

Does the Quality of Institutions Limit the MENA's Integration in the World Economy?

Pierre-Guillaume Méon¹ and Khalid Sekkat²

¹University Robert Schuman; and ²University of Brussels and European Commission

1. INTRODUCTION

MANY professionals attribute the disappointing growth and employment records in the Middle East and North Africa (MENA) to the low integration of the region in the world economy (see Dasgupta et al., 2002, for a discussion).¹ Abstracting from oil, the region scores one of the lowest ratios of exports to GDP among all regions of the world but Sub-Saharan Africa. In term of FDI inflows it also shows a similar picture.

Previous researches have identified restrictive trade and exchange rate policies among the reasons for the low exports and FDI performance of developing countries. For instance, Sachs and Warner (1995) have showed that more liberalised economies tend to adjust more rapidly from primary-intensive to manufactures-intensive exports. Sekkat and Varoudakis (2002) focused specifically on the MENA and investigated whether trade policy reforms can increase the share of manufactured exports in GDP. Their results suggest that trade policy matters for the region's performance. A similar conclusion was reached by Achy and Sekkat (2003) regarding the impact of exchange rate policy in the MENA. However, recent research suggests that for countries to fully benefit from openness strategies the functioning of institutions might be crucial.

The authors thank Michael Gasiorek and an anonymous referee for very helpful comments. They also benefited from very useful discussions with seminar participants at the University of Brussels, the University Robert Schuman of Strasbourg and the University Louis Pasteur of Strasbourg. They acknowledge financial support from the FEMISE network. All remaining errors are the authors' own.

¹ On the relationship between trade and growth in general see for instance Edwards (1992), Rodriguez and Rodrik (2001) and Frankel and Romer (1999).

As far as trade is concerned, Anderson (2001) suggested that the ill-functioning of institutions impairs foreign trade, because it increases both the costs and risks of trading abroad. Anderson and Marcouiller (2002) accordingly observe that bad institutions reduce the volume of trade. Finally, Dollar and Kraay (2002) report a positive correlation between openness and the quality of institutions with a potential bidirectional causality between the two variables. Regarding FDI, a first study by Wheeler and Mody (1992) failed to establish a significant relationship between FDI and institutions. These results being inconsistent with popular wisdom, Wei (2000) carefully re-examined the issue using a comprehensive data set on bilateral FDI flows. The results of his estimation show the existence of a negative relationship between corruption in the host country and FDI. Henisz (2000) moreover finds that foreign firms are more likely to enter wealthier countries with large population and credible political rules.²

The present paper builds on this work to examine the impact of institutions on manufactured exports and FDI attractiveness of the MENA. Econometric specifications of manufactured exports supply and FDI inflows' determinants are estimated including both traditional explanatory variables and indicators of the quality of institutions. Six indicators of institutions are considered. Three of them concern corruption: the Corruption Perception Index published by Transparency International, the corruption index provided by the World Bank and Wei (2000)'s indicator. The other three cover different aspects of governance: government effectiveness, the rule of law (both drawn from Kaufmann et al., 1999) and a broad index of the quality of governance published in the International Country Risk Guide.

The paper is organised as follows. Section 2 discusses the MENA's recent macroeconomic performance and its participation in the world economy. Section 3 briefly presents the literature linking institutions to trade and FDI. Section 4 discusses the econometric approaches. Section 5 presents the results and Section 6 concludes.

2. THE MENA'S ECONOMIC PERFORMANCE IN AN INTERNATIONAL CONTEXT

Over the last fifteen years, growth performance in the MENA has been disappointing relative to that of the rest of developing countries. The growth rate of per capita GDP in the region declined from around 3.45 per cent on average during the 1960s and 1970s to around 0.1 per cent on average during the 1980s and 1990s. The disappointing growth record is reflected in a high unemployment rate that amounts to around 15 per cent. While the decreasing growth

² The literature also suggests direct effects of institutions on growth. See Mauro (1995), Hall and Jones (1999) and Olson et al. (2000).

rate is similar for oil-exporting and non-oil-exporting countries, the unemployment rate is much higher for non-oil-exporting countries and amounts to around 25 per cent.

Research on the source of growth in the MENA have shown that trade has not been utilised as a momentum for growth (see Makdissi et al., 2000, for a recent investigation). This is due to the lack of export diversification in the region. Abstracting from energy exports, the region continues to be among the least integrated regions in the world in terms of trade and FDI. It is even losing ground in this respect relative to other regions.³ The lack of export diversification makes the growth pattern in the region highly volatile. In oil-exporting countries it is closely related to energy price cycles while in others, such as Morocco, it is highly dependent on drought conditions due to the importance of agriculture in the economy. Such a situation impacts upon these economies' capacity to invest, import, manage foreign exchange and hence their growth.

The move from primary commodity exports to manufactures and service exports can be an important factor of sustained economic growth for at least two reasons. First, the demand for such exports increases more with income increase than the demand for primary products. Hence, growth prospects for a country's exports are higher if its exports are diversified than when it is specialised in primary products. Second, the development of the manufacturing sector induces substantial dynamic productivity gains, and growth, arising from economies of scale, learning effects and externalities among firms and industries.

The MENA's record is disappointing in terms of export diversification. Figure 1 shows that the MENA, Sub-Saharan Africa (SSA) and Latin America exhibited the lowest ratios of manufactured exports to GDP in 1990. Over the 1990s, the ratio stagnated for the MENA while it increased markedly for Latin America and slightly for SSA, thereby leaving the MENA with the lowest ratio in 1999. Inside the region, there are important differences among countries. Oil-producing countries such as Libya, Saudi Arabia, Oman, Kuwait and Algeria were not diversified at the beginning of the decade and did not improve their record. Others like Oman, Tunisia, Egypt, Syria, Jordan, Morocco and Qatar showed significant improvement.

FDI inflows provide developing countries with the additional resources they need to improve their economic performance. FDI inflows are expected to increase a country's output and productivity, to encourage local investment and to stimulate the development and dispersion of technology.

The MENA's record in terms of FDI attractiveness is also disappointing. The region's share in global investment and private capital inflows is small and

³ While world trade has been expanding in the past decade by about 8 per cent a year, the MENA's trade has only been growing by about 2.7 per cent a year.

FIGURE 1
Manufactured Exports as Per Cent of GDP

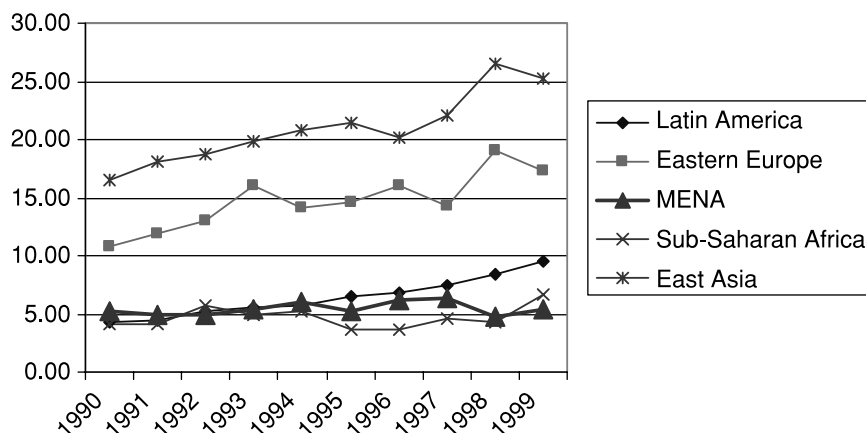
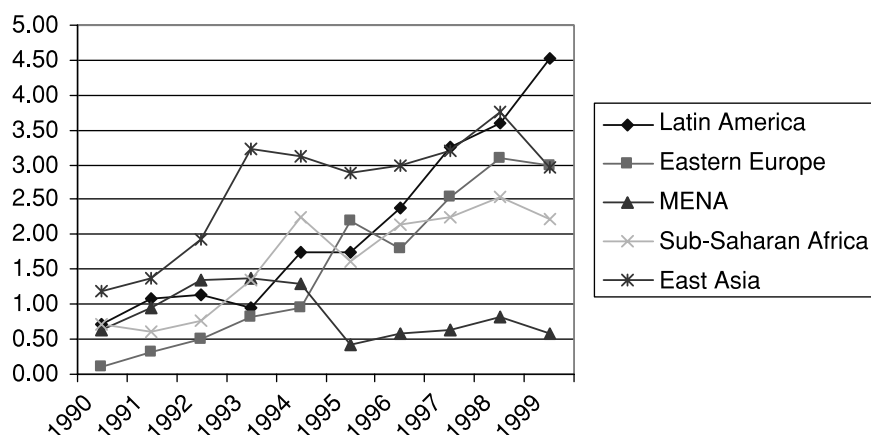


