ECONOMIC RESEARCH FORUM
منتدى البحوث الاقتصادية

2008

working paper series

BIT CONTRACTING AND FDI IMPACT IN THE GCC COUNTRIES

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Working Paper No. 437

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September 2008

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Abstract

The rationale for GCC countries increasingly contracting of BITs is controversial. This paper empirically examines the short term and long term impact BITs contracting on FDI and distinguishes it by the income level of the contracting partner country. The paper uses panel data for the period 1984-2002 and adopts a GMM estimation methodology. The paper finds that while ratified BITs with high income non-OECD countries have a positive impact on FDI, ratified BITs with upper middle income countries have a surprisingly negative impact. These results are robust to changes in model specification and sample period.

ملخص

إن من المثير للجدل ذلك الأساس المنطقي لعقد دول مجلس الخليج عدد متزايد من العقود الخاصة تتبناه معلومات الأعمال. وتبحث هذه الورقة على نحو تجريبي الأثر الذي تخلفه هذه العقود على المدى القريب والبعيد على الاستثمار المباشر الأجنبي وتميزه بمستوى الدخل لدى دولة الشريك في العقد. وتستخدم الورقة جدول البيانات عن الفترة من 1984 حتى 2002، كما تتبنى منهجية تقويم طريقة تعميم العزوم. وتجد الورقة أنه بينما أدى التصديق على عقود تقنية معلومات الأعمال مع دول مرتفعة الدخول من خارج منظمة التعاون الاقتصادي والتنمية، أدى إلى أثار إيجابية على الاستثمار المباشر الأجنبي، أدى التصديق على عقود تقنية معلومات الأعمال مع دول دخولها فوق المتوسط إلى نتائج سلبية على نحو يثير الدهشة وتنطبق هذه النتائج على التغييرات في تحديد النماذج وفترة أخذ العينات.

1. Introduction

Bilateral investment treaties (BITs) are legal instruments under international law between two contracting countries, the aim of which is to establish clear, simple, and enforceable rules for the reciprocal protection of foreign investment from expropriation in each country. A BIT identifies the circumstances under which expropriation can take place and the associated compensation standards, and establishes investment dispute settlement mechanisms. BITs therefore externally commit contracting countries to honor the property rights of the partner country's investors, reduce host country political risks, and thereby increase foreign investors' confidence and promote foreign investment (Hallward-Driemeier, 2003; Neumayer and Spess, 2005; UNCTAD, 1998).

The GCC countries have contracted, i.e. signed or ratified, an increasing number of bilateral investment treaties since 1990 to promote foreign direct investment (FDI). The rationale behind this increase is controversial, however. On the one hand the GCC countries may have contracted BITs out of recognition of the positive influence of commitment to property rights protection for foreign investment. The GCC countries greatly desire such positive influence in light of their plans for economic diversification, and the lagging performance of their domestic institutions (Mina 2007a; 2007b; 2007c; 2007d; 2008). In pursuing economic diversification, the GCC countries need to attract foreign investors into non-oil industries. These foreign investors are new to the GCC countries and are not the traditional foreign oil companies with which the GCC countries have historically established trusted business relationships. Contracting BITs would therefore reduce investment expropriation risk for new investors.

On the other hand, BITs may not be beneficial in promoting foreign investment in the GCC countries for two important reasons. The first is that FDI in GCC countries has historically been associated with oil exploration and extraction, despite the absence of BITs. Contracting BITs may therefore be unnecessary for the GCC countries, with a likely inelastic response of FDI to BIT contracting.

The second reason is associated with the institutional copying hypothesis, which Ginsburg (2005) raises. He argues that institutional copying is one possible explanation for why states contract BITs, given the minimal effect on investment flows found in the early empirical literature. Because of their "desire to seem modern," states get involved in institutional copying. In light of the strong competition among the GCC countries to promote their global image as modern, competitive economies, and the sharp increase in the number of BITs contracted by GCC countries since 1990, it is possible that GCC countries may have been involved in institutional copying. This view may be further supported by the fact that in the 1990s the GCC countries signed forty-three BITs with lower-middle-income and low-income countries, despite their limited investment potential, as opposed to thirty-seven BITs with high-income and upper-middle-income countries with more investment potential.

Given the controversy surrounding the benefits of BITs, the purpose of this paper is to examine empirically the impact of BITs on FDI in GCC countries, in both the short and long term. This distinction is important, as the response of investors to BIT contracting may be sluggish in the short term (foreign investors may take a long time to observe the actual commitment of the GCC governments to the protection of property rights). In addition, foreign investment in oil exploration and extraction takes place over a long period of time.

Using panel data for the period 1984–2002, the paper adopts a generalized method of moments (GMM) estimation methodology to deal with endogeneity resulting from reverse causal relationship between FDI and BITs. Although from a host country perspective, contracting BITs may encourage FDI, FDI may encourage home countries to contract BITs in order to protect investments. Endogeneity also results from the omission of time-invariant unobservable country effects, such as the degree of strength of foreign relations between the GCC and OECD countries such as France, Germany, and Italy.

