931)	0.153*** (0.00979)	0.201*** (0.0178)
Voice and acc.	0.0475*** (0.00444)	0.00178 (0.00353)	0.00373 (0.00360)	-0.0509*** (0.00662)	-0.0342*** (0.00385)	-0.00533 (0.00788)	-0.0763*** (0.0121)	0.0796*** (0.00412)	0.0235*** (0.00447)	0.0922*** (0.00907)
Year dummies	YES	YES	YES	YES	YES	YES	YES	YES	YES	YES
Gravity Controls	YES	YES	YES	YES	YES	YES	YES	YES	YES	YES

Table A4: Sectoral Regressions for Service Sectors

	205	236	245	249	253	260	262	266	268	287	291	REM
Cont. Corr.	-0.208 (0.187)	0.599*** (0.166)	-0.957** (0.404)	-1.414*** (0.460)	1.056*** (0.263)	0.704* (0.424)	-4.477*** (1.279)	-1.991 (1.318)	2.599*** (0.351)	-1.597*** (0.336)	-0.172 (0.208)	2.155*** (0.821)
Gov. Eff.	-0.548** (0.216)	0.464** (0.200)	-0.843** (0.368)	-1.322*** (0.457)	0.819** (0.328)	0.852* (0.500)	-5.112*** (1.719)	-1.935** (0.908)	3.058*** (0.423)	-2.575*** (0.427)	-0.680*** (0.222)	2.081** (0.940)
Pol. Stab.	2.420*** (0.315)	1.972*** (0.211)	-1.960*** (0.720)	1.703*** (0.430)	3.137*** (0.449)	1.428*** (0.513)	-9.473*** (0.896)	-3.260*** (0.566)	2.112*** (0.429)	2.899*** (0.733)	2.060*** (0.426)	6.042*** (0.649)
Reg. Qual.	-0.0705 (0.113)	0.194* (0.107)	-0.0958 (0.164)	-0.450*** (0.173)	0.835*** (0.237)	0.283* (0.164)	0.188 (0.458)	0.663 (0.547)	1.318*** (0.149)	-1.401*** (0.198)	-0.190 (0.159)	2.384*** (0.813)
Rule of Law	0.630*** (0.173)	1.064*** (0.140)	-1.253*** (0.419)	-0.453 (0.355)	1.895*** (0.182)	0.885 (0.542)	-5.748*** (0.617)	-1.774** (0.856)	2.890*** (0.373)	0.666** (0.299)	0.528** (0.226)	3.494*** (0.732)
Voice and acc.	-2.390*** (0.563)	-0.581 (0.517)	1.950*** (0.575)	-0.713 (0.558)	-4.115*** (0.664)	1.264*** (0.414)	8.685*** (0.762)	3.608** (1.473)	2.657*** (0.436)	-16.42*** (0.586)	-3.971*** (0.507)	2.273** (0.910)
Year dummies	YES	YES	YES	YES	YES	YES	YES	YES	YES	YES	YES	YES
Gravity Controls	YES	YES	YES	YES	YES	YES	YES	YES	YES	YES	YES	YES