FIGURE 2
FDI Inflows as Per Cent of GDP



falling. The ratio of FDI flows to GDP was on average around 0.83 per cent for the MENA region during the 1990s while it was 1.51 in Eastern Europe, 1.66 in SSA, 2.35 in Latin America and 2.82 in East Asia. Moreover, in contrast to most developing countries where FDI as a percentage of GDP is increasing, the ratio in the MENA remained constant over the last decade (see Figure 2).

Except for Tunisia, FDI inflows to the MENA are highly dependent on the presence of energy and on political conditions. For instance, investment in Algeria, Iraq or Sudan has been frightened away by political turmoil while Saudi Arabia and Egypt attracted further FDI in the last years. The flows of FDI to

Tunisia reached 13 per cent of GDP, which is slightly above the average of developing countries.

3. CONCEPTUAL FRAMEWORK

Although there is empirical evidence that the MENA's disappointing performance may be due to distorted and inward-looking policies, openness strategies may not be sufficient unless they are complemented by institutional reforms.⁴ The present section documents how institutions can affect export performance and FDI attractiveness and provides a conceptual framework for testing such effects.

a. Institutions and Trade

Studies of the relationship between institutions and trade are receiving increasing attention. Institutions can either directly affect the willingness of agents to trade abroad, or affect economic variables that may in turn lower the propensity of agents to trade.⁵

The direct impact of institutions on the propensity to trade runs through the reduction of the expected return of trading abroad. A theoretical analysis by Anderson and Young (1999) suggests that the lack of enforcement of contracts may act as a tariff on risk-neutral traders and therefore reduce trade.⁶ Rodrik (2002) points out that the main impediment to international trade may indeed be the problem of contract enforcement, which is of particular relevance in international transactions since they confront traders in countries whose legal and political jurisdictions differ. Using gravity models, Anderson and Marcouiller (2002) lend empirical support to the impact of the quality of institutions on trade. Deterioration of the former induces a positive mark-up on the price of exports that reduces foreign demand and then exports.

The impact of institutions on trade may also result from their effect on the risks associated with international transactions (Anderson and Marcouiller, 1997). Insecurity may prevent trade even though it offers potential mutual gains. For instance, predation reduces trade not only because it is a direct deduction on the flow of traded goods, but also because it diverts resources from their productive

⁴ Elbadawi (1999) has already pointed to the inadequate institutional support for investment and private sector development in the region.

⁵ Some authors argue that the causality between institutions and trade may run in the other direction (Rodrik, 2002; Treisman, 2000; and Hisamatsu, 2003). This reverse causality seems, however, to be statistically fragile (Knack and Azfar, 2003). While aware of the possibility of a two-sided causality between institutions and trade, we abstract from this issue here.

⁶ Contract enforcement becomes crucial when traders incur significant sunk costs resulting in a hold-up problem. Robert and Tybout (1997) document that such costs may be large and have dramatic consequences on trade.

allocation towards the defence of property rights. It follows that good institutions that may help bar predation may also foster trade.⁷

In addition to their direct effects, institutions may also indirectly affect trade through their impact on other variables that determine trade flows. Investment being an important determinant of trade (Rodrik, 1995; and Elbadawi, 1998), the impact of the quality of institutions on investment (Brunetti and Weder, 1998; Mauro, 1995; and Knack and Keefer, 1995) induces their indirect impact on trade. Furthermore, deficient institutions impact both on productivity (Hall and Jones, 1999) and its growth (Olson et al., 2000). As lower productivity is an impediment to competitiveness, countries with deficient institutions are likely to meet difficulties trading abroad.

b. Institutions and Foreign Direct Investment

The relationship between FDI and institutions has attracted greater interest than the relationship between institutions and trade. The literature underlines, however, the same type of mechanisms: direct effects stemming from the impact on the return and the risk associated with investing abroad and indirect effects coming from the impact on other variables, such as human capital or infrastructure, that were found to influence FDI inflows.

The literature suggests that the main institutional impediment to FDI may not lie in its effect on the return of investing abroad but on the excess risk that it entails. Unlike trade, foreign investment is not only subject to a risk of predation and hold-up but also, and chiefly, to a risk of expropriation and nationalisation. Harms and Ursprung (2002), focusing on democracy, argue that authoritative regimes are associated with a greater risk of policy reversals, due for example to the dictator's own whims, the need to raise public support through populist measures, or simply coups. Furthermore, Vinod (2003) points out that the impact of institutional risk on foreign investment may be even larger than expected if agents found their decisions on value at risk methods. Indeed, those methods tend to attach an extra weight to the worst scenario and may therefore deter FDI more than standard models of economic behaviour suggest.

Recently, Gastanaga et al. (1998) find that corruption, bureaucratic delays and imperfect contract enforcement are associated with lower FDI to GDP ratios. Globerman and Shapiro (2002) also observe that various measures of governance quality are related to FDI inflows. Finally, Wei (2000) describes the consequences of corruption on bilateral FDI flows as a tax on foreign investors. Other

⁷ In addition, defective institutions also seem to distort the geographic structure of trade, as Lambsdorff (1998 and 2000) observes. He finds that some countries, like Belgium, France, Italy, the Netherlands and South Korea, are persistently over-represented in the imports of corrupt countries and that others like Sweden and Malaysia tend to trade less with corrupt importers.

studies examine separately the impact of the quality of governance and the impact of the risk associated with it. Campos et al. (1999) report that the predictability of corruption is a significant determinant of the investment ratio. A similar observation was made by Brunetti et al. (1998). Lambsdorff (2003) finds that the predictability of corruption has an impact on inward capital flows that is distinct from the impact of the level of corruption.

Finally, institutional deficiencies may also have an indirect effect on FDI flows through their impact on other variables. The literature has shown that FDI flows are sensitive to human capital, health of the workforce and the quality of public infrastructure (Mody and Srinivasan, 1998; and Globerman and Shapiro, 2002). It has been observed that defective institutions tend to be associated with lower adult literacy rates (Kaufman et al., 1999), larger public investment in unproductive assets (Mauro, 1998), and lower expenditures devoted to the maintenance of past projects. Hence, by encouraging unproductive public investments that result in less efficient public facilities and a slower accumulation of human capital, defective institutions also indirectly hamper countries' attractiveness for foreign investment.