This paper contributes to the literature both of international law and of FDI, on which the impact of BITs was examined, in two main respects. First, examining the impact of BITs in the GCC region with its unique characteristics is new to both literatures. Characteristic of the GCC countries are the traditional oil-related FDI, the desire to diversify their economies, and the lagging property rights protection function of domestic institutions. These characteristics enrich and flavor the context in which the impact of BITs is examined. Second, the paper takes a host country perspective–GCC countries–and distinguishes the impact of BITs on the host country by the income level of the contracting partner. This has not been done elsewhere in the literature. The literature has typically examined the impact of FDI originating from OECD countries.

In this paper the differentiation among BITs impact accounts for the various motives for BITs contracting by the GCC countries. Anecdotal evidence on the GCC countries suggests that FDI largely originates from the high-income OECD, which is typically beneficial in providing access to technology, new expertise, and managerial know-how. At the same time, the GCC countries have also contracted BITs with lower-middle-income countries, such as Egypt, to strengthen political ties and encourage GCC investments (capital outflows) in these countries. This differentiation is a step forward to overcoming the unavailability of bilateral FDI data in the GCC countries. It is also useful for policymakers in targeting the countries with which BITs should be contracted.

The paper proceeds as follows. Section 2 discusses the FDI and BITs experience of the GCC countries. Section 3 briefly presents the findings of the empirical literature on the FDI impact of BITs. Section 4 discusses the empirical model, conceptual issues, and data. Section 5 discusses data issues, empirical issues, and the estimation methodology. Section 6 discusses the empirical results, section 7 explores the robustness of the results, while section 8 presents the conclusion.

2. FDI and BITS in GCC countries

The accumulated FDI in GCC countries started to accelerate significantly after 1990. Parallel to the acceleration of FDI was a significant increase in the number of BITs contracted in the 1990s and 2000s. As shown in Table 1, the GCC countries signed eighty BITs in the 1990s–more than seven times the number signed in the 1980s (eleven BITs). The increase in the number of BITs ratified in the 1990s and 2000s is even more pronounced. The fifty-seven BITs ratified in the 1990s were more than eleven times those ratified in the 1980s (five BITs). In the first four years of the present century alone, GCC countries ratified forty BITs (about 70 percent of those ratified during the whole decade of the 1990s).

The breakdown of BITs by income level of the GCC contracting partner reveals that about half the BITs were contracted with lower-middle and low-income countries with limited investment potential.[1] Since 1990, GCC countries signed most BITs (forty-six) with lower-middle-income countries, followed by forty-one with high-income OECD countries, twenty-five with low-income countries, fourteen with upper-middle-income countries, and four with high-income, non-OECD countries. A similar pattern is observed for BITs ratified, where the largest number (thirty-nine) was with lower-middle-income countries, followed by high-income OECD (thirty-six), upper-middle (eleven), low-income (ten), and high-income, non-OECD countries (one).

[1] Country income level classification follows World Bank (2005).

These statistics raise three interesting inquiries. First, one would normally expect more positive impact on FDI from BITs contracted with OECD countries than upper-middle-income countries, since both home and host countries are interested in outward and inward FDI, respectively. OECD investors would seek investments in oil resources or in the growing market size, while GCC countries would seek to attract technology and expertise. Is this hypothesis true in the case of the GCC countries? Second, given the number of BITs contracted with high-income non-industrialized countries, like Brunei Darussalam, Kuwait, and UAE, which reflect belief in FDI benefits, do these BITs have a positive impact on FDI. In a similar fashion, do BITs contracted with lower-middle and low-income countries, despite their low investment potential, actually have a positive impact on inward FDI? Or were these BITs contracted to protect GCC outward FDI in these countries?

3. Impact of BITS on FDI in empirical literature

The impact of BITs on FDI has been examined in the empirical literature of FDI and international law. The findings in both have been mixed. Earlier studies, namely UNCTAD (1998) and Hallward-Driemeier (2003) found insignificant impact on FDI, while the more recent studies, namely Egger and Merlo (2007), Egger and Pfaffermayr (2004), Neumayer and Spess (2005), and Tobin and Rose-Ackerman (2006), found a significant positive impact on FDI.

UNCTAD's 1998 landmark study examines the impact of BITs on FDI using both time series and cross section analyses. Time series analysis has been conducted using data over eleven years and two hundred BITs signed between fourteen home and seventy-two host countries. The study finds that BITs have a positive, albeit not a strong effect on FDI. However, the impact of BITs was most statistically significant for the share of a home country partner to a BIT in a host country's total inflows, and for the share of a particular host country in a home country's total FDI outflows. The cross section analysis of the study finds a positive impact of BITs on the absolute level of FDI flows and on FDI flows relative to GDP. The overall conclusion of the cross section analysis is that BITs play a minor and secondary role in attracting FDI, while the leading determinant appears to be market size. Similar to the conclusion of the UNCTAD (1998) study, Hallward-Driemeier (2003) finds little evidence of a beneficial impact of BITs on FDI in countries with reasonably strong institutions in examining the impact of ratified BITs on bilateral FDI flows from twenty OECD countries to thirty-one developing countries over the period 1980–2000.