4. DATA AND METHODOLOGY

To assess the impact of the quality of institutions on manufactured exports and FDI, we rely on traditional econometric specifications of these variables to which we add measures of the quality of institutions. Various indicators are now available to proxy the quality of institutions. They include the International Country Risk Guide (ICRG) index, the Transparency International (TI) index, and a set of the World Bank (WB) indices covering various dimensions of institutions' quality. However, apart from the ICRG index and, to some extent, the TI index, all the other indices are time invariant. While the ICRG index provides a broad measure of institutions' quality, the others have the advantage that each is designed to measure a specific aspect of governance, which is a useful piece of information for our study.

In order to take advantage of the time dimension in the ICRG and the TI indices, and of the precision in the WB indices two econometric approaches are adopted. One consists of using the whole time-series cross-section sample (including ICRG and TI) as it stands and apply panel data analysis. The other estimates a fixed effects model using basic specifications for manufactured trade and FDI and then use the estimated fixed effects as a dependent variable to be explained by institution indicators and relevant control variables.⁸ A detailed description of the approaches is provided below.

⁸ This method is described in Hsiao (1986, section 3.6.1). For an application to institutional measures, the interested reader may refer to Olson et al. (2000).

a. The Panel Data Approach

We apply the same panel data approach to both manufactured exports and FDI. However, the relationships that we estimate are naturally different and are consequently presented separately.

(i) Manufactured exports

To test for the impact of institutions on manufactured exports, we extend a specification that was used by Sekkat and Varoudakis (2000). We assume the following relationship between exports of manufactures and the quality of institutions:

$$\begin{aligned} \log(XM_{it}) = & \alpha_{0i} + \alpha_1 * \log(E_{it}) + \alpha_2 * RYP_{it} + \alpha_3 * \log(IM_{it-1}) \\ & + \alpha_4 * \log(Inst_{it}) + \mu_{it}, \end{aligned} \quad (1)$$

where XM_{it} is country i 's ratio of manufactured exports to GDP for year t . E_{it} stands for country i 's real effective exchange rate for year t ; an increase in E_{it} implying an appreciation of the exporter's currency. RYP_{it} measures the GDP growth rates of country i 's partners. IM_{it-1} is year $t-1$'s investment in the manufactured goods sector over GDP. $Inst_{it}$ stands for an index of the quality of country i 's institutions for year t , higher values of $Inst_{it}$ standing for a lower quality of its institutions. Finally, μ_{it} is the error term.

We use the ratio of manufactured exports as the dependent variable to correct for the differences in countries' sizes.⁹ α_{0i} is a fixed country effect that accounts for systematic cross-country differences that are not explained by the other independent variables. It therefore accounts for unmeasured or unobservable country specificities related to countries' socio-economic characteristics. The control variables are standard in the literature and all have a well-defined expected impact on manufactured exports. The coefficient of the exchange rate should be negative, as an increase in E_{it} means an appreciation of the exporter's currency. We expect a positive coefficient for the growth rates of a country's partners. If a country's partners grow faster, they will increase their demands for goods produced in that country, thereby raising its exports. Finally, we complement our set of control variables by the ratio of investment in the manufactured goods sector to GDP. This is based on the presumption that investment in the manufactured goods sector should raise its capacity, resulting in greater supply of manufactured goods,

⁹ In so doing, we may well underestimate the impact of governance on exports of manufactures. Namely, as worse governance is associated with a lower GDP (Mauro, 1995, or Knack and Keefer, 1995), both the numerator and the denominator of the exports ratio are negatively affected by defective institutions. This suggests that the impact of governance on exports may be stronger than what our point estimates already imply. This comment also applies to the FDI ratio used below.

hence higher exports. We accordingly expect the exports ratio to be positively correlated with investment. As institutional indicators, we use here the two time-varying indices: the index published in the International Country Risk Guide and the Corruption Perception Index constructed by Transparency International.

The International Country Risk Guide provides, among others, a synthetic indicator of the political risk associated with a country on an annual basis. That indicator is constructed so as to encompass a wide variety of political factors that may influence the risk of investing in a country. Those factors are so diverse that it is not possible to associate the ICRG political risk indicator with any specific aspect of governance.¹⁰ It is therefore best interpreted as a synthetic measure of risk, broadly defined. The original index ranges from 0 to 100, the latter corresponding to the lowest possible risk. To ensure coherence with the other indicators, we re-code it such as an increase reflects higher risk. We therefore expect our ICRG index to be negatively related to the ratio of manufactured exports.

Unlike the ICRG index, the TI index focuses on a specific aspect of governance, i.e. corruption. It ranges from 0 to 8, the latter corresponding to an absence of corruption. It was also re-coded such that an increase in that index reflects higher corruption. Thus, we expect the modified index to be negatively associated with manufactured exports.¹¹

(ii) Foreign direct investment

The strategy we employ to assess the impact of institutions on FDI is quite similar to the one we use for exports of manufactured goods. Namely, we add an index of the quality of institutions to a standard set of explanatory variables (see UNCTAD, 1998). The relationship that we estimate is therefore the following:

$$\begin{aligned} \log(FDI_{it}) = & \beta_{0i} + \beta_1 * \log(Ypc_{it}) + \beta_2 * RY_{it} + \beta_3 * \log(Prim_{it}) \\ & + \beta_4 * RYP_{it} + \beta_5 * \log(Inst_{it}) + v_{it}, \end{aligned} \quad (2)$$

where FDI_{it} is country i 's FDI to GDP ratio for year t and Ypc_{it} its current GDP per capita for year t . RY_{it} stands for country i 's current GDP growth rate for year t . $Prim_{it}$ measures country i 's primary school enrolment ratio for year t . v_{it} is the error term. RYP_{it} and $Inst_{it}$ are defined as in (1).

¹⁰ As a matter of fact, the indicator results from the aggregation of twelve basic components, unevenly weighted. Those components respectively assess: the stability of the government, socio-economic conditions, the government's attitude toward investment, the degree of political violence, the potential for external conflict, corruption, the role of the military in politics, the role played by religion in politics, law and order, ethnic tensions, the government's democratic accountability, and the quality of the bureaucracy (ICRG, 1999).

¹¹ Note that Transparency International warns against year-to-year comparisons of its index on the ground that its composition may change for one year to another. We nevertheless decided to use that index in our panel estimations for comparison with the ICRG.

Here again, the dependent variable is scaled by GDP to abstract from the difference in the size of countries. We tried to use FDI in the manufactured sector to get a better measure of the attractiveness of countries but such series are available for too few countries, only two of which (Morocco and Tunisia) are part of the MENA region.¹² Once these series are used with governance indicators, we end up with only one MENA country (Morocco).

As in (1), β_{0i} is country i 's fixed effect, which controls that country's specificities that are not measured by the other explanatory variables. The control variables are, as before, fairly standard. An increase in per capita income is associated with higher purchasing power and is supposed to attract more FDI: β_1 should consequently be positive. Faster GDP growth suggests dynamism of the economy and is expected to attract more FDI: β_2 should also be positive. A better educated, hence potentially more productive, workforce should also attract foreign investors. We therefore expect a positive β_3 . As faster growth of main trading partners implies more opportunity for exports FDI may also increase: β_4 should be positive. Finally, as bad institutions are assumed detrimental to investment, we expect β_5 to negative.

b. Cross-section of Fixed Effects

Apart from the ICRG risk index and the Transparency International index, other institutional indicators exist which have the advantage of being designed to measure a specific aspect of governance. These indicators are, however, time invariant. To take advantage of the information in these indicators, we use another econometric approach. In a first step we separate the explanatory variables used before into two subsets: those which vary in time (first subset) and those which do not (or almost not). The latter subset includes the new institutional indicators, human capital and per capita GDP.¹³ In a second step we estimate a specification where explanatory variables are fixed country effects and the ones included in the first subset. The fixed country effects therefore capture all the cross-country differences that are not explained by the differences in, and variations of, the time-varying variables. In the third step the estimated fixed country effects coefficients are used as dependent variables to be explained by institutions indicators, the other non-time-varying variables (second subset) and other control variables. The third step therefore assesses to which extent systematic cross-country differences are attributable to differences in measured time-invariant variables, including chiefly the quality of institutions.

¹² Using total FDI may blur the impact of governance because such flows can also be driven by natural resources abundance.

¹³ Although per capita GDP varies in time, the variations over the sample period appear to be slow enough for its inclusion in the second subset to improve the results.

(i) *Manufactured exports*

The specification to be estimated in the second step for exports of manufactures is the same as (1) except that only E_{it} , RYP_{it} and IM_{t-1} are included among the regressors. In the third step, we used the fixed country effects estimated in the second step as a dependent variable. The specification estimated in the third step is:

$$\alpha_{0i} = \eta_0 + \eta_1 * \log(\text{Inst}_i) + \eta_2 * \log(\text{Pot}_i) + \varepsilon_i, \quad (3)$$

where α_{0i} is country i 's fixed effect as estimated in the second step. Inst_i is an index of the quality of country i 's institutions. Pot_i measures country i 's market potential. ε_i is the error term.

Four time-invariant indicators of institutions are considered. The first and second ones are indices of corruption (labelled Wei and WB respectively) and are drawn from Wei (2000) and Kaufmann et al. (1999). The two other indicators shed light on the impact of two different facets of governance: the rule of law and government effectiveness. Both draw on Kaufmann et al. (1999). Government effectiveness concerns the 'perceptions of the quality of public service provision, the quality of the bureaucracy, the competence of the civil servants, the independence of the civil service from political pressures, and the credibility of the government's commitment to policies'. The rule of law is 'the extent to which agents have confidence in and abide by the rules of society'. For the sake of comparability, the two governance indicators used before (ICRG and TI) are also considered. They are simply averaged over the sample period. We re-scaled all indices so that higher levels mean lower quality of governance. Their coefficients should consequently be negative.

We used a country's market potential as a control variable in the export regressions. That variable is defined as the distance-weighted average of a country's partners' GDPs. It therefore measures how close a country is to other markets. That variable was computed by the Centre d'Etudes Prospectives et d'Informations Internationales (CEPII) and was downloaded from its website. Our presumption is that the closer a country is to rich economies the more it will export. We therefore expect the market potential variable to be positively correlated with a country's exports of manufactures ratio.

(ii) *Foreign direct investment*

Regarding FDI, the specification that we estimate in the first step is similar to (2). Only RY_{it} , Prim_{it} and RYP_{it} are used as explanatory variables however. Once that relationship is estimated, the country fixed effect can be used as the dependent variable in the third step, using the following specification:

$$\beta_{0i} = \lambda_0 + \lambda_1 * \log(\text{Inst}_i) + \lambda_2 * \log(\text{Ypc}_i) + \lambda_3 * \text{Nfpp}_i + \lambda_4 * \log(\text{Pot}_i) + \xi_i, \quad (4)$$

where β_{0i} is country i 's fixed effect as estimated in the second step and Inst_{it} an index of the quality of country i 's institutions. Ypc_i stands for country i 's average per capita GDP. Nfpp_i is a dummy variable equal to one when country i is classified as an exporter of primary products (including oil) by the World Bank. Pot_i measures country i 's market potential. ξ_i is the error term.

The measures of institutional quality are the same as before and so are the expected sign of the coefficients. A new control variable is introduced here: Nfpp_i . It takes account of the fact that natural resources abundant countries can attract more FDI independently of their institutional framework: λ_3 should be positive.

5. EMPIRICAL RESULTS

In this section, we successively present the results of our computations with the panel data approach and the cross-section of fixed effects.

a. The Panel Data Approach

Tables 1 and 2 display the estimation results of equations (1) and (2) respectively. Both equations are estimated using a sample of cross-section and

TABLE 1
Regression Results. Dependent Variable: Ratio of Manufactured Exports to GDP

<i>Explanatory Variables</i>	<i>Institutional Indicator Used in the Specification</i>	
	<i>Political Risk (ICRG)</i>	<i>Corruption (TI)</i>
Exchange rate	-0.43** (2.52)	-0.19 (0.7)
Partners' growth	0.044*** (2.67)	-0.04 (1.61)
Investment	0.12*** (3.92)	-0.02 (0.75)
Institutional indicator	-0.78*** (3.80)	-0.25** (2.17)
Number of observations	357	125
Adjusted R^2	0.95	0.97
Fixed effects	108.86	106.17
Random effects	$\chi^2(3) = 27.6$	$\chi^2(1) = 0.65$

Notes:

Absolute t -statistics are displayed in parentheses under the coefficient estimates.

* Test statistic is significant at the 10 per cent level; ** significant at the 5 per cent level; *** significant at the 1 per cent level.

Fixed effects are not reported. The estimates are heteroscedastic consistent.

TABLE 2
Regression Results. Dependent Variable: Ratio of FDI to GDP

<i>Explanatory Variables</i>	<i>Institutional Indicator Used in the Specification</i>	
	<i>Political Risk (ICRG)</i>	<i>Corruption (TI)</i>
GDP per capita	1.32*** (2.98)	3.58** (2.44)
Growth rate	0.0076 (1.30)	-0.02 (0.94)
Primary schooling	0.42 (1.13)	3.66** (2.40)
Partners' growth	0.063** (2.11)	-0.054 (0.74)
Institutional indicator	-1.91*** (6.05)	0.013 (0.02)
Number of observations	833	215
Adjusted R^2	0.67	0.78
Fixed effects	15.96	9.55
Random effects	$\chi^2(3) = 15.97$	$\chi^2(5) = 32.72$

Notes:

Absolute t -statistics are displayed in parentheses under the coefficient estimates.

* Test statistic is significant at the 10 per cent level; ** significant at the 5 per cent level; *** significant at the 1 per cent level.

Fixed effects are not reported. The estimates are heteroscedastic consistent.

time-series data. All series, except institution indicators, are drawn from the World Development Indicators. The sample includes annual data (1990–1999) and covers a number of countries between 34 and 107 (see the Appendix). We use the panel data econometric methodology: tests of fixed and random effects are conducted to select the most adequate models. The estimates are heteroscedastic consistent. The fixed effects and the random effects tests support the focus on the fixed effects model. The overall quality of fit is very high for exports and high for FDI.

(i) Manufactured exports

In the regression with the ICRG index, all coefficients of the control variables are significant and have the expected sign. Faster growth in a country's partners leads to an increase in its exports of manufactures; the appreciation of the exporter's currency harms its exports. Investment in the manufactured goods sector is associated with higher exports. The coefficient of the ICRG index also has the expected sign and is significant, confirming that higher political risk disables a country's participation in world trade.

The regression where the TI corruption index is used among the explanatory variables confirms the main results obtained above: the governance index is

significantly correlated with manufactured exports and a reduction in the level of corruption results in an increase of such exports. However, the control variables lose their significance. This may be due to the drastic reduction in the sample's size or to the fact that, as suggested by TI itself, the index should not be used in a temporal perspective.