In contrast to the above two studies, Egger and Pfaffermayr (2004) find that signed and ratified BITs exert a significant positive impact on the stock of outward FDI of nineteen OECD home countries into fifty-four host countries (both OECD and non-OECD) for the period 1982–1997. They find that the impact is higher for ratified BITs as opposed to signed BITs. Similarly Neumayer and Spess (2005) find that BITs have a significant positive impact on FDI flows to 119 developing countries for a longer time period (1970–2001). Also Tobin and Rose-Ackerman (2006), in studying the impact of BITs contracted between home OECD countries and host developing countries during the period 1980–2003, find that the number of BITs contracted has a positive impact on FDI in subsequent periods but their marginal impact diminishes as the number of globally contracted BITs increases.

One drawback of the above studies is the failure to take into account the dynamic effect of BITs. Egger and Merlo (2007) overcome this drawback by addressing the dynamic adjustment of FDI in the long run. Using bilateral FDI stocks covering twenty-four home and twenty-eight host OECD and transition countries in the period 1980–2001, and adopting the first-differenced GMM estimator, they find that the long-run impact of BITs on FDI is nearly twice the short-run effect, with the former amounting to 8.9 percent, while the latter amounts to 4.8 percent.

Recently, Mina (2007c), empirically evaluating the impact of BITs on FDI flows to GCC countries during the period 1980–2004 and using GMM estimation methodology, found that BITs contracted with high-income non-OECD countries and upper-middle-income countries have a positive and statistically significant impact on FDI flows to the GCC countries. In empirically examining the influence of BITs and domestic institutions on FDI in the GCC countries and using panel data for the period 1984–2002 and instrumental variables estimation methodology, Mina (2008) finds that BITs contracted with high-income non-OECD countries have a positive influence and are more influential than domestic institutions, while BITs contracted with OECD and upper-middle-income countries have a surprisingly negative influence and seem to be dominated by the significantly positive influence of domestic institutions on FDI.

4. Empirical model, conceptual issues, and data

The empirical model for this paper largely builds on the location advantage hypothesis of Dunning's (1981) ownership-location-internalization paradigm. The GCC countries provide a number of location advantages to foreign investment (Mina 2007a; 2007b; 2007d). From a factor endowment perspective, the proven oil reserves and natural gas reserves of the GCC countries account for nearly 40 percent and 25 percent of world reserves, respectively, and lure resource-seeking FDI, especially from OECD countries.[2] As a result, most GCC countries enjoy high income per capita.[3] Oil endowments have also been associated with trade openness. On the other hand, the GCC institutions seem to be lagging behind in their property rights protection and contract enforcement functions, providing a location disadvantage (Mina 2007a; 2007b; 2007d; 2008).

The empirical model therefore explains FDI in terms of location-related variables, lagged FDI to capture the dynamic adjustment of FDI similar to Eggar and Merlo (2007), in addition to the number of annual BITs contracted. The location-related variables include relative oil production, human capital, and institutional quality. The empirical model is provided in equation (1) as:

$$FDI_{i,t} = \beta_0 + \beta_1 FDI_{i,t-1} + \beta_2 BIT_{i,t} + \beta_3 OIL_{i,t} + \beta_4 EDUC_{i,t} + \beta_5 INST_{i,t} + \beta_6 YEAR_{i,t} + \varepsilon_{i,t} \quad \textbf{(1)}$$

where *FDI* is the stock of real inward FDI relative to real GDP (log).[4] *BIT* is the number of annual BITs contracted. *OIL* is relative oil production, measured as oil production in millions of barrels per day as a percentage of oil reserves in millions of barrels (log). *EDUC* is the percentage of secondary education enrollment to total school enrollment (log) to proxy for human capital. *INST* is institutional quality, proxied by ICRG's law and order indicator, a component of the political risk index. *YEAR* is a time trend.

Modeling BITs in the empirical model takes into account two considerations. The first is the distinction between a government's *willingness* to commit to property rights protection, and its *actual* commitment. Signing a BIT indicates willingness to commit to property rights protection and investment dispute settlement, while ratifying a BIT indicates actual commitment. The paper estimates separate empirical models using signed and ratified BITs. This distinction helps separate the responses of foreign investors to these two degrees of government commitment to property rights protection.

The second consideration is that each GCC country has contracted BITs with different countries for different motives, and depending on the nature of the economic, political, and

[2] Author's calculation based on Energy Information Administration (2007) estimates.

[3] According to the World Bank (2005) classification, the GCC countries are considered high-income countries with the exception of Saudi Arabia and Oman, which are considered upper-middle-income countries.

[4] The stock of FDI is measured in constant 2000 US dollars using the US implicit GDP deflator.

historical relations it has with them. As these differences are most likely to be associated with the income level of the contracting partner, this paper distinguishes the impact of contracted BITs by the income level of the contracting partner, and separately estimates the empirical model for each income-distinguished contracted BIT. The paper distinguishes the impact of BITs contracted with a) high-income OECD countries, b) high-income non-OECD countries, c) upper-middle-income countries, d) lower-middle-income countries, and e) low-income countries.

The empirical model is double-logarithmic, except for *BIT*, which has zero values for most of the 1980s, and for *YEAR*. Panel data covering the period 1984–2002 are used. *FDI* and *BIT* are obtained from UNCTAD's FDI and bilateral investment treaties online databases.[5] *INST* is obtained from ICRG's political risk index. *OIL* is obtained from Energy Information Administration.[6] *EDUC* is obtained from the United Nations Common Database.[7] The panel data are unbalanced, however, due to two missing observations on *INST* for Oman and Qatar for the year 1984, and twnety-two sporadically missing observations on *EDUC* for the six GCC countries. The sample period could have been lengthened had data on *EDUC* been available beyond 2002. STATA 9.0 is the econometric package used in estimation.