In a nutshell, a quick glance at Table 1 seems to confirm the importance of institutions in determining a country's participation in international trade. One may, however, wonder what the quantitative importance of governance is and, more to the point, what that result means for MENA countries. To answer those two questions, we use our estimations to compare the observed exports ratio of the MENA countries comprised in our sample with what it might be if their governance improved.¹⁴

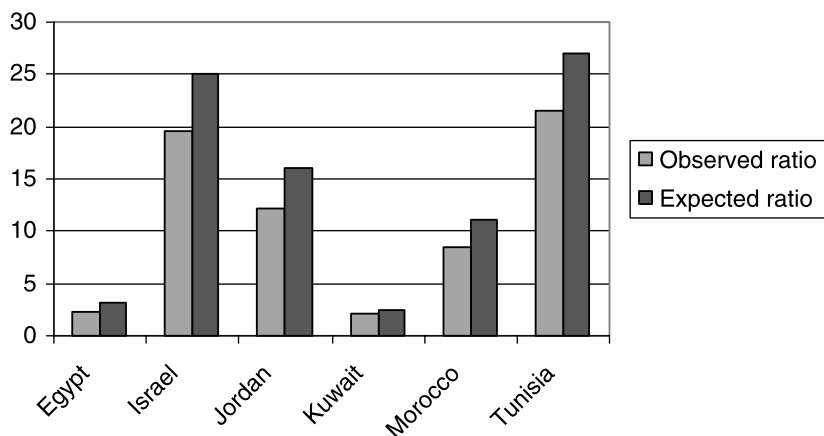
Given the quality of its results, we focus on the degree of political risk as measured by the ICRG index. Our estimation reveals that the elasticity of the manufactured exports to the index is 0.78. This means that if any country decreased its political risk by 1 per cent, during any particular year, its exports ratio would be expected to rise by 0.78 per cent. To grasp the true meaning of that figure, let us take the example of Morocco. In 1997, that country's ICRG score amounted to 68.8 and its exports of manufactures to 10.4 per cent of its GDP. Let us now assume that during that year Morocco could have raised its ICRG index to Switzerland's level, which is the country that on average ranks highest on the ICRG scale, with an index of 85.08 in 1997. The choice of the highest level score may seem excessive. The outcomes are proportional however: assuming that the gap between Morocco and Switzerland is only reduced by half will result in one-half of our computed outcome. Hence, one can easily compute the result of different scenarios.

Assuming the Swiss index will result in a 23.75 per cent increase in Morocco's ICRG index that, according to our estimation, would have resulted in an 18.45 per cent increase in Morocco's exports of manufactures ratio. Morocco's exports ratio would therefore have amounted to 12.32 per cent instead of 10.4 per cent in 1997, a ratio similar to Poland's. The impact on manufactured exports ratio is far from negligible. For instance, Sekkat and Varoudakis (2002) have found that the trade liberalisation programme adopted in Morocco since 1983 has resulted in an increase of the manufactured exports ratio by around 40 per cent. Hence, the impact of improvement in the quality of institutions could be one-half that of 20 years of trade liberalisation.

We ran the same exercise for every year and every MENA country in the sample. The average difference between the observed ratio and the predicted ratio if governance improved is reported in Figure 3. This shows marked differences in

¹⁴ Due to limitations in the availability of data, there are only six MENA countries in our sample for which we could run that exercise.

FIGURE 3
The Expected Impact of an Improvement of Governance in MENA Countries on Their Exports Ratio



the observed trade of manufactured goods ratio from one country to another. Tunisia appears to be the most open country in the sample of MENA economies, whereas Kuwait is the least open economy. More to the point, it shows that an upgrading of the political risk indicator to Switzerland's level would have resulted everywhere in an increase of the exports of manufactured goods ratio. However, the magnitude of the average variation differs from one country to another. For instance, Kuwait could only raise its exports of manufactured items by 0.33 percentage points while Tunisia could obtain a 5.40 points increase in that ratio.

(ii) Foreign direct investment

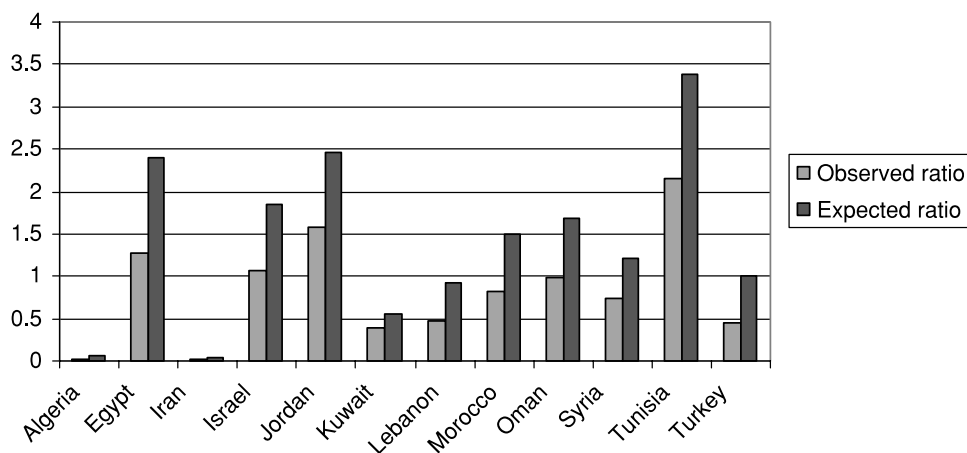
The results for the FDI ratio using the ICRG index show that a higher per capita income and a faster growth of trading partners increase FDI inflows. The domestic growth and human capital coefficients are non-significant. The ICRG index is significantly and negatively correlated with the FDI ratio. This suggests that political risk is a severe impediment to FDI.

When one looks at the regression where the TI corruption index is used instead of the ICRG index, the above diagnosis is, however, qualified. It appears that the coefficient of that index is not significantly different from zero. We therefore observe no meaningful relationship between FDI and corruption, as measured by the CPI index.

The results therefore underline the role of political risk in general, rather than only one aspect of bad governance, i.e. corruption, in diverting FDI from a country. A sensible question is to determine by how much it does. To provide an order of magnitude, we ran the same simulation for the FDI ratio as we did for the exports

FIGURE 4

The Expected Impact of an Improvement of Governance in MENA Countries on the FDI Ratio



of manufactures ratio. We therefore assessed the potential impact of an improvement of the political risk of the MENA countries in our sample to Switzerland's level. The results of our computations, based on an estimated elasticity of 1.91, are plotted in Figure 4.¹⁵

Like Figure 3, Figure 4 displays significant differences in the observed FDI attractiveness of the MENA countries of our sample. With a ratio equal to 2.15 per cent, Tunisia is the most attractive economy, followed by Jordan, whose FDI ratio amounts to 1.60 per cent. On the other hand, Algeria and Iran's FDI ratios, which hardly exceed 0.2 per cent, are the least attractive in the sample.

The feature of interest in Figure 4 is the increase in the FDI ratio that would result if the countries in our sample reduced their degree of political risk. It appears that the improvement measured in relative terms would be greater for the FDI ratio than for the exports ratio, due to the greater estimated elasticity of FDI to political risk. Some countries, such as Turkey or Egypt, might accordingly almost double their FDI ratio.

In absolute terms, Tunisia and Egypt would be the chief gainers of an improvement of their political risk. They would accordingly raise their FDI ratio by more than 1 percentage point if they upgraded their risk to the level of Switzerland. The FDI ratios of Morocco, Israel and Jordan would also increase, although to a lesser extent. Finally, the case of Algeria is worth emphasising. Our estimations imply that that country might more than double its FDI ratio if it cut down its political risk. However, as that country attracts very little FDI, the increase measured in absolute terms would appear almost negligible.

¹⁵ As FDI data are more easily available than data on exports of manufactures, we could run our simulation on a larger sample of MENA countries.

Those results are based on a specific definition of governance, i.e. political risk as measured by the ICRG political risk index. To get a better view of the impact of institutions, using a more refined definition of institutions would be desirable. However, as the alternative measures of institutional quality are unfortunately time-invariant, our method must be adapted accordingly. That is the aim of the following section.

b. Cross-section of Fixed Effects

In this section, we first study the relationship between the quality of institutions and the exports of manufactures ratio, then focus on the determinants of the FDI ratio.

(i) Manufactured exports

Table 3 presents the result of the relationship between various dimensions of governance and manufactured exports. Given that the sample is only cross-sectional, the overall quality of fit is good. The results show that the proximity of large markets has a significantly positive impact on the exports of manufactured goods, since market potential exhibits a positive and significant coefficient. Moreover, all the governance variables appear significantly in the regressions and exhibit their predicted sign. The regressions, therefore, unanimously suggest that institutional quality has an impact on manufactured exports, regardless of which aspect of governance is taken into account. More interestingly, the regressions underline the importance of a country's institutions on its exports of manufactured

TABLE 3
Regression Results. Dependent Variable: Fixed Effects of Manufactured Exports Ratio

Explanatory Variables	Institutional Indicator Used in the Specification					
	Political Risk (ICRG)	Corruption (TI)	Corruption (Wei)	Corruption (WB)	Rule of Law	Government Effectiveness
Constant	-9.03*** (4.29)	-5.96*** (3.05)	-5.73*** (2.62)	-4.72** (2.13)	-9.02*** (4.35)	-9.12*** (4.61)
Market potential	0.59** (2.23)	0.75*** (3.61)	0.77*** (3.45)	0.64*** (2.87)	0.63** (2.03)	0.65** (2.18)
Institutional indicator	-0.05*** (2.76)	-0.73*** (3.18)	-1.10** (2.32)	-1.41*** (3.37)	-2.19** (2.10)	-2.16** (2.24)
Number of observations	40	38	34	38	38	38
Adjusted R^2	0.34	0.39	0.32	0.42	0.42	0.42

Notes:

Absolute t -statistics are displayed in parentheses under the coefficient estimates.

* Test statistic is significant at the 10 per cent level; ** significant at the 5 per cent level; *** significant at the 1 per cent level.

The estimates are heteroscedastic consistent.

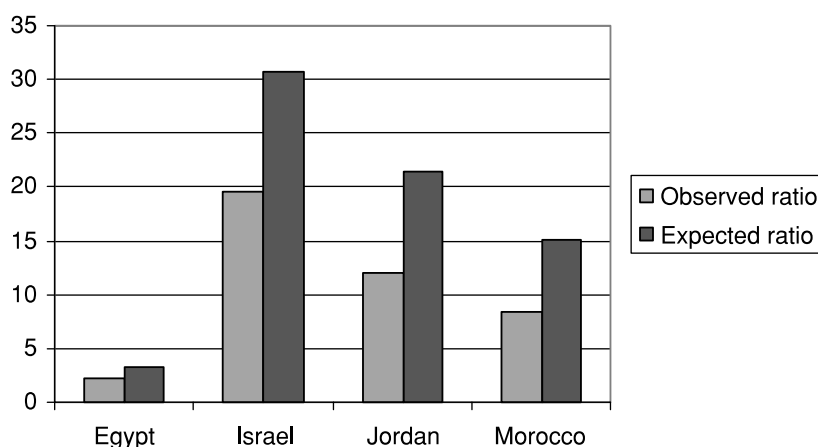
goods in spite of the inclusion of an additional explanatory variable. In other words, all the governance variables remain significantly correlated with the ratio of exports of manufactured goods and the sign of their coefficients remains unaffected.

To get a clearer picture of the meaning of those results for MENA countries, we complement the insights of Table 3 by a quantitative evaluation of the impact of institutions on the exports ratio of those countries. To do so, we follow the same procedure as in the previous section and use our results to simulate the consequences of an improvement of the institutions of MENA countries for their exports ratio.

Let us accordingly focus on Wei (2000)'s measure of corruption and assume that the MENA countries included in our sample were able to reduce the pervasiveness of corruption to Finland's level. That country, which scores 1.3 on Wei (2000)'s corruption scale, is the least corrupt country in our sample according to Wei (2000). Such an improvement would for instance result in a 71.7 per cent reduction in Morocco's corruption index. According to the point estimate of the elasticity of exports of manufactured goods to corruption, such an evolution would result in a 78.9 per cent increase in that country's exports ratio. That would take it to 15.1 per cent, a ratio comparable to France's. The increase here is higher than with the ICRG index and becomes comparable to the one resulting from liberalisation. We followed the same line of reasoning for the four MENA countries for which data were available. The outcome of our estimations is summarised in Figure 5.

Figure 5 shows differences in the relative impact of a better control of corruption between countries. Thus, it appears that Morocco and Jordan might almost

FIGURE 5
Expected Impact of an Improvement in Governance on the Exports of Manufactures Ratio in Some MENA Countries



double their exports of manufactured goods ratio while Egypt would only raise it by one-third. As the estimated elasticity of the exports of manufactured goods ratio is the same for all countries, these differences are due to the difference in the quality of governance in each country. Thus, according to Wei (2000), Egypt fares better than Morocco and Jordan in terms of corruption. An improvement of Egypt's degree of corruption to Finland's, consequently results in a smaller relative improvement than for the other countries.

Regarding the absolute impact of an improvement of a country's degree of corruption, Israel would obtain the largest gain. If Jordan succeeded in controlling corruption as well as Finland, it would obtain an exports of manufactured goods to GDP ratio equal to 21.4 per cent, which would be similar to Austria's. It would thus rank among the top ten exporters of manufactured goods as a percentage of their GDP.

(ii) *Foreign direct investment*

Table 4 reports the results of the relationship between various dimensions of governance and FDI. The regressions lead to a somewhat more mixed impression than the regressions displayed in Table 3. First, the overall quality of fit is very low, even for cross-sectional data.

TABLE 4
Regression Results. Dependent Variable: Fixed Effects of FDI Ratio

Explanatory Variables	Institutional Indicator Used in the Specification					
	Political Risk (ICRG)	Corruption (TI)	Corruption (Wei)	Corruption (WB)	Rule of Law	Government Effectiveness
Constant	-18.77*** (4.52)	-6.38** (2.95)	-5.23** (2.17)	-7.15** (2.60)	-7.56*** (4.08)	-7.56*** (4.01)
Per capita GDP	-0.24* (1.76)	-0.22* (1.67)	-0.26* (1.98)	-0.09 (0.50)	-0.06 (0.40)	-0.06 (0.35)
Human capital	0.04 (0.19)	0.43** (2.20)	0.49** (2.31)	0.42* (1.79)	0.40* (1.67)	0.40 (1.55)
Primary products exporter	0.07 (0.25)	0.42 (1.63)	0.42 (1.62)	0.46 (1.57)	0.47* (1.78)	0.47* (1.70)
Market potential	-0.14 (0.58)	0.26 (1.24)	0.22 (0.96)	0.18 (0.82)	0.19 (0.90)	0.19 (0.88)
Institutional indicator	-4.07*** (3.33)	-0.34 (1.24)	-0.85* (1.94)	-0.14 (0.24)	0.84 (0.01)	0.00 (0.00)
Number of observations	107	84	76	88	88	88
Adjusted R^2	0.17	0.05	0.08	0.04	0.04	0.04

Notes:

Absolute *t*-statistics are displayed in parentheses under the coefficient estimates.

* Test statistic is significant at the 10 per cent level; ** significant at the 5 per cent level; *** significant at the 1 per cent level.

The estimates are heteroscedastic consistent.