5. Data and empirical issues and estimation methodology

UNCTAD data tend to underestimate actual FDI in the GCC countries. UNCTAD defines FDI as investment involving a long-term relationship and reflecting a lasting interest and "control" by a resident entity in one economy in an enterprise resident in an economy other than that of the foreign direct investor. Much of the oil-related FDI in the GCC region is done through production sharing arrangements, which lack the "control" aspect of the UNCTAD definition of FDI. It is therefore possible that the impact of BITs is underestimated. On the other hand the unavailability of bilateral FDI for the GCC countries and the use of "aggregate" FDI data is likely to overestimate the influence of BITs because of the potential impact spillover of BITs on FDI from countries with which no BITs have been contracted.

In estimating the empirical model, endogeneity is an important econometric issue which is taken into account. Endogeneity in equation 1 results from a) reversed causality between BITs and FDI, as well as between relative oil production and FDI; b) the correlation between the lagged dependent variable and the country effect; and c) the presence of time-invariant unobservable country effect, such as the degree of strength of international relationships a GCC country has with the rest of the world–including those countries with which BITs are contracted. Endogeneity results in unbiased and inconsistent OLS estimates.

In the presence of endogeneity, this paper adopts a difference GMM estimator for dynamic panel models proposed by Arellano and Bond (1991). This approach has been recently adopted by Mina (2007c) in examining the influence of BITs on FDI flows, and by Egger and Merlo (2007) in examining the dynamic impact of BITs on FDI stocks.

6. Empirical results

The correlation between FDI and BITs contracted is presented in Table 1. Almost all correlation coefficients are close to zero and statistically insignificant. The highest absolute and statistically significant correlation (-0.25) is for ratified BITs with upper-middle-income countries.

[5] FDI and BITs data are available at http://www.unctad.org/Templates/Page.asp?intItemID=3277&lang=1, and http://www.unctad.org/Templates/Page.asp?intItemID=2344&lang=1, respectively.

[6] Oil data are available at http://www.eia.doe.gov/emeu/international/contents.html.

[7] Education data are available at http://unstats.un.org/unsd/cdb/cdb_help/cdb_quick_start.asp.

Before estimating the empirical model, a Ramsey model specification RESET test was conducted on the ordinary least squares regressions of the empirical model for different income classifications of BITs, and the *p* values for these tests are presented in Table 1. All results lend support to the null hypothesis of no variable omission, except for the non-OECD countries specification, which is statistically significant at the 10 percent level only.[8] In addition, multicollinearity is explored and the mean variance inflation factor (VIF) for the different specifications is also reported. Bowerman *et al.* (2005) consider multicollinearity as "severe" if the largest VIF is greater than 10 and the mean VIF is substantially greater than 1. The highest VIF did not exceed 10, and the mean VIF did not exceed 3 in any of the specifications, suggesting that correlation among the explanatory variables is reasonable.[9]

The results of the one-step difference GMM estimator are presented in Table 2.[10] In all specifications the Wald test indicates joint significance of the explanatory variables. The results of the Sargan test indicate that the instruments are not correlated with the residuals of the first difference regression. The results of the serial correlation test indicate that the errors in the first difference regression exhibit no second-order serial correlation for almost all specifications. Only in specifications (3A) and (5A), serial correlation is marginally significant (at the 10 percent level). The results of these three tests suggest that the model specification is satisfactory, in particular for ratified BITs.

With the exception of *BIT* coefficient, the coefficients of the explanatory variables are interpreted as elasticities, since they are expressed in logarithmic form. The coefficients of the lagged FDI in all specifications are positive, statistically significant at the 5 percent level at least, and range between 0.4 and 0.5.

The coefficients of *OIL* and *EDUC* are negative and statistically significant at the 5 percent level at least. The sign of *OIL* coefficient seems surprising. Since the oil variable by construction indicates the degree of utilization of oil resources, the interpretation of its coefficient suggests that a 1 percent increase in the degree of utilization results in the reduction of relative FDI, i.e. relative to GDP, by 0.273 percent in specification (1B) for example. This is interpreted as indicating that increased oil production results in a higher rate of increase in GDP than in FDI, resulting in a decline of the share of FDI in GDP. The negative coefficient of *EDUC* points to the lagging quality of education in GCC countries, which is consistent with the findings of Mina (2007d) and is explained in length in Mina (2007b).

The positive and statistically significant coefficient (at the 1 percent level) of *INST* highlights the importance of institutional quality to FDI in GCC countries. An improvement in the quality of institutions by 1 percent results in an increase in relative FDI by nearly 1 percent, a result that is consistent with Mina (2007d) and is explained in length in Mina (2007b).

The coefficients of signed BITs are statistically insignificant, except for the coefficient of BITs signed with low-income countries (specification 6A). The value of this coefficient suggests that an increase in the number of BITs signed with low-income countries increases

[8] The null hypothesis of no variable omission failed to be rejected under the different robustness checks conducted, as mentioned in the following section.