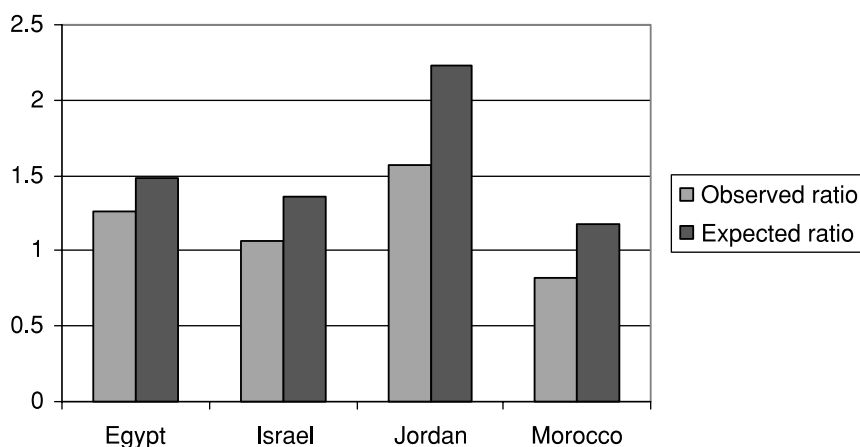
Second, there is no consistent pattern of control variables significance. When significant, they tend to exhibit the right sign. The coefficient of human capital is positive and significant in four instances out of six. The coefficient of per capita GDP is significant in three instances and is negative. This sign contradicts the one found in the cross-section time-series sample. It is, however, not necessarily wrong since in a pure cross-section (cross-country) dimension it is interpreted as a proxy for (the inverse) return on capital (Edwards, 1991). Higher per capita GDP should therefore be associated with less foreign investment.

Finally, only the coefficients of the ICRG political risk index and the corruption index, as measured by Wei (2000), exhibit significant signs. The signs of those coefficients correspond to their predicted signs. This suggests that political risk or corruption tend to impede FDI. The results on corruption are, however, not confirmed by the other indicators. The result regarding the ICRG index is coherent with our previous findings. Here again, the results suggest that this is political risk in general, rather than only one aspect of bad governance, which reduces FDI to a given country.

As before, we tried to illustrate the meaning of those results for the four MENA countries for which data were available. We therefore supposed that those countries were able to upgrade their institutions so as to reach an institutional quality similar to Finland's. Using our point estimate of the elasticity of the FDI ratio to Wei (2000)'s corruption index, we could compute the predicted variation of those countries' FDI ratios. The results of our computations are displayed in Figure 6.

Figure 6 confirms that institutions matter for MENA countries. Namely, if the MENA countries in our sample could control corruption, as measured by Wei

FIGURE 6
Expected Impact of an Improvement in Governance on the FDI Ratio in Some MENA Countries



(2000)'s index, our estimations predict that they would all experience a rise in their FDI ratio. As before, however, one can observe marked differences in the impact of controlling corruption from one country to another. Thus, in relative terms, Morocco and Jordan would gain more than Israel and Egypt.

6. CONCLUSION

The present paper examines the extent to which ill-functioning institutions disable a greater participation of MENA countries in the world economy. It builds on recent research emphasising the importance of the quality of institutions for growth, trade and investment. The paper focuses on manufactured exports and FDI attractiveness as the main indicators of the region's integration to the world economy. The latter is seen as an important mechanism which can enable the MENA to meet the growth and employment problems it is facing.

The empirical analysis relies on basic specifications of manufactured exports supply and FDI inflows' determinants to which indicators of the quality of institutions are added. The latter includes a broad index of political risk as well as indices targeted toward specific aspects of governance such as corruption, government effectiveness and the rule of law. The estimation is conducted on a large sample of countries over the 1990s and uses different econometric approaches in order to check for the robustness of the results.

Overall, the results lend strong support to the hypothesis that the functioning of their institutions may disable the participation of MENA countries in the world economy. From an econometric point of view, the results for manufactured exports are, however, stronger than for FDI. It is found that deterioration of the quality of institutions is, in general, associated with low performance in terms of manufactured exports and FDI attractiveness.

Simple simulations resting on our econometric results suggest that the impact of an improvement in the quality of institutions may result in a sensitive increase of FDI inflows and manufactured exports. Depending on the institutional indicator used, the latter can improve by an amount comparable to the one resulting from liberalisation policies. For instance, institutions improvement in Morocco is found to entail an increase of the ratio of manufactured exports to GDP at least equal to one-half of the impact of the liberalisation policy initiated 20 years ago. Hence, although institutional reforms can take time, they deserve the necessary efforts given their outcomes as compared to other reforms.

APPENDIX

*Countries in the Sample**

<i>Albania</i>	<i>Ethiopia</i>	<i>Kuwait</i>	<i>Romania</i>
<i>Algeria</i>	<i>Finland</i>	<i>Lebanon</i>	<i>Russia</i>
<i>Angola</i>	<i>France</i>	<i>Madagascar</i>	<i>Senegal</i>
<i>Argentina</i>	<i>Gabon</i>	<i>Malawi</i>	<i>Sierra Leone</i>
<i>Australia</i>	<i>Gambia</i>	<i>Malaysia</i>	<i>Singapore</i>
<i>Austria</i>	<i>Germany</i>	<i>Mali</i>	<i>Slovak Republic</i>
<i>Bangladesh</i>	<i>Ghana</i>	<i>Malta</i>	<i>South Africa</i>
<i>Bolivia</i>	<i>Greece</i>	<i>Mexico</i>	<i>Spain</i>
<i>Brazil</i>	<i>Guatemala</i>	<i>Mongolia</i>	<i>Sri Lanka</i>
<i>Bulgaria</i>	<i>Guinea</i>	<i>Morocco</i>	<i>Sweden</i>
<i>Burkina Faso</i>	<i>Haiti</i>	<i>Mozambique</i>	<i>Switzerland</i>
<i>Cameroon</i>	<i>Honduras</i>	<i>Netherlands</i>	<i>Syria</i>
<i>Canada</i>	<i>Hungary</i>	<i>New Zealand</i>	<i>Tanzania</i>
<i>Chile</i>	<i>Iceland</i>	<i>Nicaragua</i>	<i>Thailand</i>
<i>China</i>	<i>India</i>	<i>Niger</i>	<i>Togo</i>
<i>Colombia</i>	<i>Indonesia</i>	<i>Nigeria</i>	<i>Tunisia</i>
<i>Congo Republic</i>	<i>Iran</i>	<i>Norway</i>	<i>Turkey</i>
<i>Costa Rica</i>	<i>Ireland</i>	<i>Pakistan</i>	<i>Uganda</i>
<i>Côte d'Ivoire</i>	<i>Israel</i>	<i>Panama</i>	<i>United Kingdom</i>
<i>Cyprus</i>	<i>Italy</i>	<i>Papua New Guinea</i>	<i>United States</i>
<i>Czech Republic</i>	<i>Jamaica</i>	<i>Paraguay</i>	<i>Uruguay</i>
<i>Denmark</i>	<i>Japan</i>	<i>Peru</i>	<i>Venezuela, RB</i>
<i>Dominican Republic</i>	<i>Jordan</i>	<i>Philippines</i>	<i>Vietnam</i>
<i>Ecuador</i>	<i>Kenya</i>	<i>Poland</i>	<i>Zambia</i>
<i>Egypt</i>	<i>Korea, Republic</i>	<i>Portugal</i>	<i>Zimbabwe</i>

* Countries in italics do not enter the exports sample.

REFERENCES

- Achy, L. and K. Sekkat (2003), 'The European Single Currency and MENA's Export to Europe', *Review of Development Economics*, **7**, 4, 563–82.
- Anderson, J. E. (2001), 'Trade and Informal Institutions' (mimeo).
- Anderson, J. E. and D. Marcouiller (1997), 'Trade and Security, I: Anarchy', NBER Working Paper No. 6223.
- Anderson, J. E. and D. Marcouiller (2002), 'Insecurity and the Pattern of Trade: An Empirical Investigation', *Review of Economics and Statistics*, **84**, 2, 342–52.
- Anderson, J. E. and L. Young (1999), 'Trade and Contract Enforcement' (Boston College, mimeo).
- Brunetti, A. and B. Weder (1998), 'Investment and Institutional Uncertainty: A Comparative Study of Different Uncertainty Measures', *Weltwirtschaftliches Archiv*, **134**, 3, 513–33.