[9] Results are available from the author.

[10] STATA 9.0 upheld the use of the one-step as opposed to the two-step estimator.

the stock of FDI relative to GDP by about 9.4 percent in the short term.[11] The corresponding long-term impact is about 18 percent.[12]

The coefficient of all ratified BITs in specification (1B) is negative and marginally statistically significant. An increase of one in the number of ratified BITs results in a decrease in relative FDI by 6.6 percent in the short term and by 11.5 percent in the long term. Although this is a surprising result, it may suggest that foreign investors remain concerned about property rights protection even after BITs have been contracted.[13]

Consistent with Mina (2007c), the coefficient of ratified BITs with high-income non-OECD countries in specification (3B) is positive (1.427) and statistically significant at the 1 percent level.[14] The corresponding short-term and long-term impacts suggest that an increase of one in the number of ratified BITs with high-income non-OECD countries, whether outside the region (e.g. Brunei Darussalam) or inside the region (e.g. Kuwait and the UAE), results in more than tripling of relative FDI in the short term, and in growth of relative FDI by a factor of slightly over six in the long term. It should be noted that the *BIT* coefficient for BITs with high-income, non-OECD, largely GCC countries, is the largest positive and most statistically significant among the different income groups.

The coefficient of ratified BITs with upper-middle-income countries in specification (4B) is surprisingly negative and significant, contrary to the findings of Mina (2007c). An increase of one in the number of ratified BITs with upper-middle-income countries reduces relative FDI by about one-third in the short term, and by more than three-fifths in the long term.

7. Sensitivity analysis

The inconsistency of the BIT coefficient for upper-middle-income-countries with the findings of Mina (2007c) lends further support to the importance of conducting robustness checks. Robustness of results is checked in three respects. First, the second lag of the dependent variable (FDI-2) is included in the empirical model (Table 3).15 Second, a recent sample period (1990–2002) is used, since the number of BITs increased significantly starting in 1990 (Table 4), and FDI-2 is added to the empirical mode using this recent sample (Table 5). Third, outward FDI (FDIOUT) is added to the empirical model, since BITs provide property rights protection not only to foreign investments in the GCC countries but to GCC investments in partner countries as well (Table 6).16 With FDIOUT included in the empirical model, which is discovered to be highly correlated with EDUC, three further robustness checks are conducted: EDUC is excluded from the empirical model (Table 7), a recent sample period 1990–2002 is adopted (Table 8), and BITs contracted by other GCC countries (BITOTHERS) are included (Table 9).

When FDI-2 is included in the empirical model, most BIT coefficients in Table 3 slightly decrease but their statistical significance remains the same, compared to Table 2. Short-term impact of ratified BITs declines slightly, while long-term impact increases significantly for

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[11] In the empirical model above, short-term impact is calculated as $[(\exp(\beta_2)-1)*100]$ while long-term impact is calculated as $\beta_2/(1-\beta_1)$.

[12] Note that the short- and long-term impacts are calculated and reported only for statistically significant *BIT* coefficients.

[13] This result remains robust after including a) the second lag of FDI, b) outward FDI, and c) BITs contracted by other GCC countries, to account for the possibly negative influence that BIT contracting by one GCC country has on another.

[14] Mina (2007a) also discusses sectoral FDI in the period 2004–2006, including intra-GCC FDI considered as non-OECD FDI, and points to the growth in intra-GCC FDI.

[15] An inclusion/exclusion of a variable in empirical model is noted by +/- sign in the table title.

[16] The measurement of *OUTFDI* is similar to *FDI* but with outward FDI instead.

ratified BITs with high-income non-OECD countries. For ratified BITs with upper-middle-income countries, the short-term negative impact improves slightly, while negative long-term impact increases significantly. In contrast, the positive short-term and long-term impact of signed BITs with low-income countries increases significantly.

When recent sample period is used (Table 4), the positive coefficients of BITs signed with low-income countries in specification (6A), and of BITs ratified with high-income non-OECD countries in specification (3B), increase compared to Table 2; while the negative coefficient of ratified BITs with upper-middle-income countries in specification (4B) improves. The absolute value of the impact of these BITs increases significantly in the long run, especially with the significant increase in the coefficient of FDI_{-1}. The coefficient of all ratified BITs in specification (1B) decreases and becomes statistically insignificant.

When FDI_{-2} is included in the model and the recent sample period (1990–2002) is used (Table 5), the coefficient of BITs ratified with non-OECD countries increases compared to that reported in Table 3, while that of BITs ratified with upper-middle-income countries decreases slightly. Thus the absolute value of the long-term impact more than doubles for BITs ratified with non-OECD and upper-middle-income countries, while that for BITs signed with low-income countries grows about tenfold.

When *OUTFDI* is included in the empirical model (Table 6), the coefficients of all ratified BITs and of BITs ratified with non-OECD and upper-middle-income countries do not change much compared to the coefficients in Table 2. However, the coefficient of FDI_{-1} drops by nearly half, which reduces the absolute value of the long-term impact. Also the negative impact of all ratified BITs and of ratified BITs with upper-middle-income countries improves by about 20 and 30 percent, respectively, while the positive impact of ratified BITs with non-OECD countries worsens by about 20 percent.

The inclusion of *FDIOUT* results in two additional major changes in coefficient estimates. First, the absolute value of the coefficient of *OIL* decreases. In other words, the negative influence of oil on FDI *improves* as a result. Second, the coefficients of *INST* and *EDUC* become statistically insignificant. The latter result is attributed to the high positive correlation between *EDUC* and *FDIOUT*, which amounts to about 0.67 and is statistically significant at the 5 percent level.

When *EDUC* is excluded from the empirical model (Table 7), FDI_{-1} coefficients increase significantly, compared to those of Tables 2 and 6. Also the absolute value of *OIL* coefficient and the statistical significance of *INST* coefficient improve compared to Table 6. The positive long-term impact of BITs ratified with non-OECD countries nearly triples, while the short-term impact worsens by nearly 20 percent. The negative long-term impact of all ratified BITs and those ratified with upper-middle-income countries worsens, while the short-term impact improves. Interestingly, with the exception of the coefficient of BITs signed with upper-middle-income countries, the coefficients of signed BITs become statistically significant. Hence the short-term and long-term impact of signed BITs becomes positive.

The positive coefficients of signed BITs are what one would normally expect from BITs contracting. The negative coefficient of BITs signed with non-OECD countries, which has been consistently obtained, becomes statistically significant. To examine the robustness of these results, the sample period is first restricted to the period 1990–2002. As Table 8 shows, the coefficient of ratified BITs with non-OECD and upper-middle-income countries, and the resulting short-term and long-term impact, change little. The coefficient of all ratified BITs in specification (1B) becomes statistically insignificant compared to Table 7. For signed BITs, the coefficients of all signed BITs in specification (1A) and of BITs signed with non-OECD and low-income countries remain robust, while the coefficient of signed BITs with upper-middle-income countries increases significantly and becomes statistically significant.

Can a negative *BIT* coefficient possibly result from competition among GCC countries to contract BITs? To address this point, *BITOTHERS* is introduced into the model (Table 9). The coefficients of *BITOTHERS* for OECD countries in specifications (2A) and (2B), non-OECD countries in specification (3B), and lower-middle-income countries in specification (5B) are positive, suggesting that FDI flows into one GCC country when any other GCC country contracts BITs with partner countries of the same income level.[17] In other words, FDI geographically spills over when the GCC countries, as group, contract BITs with the same group of contracting partners. This is the exact opposite of FDI competition, and is particularly observable for BITs contracted with OECD countries.

8. Conclusion

This paper has empirically examined the short-term and long-term impact of BITs contracting by GCC countries, and has distinguished BITs contracting by the degree of commitment to property rights protection, and by the income level of the contracting partner, to account for the different motives and natures of international relationships. The paper has adopted a GMM estimation methodology to account for endogeneity.

The study has found that BITs ratified with high-income, non-OECD countries have a positive and significant short-term and long-term impact on relative FDI; while BITs ratified with upper-middle-income countries have a surprisingly negative impact. These two results are the most robust throughout the different robustness checks. BITs signed with low-income countries have a positive impact, a result which tends to be robust and has held in almost all robustness checks. In addition, contrary to what one would normally expect, results show that the coefficients of BITs ratified with OECD countries are statistically insignificant, even negative.

In conclusion, with the negative impact of ratified BITs with upper-middle-income countries, the results do not lend support to a positive association between the degree of commitment to property rights protection and FDI impact. Neither do the results lend support to a positive association between the income level of the contracting partner and BITs on FDI impact. The positive impact of BITs on FDI comes from the non-OECD countries–mainly from within the GCC region. This result raises concerns about the responsiveness of FDI had these BITs not been contracted in the first place. The results of this paper lend justification to the GCC countries' approach of purchasing technology and importing needed human capital directly.

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[17] *BITOTHERS* is the number of annual BITs the other five GCC countries contract. The variable is constructed in such a way that partner countries are of the same income level to capture the influence of the income level on FDI.

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Table 1: BITs and FDI: Data and Statistics

BITs Data: Number of Signed and Ratified BITs			
	1980–1990	1991–2000	2001–2004
Signed BITs	11	80	50
Ratified BITs	5	57	40
Number of Signed BITs by Income Level of Contracting Partner			
High income OECD	3	26	15
High income non-OECD	0	3	1
Upper middle income	3	8	6
Lower middle income	4	29	17
Low income	1	14	11
Number of Ratified BITs by Income Level of Contracting Partner			
High income OECD	3	22	14
High income non-OECD	0	1	0
Upper middle income	0	8	3
Low middle income	1	20	19
Low income	1	6	4

BITs and FDI Statistics

Correlation between FDI and BITs Contracted[1]

	Signed	Ratified
All[2]	0.061	0.019
High income OECD	-0.018	0.02
High income non-OECD	-0.07	-0.066
Upper middle Income	-0.135	**-0.251**[3]
Lower Middle Income	0.07	0.067
Low Income	0.029	-0.08

Ramsey RESET Test and Variance Inflation Factor

	Signed		Ratified	
	RESET F-test (*p* value)	Mean VIF	RESET F-test (*p* value)	Mean VIF
All[2]	0.456	2.74	0.597	2.67
High income OECD	0.437	2.69	0.487	2.64
High income non-OECD	0.578	2.65	0.065	2.76
Upper middle income	0.508	2.64	0.533	2.63
Lower middle income	0.614	2.7	0.509	2.69
Low income	0.347	2.72	0.612	2.62

[1]Pairwise correlation. [2] "All" refers to non-income-distinguished BITs. [3] significant at the 5% level.