- Brunetti, A., G. Kisunko and B. Weder (1998), 'Credibility of Rules and Economic Growth: Evidence from a Worldwide Survey of the Private Sector', *World Bank Economic Review*, **12**, 3, 353–84.
- Campos, J. E., D. Lien and S. Pradhan (1999), 'The Impact of Corruption on Investment: Predictability Matters', *World Development*, **27**, 6, 1059–67.
- Dasgupta, D., M. Nabli, C. Pissarides and A. Varoudakis (2002), 'Making Trade Work for Jobs: International Evidence and Lessons for MENA' (The World Bank; Middle East and North Africa Region).
- Dollar, D. and A. Kraay (2003), 'Institutions, Trade and Growth', *Journal of Monetary Economics*, **50**, 1, 133–62.
- Economic Research Forum (2002), *Economic Trends in the MENA Region*.
- Edwards, S. (1991), 'Capital Flows, Foreign Direct Investment, and Debt-Equity Swaps in Developing Countries', in H. Siebert (ed.), *Capital Flows in the World Economy* (Tübingen, J. C. B. Mohr), 255–81.
- Edwards, S. (1992), 'Trade Orientation, Distortions and Growth in Developing Countries', *Journal of Development Economics*, **39**, 1, 31–57.
- Elbadawi, I. (1998), 'Real Exchange Rate Policy and Non-traditional Exports in Developing Countries', WIDER Discussion Paper, forthcoming in G. Helleimer (ed.), *Growth, External Sector and the Role of Non-traditional Exports in Sub-Saharan Africa*.
- Elbadawi, I. (1999), 'Can Reforming Countries Perform an Asian Miracle? Role of Institutions and Governance on Private Investment', in I. Limam (ed.), *Institutional Reform and Development in the MENA Region* (Arab Planning Institute and Economic Research Forum).
- Frankel, J. A. and D. Romer (1999), 'Does Trade Cause Growth?', *American Economic Review*, **89**, 3, 379–99.
- Gastanaga, V. M., J. B. Nugent and B. Pashamova (1998), 'Host Country Reforms and FDI Inflows: How Much Difference Do They Make?', *World Development*, **26**, 7, 1299–314.
- Globerman, S. and D. Shapiro (2002), 'Global Foreign Direct Investment Flows: The Role of Governance Infrastructure', *World Development*, **30**, 11, 1899–919.
- Hall, R. and C. I. Jones (1999), 'Why Do Some Countries Produce so Much More Output Per Worker than Others?', *Quarterly Journal of Economics*, **114**, 1, 83–116.
- Harms, P. and H. W. Ursprung (2002), 'Do Civil and Political Repression Really Boost Foreign Direct Investments?', *Economic Inquiry*, **40**, 4, 651–63.
- Henisz, J. W. (2000), 'The Institutional Environment for Multinational Investment', Working Paper of the Reginald H. Jones Center (The Wharton School, University of Pennsylvania).
- Hisamatsu, Y. (2003), 'Does Foreign Demand Affect Corruption?', *Applied Economics Letters*, **10**, 1, 1–2.
- Hsiao, C. (1986), *Analysis of Panel Data* (New York, Cambridge University Press).
- International Country Risk Guide (1999), 'Brief Guide to the Ratings System' (June).
- Kaufmann, D., A. Kraay and P. Zoido-Lobaton (1999), 'Aggregating Governance Indicators', Working Paper No. 2195 (World Bank).
- Knack, P. and S. Keefer (1995), 'Institutions and Economic Performance: Cross-country Tests Using Alternative Institutional Measures', *Economics and Politics*, **7**, 3, 207–27.
- Knack, S. and O. Azfar (2003), 'Trade Intensity, Country Size and Corruption', *Economics of Governance*, **4**, 1, 1–18.
- Lambsdorff, J. G. (1998), 'An Empirical Investigation of Bribery in International Trade', *European Journal of Development Research*, **10**, 1, 40–59.
- Lambsdorff, J. G. (2000), 'La Propension des Exportateurs à Verser des Pots de Vin. L'impact sur les échanges', *Revue Tiers Monde*, **41**, 161, 89–116.
- Lambsdorff, J. G. (2003), 'How Corruption Affects Persistent Capital Flows', *Economics of Governance*, **4**, 3, 229–43.
- Makdisi, S., Z. Fattah and I. Limam (2000), 'Determinants of Growth in the MENA Region', Global Development Network (Prague).
- Mauro, P. (1995), 'Corruption and Growth', *Quarterly Journal of Economics*, **110**, 3, 681–712.

- Mauro, P. (1998), 'Corruption and the Composition of Government Expenditure', *Journal of Public Economics*, **69**, 2, 263–79.
- Mody, A. and K. Srinivasan (1998), 'Japanese and US Firms as Foreign Investors: Do they March to the Same Tune?', *Canadian Journal of Economics*, **31**, 4, 778–99.
- Olson, M., N. Sarna and A. V. Svamy (2000), 'Governance and Growth: A Simple Hypothesis Explaining Cross-country Differences in Productivity Growth', *Public Choice*, **102**, 3–4, 341–64.
- Robert, M. J. and J. R. Tybout (1997), 'The Decision to Export in Colombia: An Empirical Model of Entry with Sunk Costs', *American Economic Review*, **87**, 4, 545–64.
- Rodríguez, F. and D. Rodrik (2001), 'Trade Policy and Economic Growth: A Skeptic's Guide to the Cross-national Evidence', in B. Bernanke and K. S. Rogoff (eds.), *Macroeconomics Annual 2000* (MIT Press for NBER, Cambridge, MA).
- Rodrik, D. (1995), 'Getting Interventions Right: How South Korea and Taiwan Grew Rich', *Economic Policy*, **10**, 20, 53–97.
- Rodrik, D. (2002), 'Trade Policy Reform as Institutional Reform', in B. M. Hoekman, P. English and A. Mattoo (eds.), *Development, Trade, and the WTO: A Handbook* (World Bank, Washington, DC).
- Sachs, J. D. and A. Warner (1995), 'Economic Reform and the Process of Global Integration', *Brookings Papers on Economic Activity*, **1**, 1–118.
- Sekkat, K. and A. Varoudakis (2000), 'Exchange Rate Management and Manufactured Exports in Sub-Saharan Africa', *Journal of Development Economics*, **61**, 1, 237–53.
- Sekkat, K. and A. Varoudakis (2002), 'The Impact of Trade and Exchange Rate Policy Reforms on North-African Manufactured Imports', *Development Policy Review*, **20**, 2, 177–89.
- Treisman, D. (2000), 'The Causes of Corruption: A Cross-national Study', *Journal of Public Economics*, **76**, 3, 399–457.
- UNCTAD (1998), World Investment Report.
- Vinod, H. D. (2003), 'Open Economy and Financial Burden of Corruption: Theory and Application to Asia', *Journal of Asian Economics*, **13**, 6, 873–90.
- Wei, S.-J. (2000), 'How Taxing Is Corruption on International Investors?', *Review of Economics and Statistics*, **82**, 1, 1–11.
- Wheeler, D. and A. Mody (1992), 'International Investment Location Decisions: The Case of U.S. Firms', *Journal of International Economics*, **33**, 1–2, 57–76.