Table 2: Impact of BITs on FDI in GCC Countries (1984–2002)

	All	OECD	Non-OECD	UM	LM	L
			Signed			
	(1A)	**(2A)**	**(3A)**	**(4A)**	**(5A)**	**(6A)**
FDI_{-1}	0.443a	0.447a	0.428b	0.439a	0.438a	0.475a
	[0.161]	[0.160]	[0.172]	[0.168]	[0.168]	[0.166]
BIT	0.01	0.041	-0.396	0.054	0.008	**0.090b**
	[0.025]	[0.044]	[0.254]	[0.059]	[0.048]	[0.041]
OIL	-0.253a	-0.261b	-0.249b	-0.256b	-0.254a	-0.254b
	[0.095]	[0.108]	[0.105]	[0.105]	[0.086]	[0.101]
INST	0.824a	0.849a	0.814a	0.835a	0.831a	0.782a
	[0.256]	[0.281]	[0.287]	[0.270]	[0.263]	[0.274]
EDUC	-0.927a	-0.939a	-1.002a	-0.903a	-0.931a	-0.887b
	[0.340]	[0.353]	[0.364]	[0.336]	[0.342]	[0.391]
YEAR	0.012	0.01	0.019	0.011	0.013	0.011
	[0.018]	[0.020]	[0.017]	[0.019]	[0.018]	[0.018]
Wald test χ^2	255.8	348.1	97.5	224.9	253.01	210.2
Sargan test χ^2	82.6	83.13	86.35	82.14	82.95	80.88
Serial correlation test	0.105	0.107	0.092	0.112	0.095	0.106
Short-term impact (%)	-	-	-	-	-	**9.4**
Long-term impact (%)	-	-	-	-	-	**17.9**
			Ratified			
	(1B)	**(2B)**	**(3B)**	**(4B)**	**(5B)**	**(6B)**
FDI_{-1}	0.420a	0.425b	0.476a	0.460a	0.441a	0.434b
	[0.163]	[0.171]	[0.158]	[0.160]	[0.168]	[0.169]
BIT	**-0.069c**	-0.09	**1.427a**	**-0.419a**	0.038	-0.049
	[0.037]	[0.083]	[0.047]	[0.088]	[0.052]	[0.113]
OIL	-0.273a	-0.279a	-0.234a	-0.287a	-0.266b	-0.256b
	[0.105]	[0.100]	[0.080]	[0.084]	[0.109]	[0.103]
INST	0.875a	0.849a	0.655a	0.854a	0.807a	0.837a
	[0.254]	[0.258]	[0.178]	[0.235]	[0.263]	[0.274]
EDUC	-0.815b	-0.835b	-0.725b	-0.840a	-0.957a	-0.944a
	[0.336]	[0.388]	[0.298]	[0.295]	[0.320]	[0.353]
YEAR	0.01	0.012	0.01	0.011	0.014	0.013
	[0.017]	[0.018]	[0.018]	[0.018]	[0.016]	[0.018]
Observations	72	72	72	72	72	72
Wald test χ^2	268.6	1792.8	53027	193.4	692.5	1383.6
Sargan test χ^2	79.2	80.85	82.17	72.6	82.3	82.4
Serial Correlation test	0.104	0.1	0.1	0.132	0.082	0.101
Short-term impact (%)	**-6.6**	-	**316.6**	**-34.2**	-	-
Long-term impact (%)	**-11. 5**	-	**604.2**	**-63.4**	-	-

Robust standard errors in brackets. Coefficients of the difference of lagged FDI, OIL, INST, EDUC, and BIT reported. Letters a, b, c significant at 1, 5, 10% level, respectively. H_0 for Sargan over-identification test: instruments not correlated with residuals. H_0 for serial correlation test: errors in first-difference regression exhibit no second-order serial correlation (*p* values reported).

Table 3: Impact of BITs on FDI in GCC Countries (1984–2002): + *FDI_{-2}*

	All	OECD	Non-OECD	UM	LM	L
			Signed			
	(1A)	**(2A)**	**(3A)**	**(4A)**	**(5A)**	**(6A)**
FDI_{-1}	0.587a	0.576a	0.562a	0.569a	0.582a	0.625a
	[0.187]	[0.188]	[0.196]	[0.194]	[0.190]	[0.212]
BIT	0.019	0.038	-0.405	0.048	0.037	**0.106b**
	[0.016]	[0.039]	[0.248]	[0.053]	[0.044]	[0.049]
OIL	-0.256b	-0.266b	-0.255b	-0.262b	-0.249a	-0.260b
	[0.105]	[0.113]	[0.110]	[0.111]	[0.092]	[0.107]
INST	0.854a	0.884a	0.851a	0.871a	0.858a	0.813a
	[0.284]	[0.304]	[0.316]	[0.296]	[0.290]	[0.297]
EDUC	-1.009a	-1.020a	-1.088a	-0.989a	-1.017a	-0.969a
	[0.346]	[0.363]	[0.351]	[0.352]	[0.346]	[0.358]
YEAR	0.011	0.009	0.018	0.011	0.013	0.011
	[0.019]	[0.021]	[0.017]	[0.020]	[0.018]	[0.018]
FDI_{-2}	-0.237b	-0.224b	-0.232b	-0.225b	-0.238b	-0.246b
	[0.108]	[0.106]	[0.104]	[0.108]	[0.106]	[0.116]
Wald test χ^2	139.1	200.1	47.4	125	119.5	55.2
Sargan test χ^2	73.92	74.86	77.16	74.11	74.96	71.7
Serial correlation test	0.215	0.215	0.184	0.217	0.185	0.269
Short-term impact (%)	-	-	-	-	-	**11.2**
Long-term impact (%)	-	-	-	-	-	**29.8**
			Ratified			
	(1B)	**(2B)**	**(3B)**	**(4B)**	**(5B)**	**(6B)**
FDI_{-1}	0.546a	0.550a	0.587a	0.585a	0.568a	0.567a
	[0.182]	[0.193]	[0.187]	[0.184]	[0.195]	[0.192]
BIT	**-0.062c**	-0.079	**1.393a**	**-0.407a**	0.021	-0.052
	[0.032]	[0.075]	[0.054]	[0.083]	[0.045]	[0.123]
OIL	-0.278b	-0.282b	-0.240a	-0.292a	-0.268b	-0.262b
	[0.114]	[0.110]	[0.081]	[0.094]	[0.114]	[0.108]
INST	0.905a	0.881a	0.690a	0.888a	0.855a	0.873a
	[0.290]	[0.289]	[0.191]	[0.266]	[0.293]	[0.302]
EDUC	-0.904a	-0.925b	-0.800b	-0.921a	-1.026a	-1.027a
	[0.337]	[0.363]	[0.328]	[0.299]	[0.331]	[0.357]
YEAR	0.01	0.011	0.01	0.01	0.013	0.013
	[0.018]	[0.018]	[0.018]	[0.018]	[0.017]	[0.018]
FDI_{-2}	-0.214b	-0.213b	-0.192c	-0.215b	-0.222b	-0.227b
	[0.094]	[0.091]	[0.108]	[0.106]	[0.103]	[0.103]
Observations	72	72	72	72	72	72
Wald test χ^2	49.6	46.2	41.6	81.4	1093	572.3
Sargan test χ^2	72.45	73.44	73.04	66.49	74.3	74.24
Serial correlation test	0.224	0.206	0.194	0.3	0.172	0.203
Short-term impact (%)	**-6**	-	**302.7**	**-33.4**	-	-
Long-term impact (%)	**-13.2**	-	**732.9**	**-80.6**	-	-

Robust standard errors in brackets. Coefficients of the difference of lagged FDI, OIL, INST, EDUC, and BIT reported. Letters a, b, c significant at 1, 5, 10% level, respectively. H_0 for Sargan over-identification test: instruments not correlated with residuals. H_0 for serial correlation test: errors in first-difference regression exhibit no second-order serial correlation (*p* values reported).

Table 4: Impact of BITs on FDI in GCC Countries (1990–2002)

	All	OECD	non-OECD	UM	LM	L
			Signed			
	(1A)	**(2A)**	**(3A)**	**(4A)**	**(5A)**	**(6A)**
FDI_{-1}	0.678a	0.675a	0.625a	0.647a	0.633a	0.728a
	[0.174]	[0.174]	[0.202]	[0.210]	[0.199]	[0.172]
BIT	0.039	0.099	-0.401	0.276	-0.073	**0.125b**
	[0.046]	[0.086]	[0.260]	[0.228]	[0.065]	[0.064]
OIL	-0.287a	-0.312a	-0.287a	-0.282a	-0.338a	-0.298a
	[0.064]	[0.084]	[0.075]	[0.077]	[0.105]	[0.072]
INST	0.537b	0.609b	0.567b	0.574b	0.631b	0.498b
	[0.221]	[0.292]	[0.284]	[0.275]	[0.286]	[0.251]
EDUC	-0.734	-0.838	-0.913	-0.703c	-0.725c	-0.486
	[0.510]	[0.637]	[0.597]	[0.381]	[0.419]	[0.698]
YEAR	0.02	0.015	0.034	0.019	0.019	0.014
	[0.025]	[0.028]	[0.028]	[0.027]	[0.023]	[0.023]
Wald test χ^2	633.8	243.2	1061.9	972.2	1132.5	3465.3
Sargan test χ^2	52.92	54.71	56.6	53.58	51.02	50.97
Serial correlation test	0.196	0.183	0.163	0.181	0.173	0.191
Short-term impact (%)	-	-	-	-	-	**13.3**
Long-term impact (%)	-	-	-	-	-	**50.0**
			Ratified			
	(1B)	**(2B)**	**(3B)**	**(4B)**	**(5B)**	**(6B)**
FDI_{-1}	0.611a	0.613a	0.708a	0.659a	0.666a	0.655a
	[0.210]	[0.211]	[0.194]	[0.196]	[0.193]	[0.193]
BIT	-0.034	-0.088	**1.476a**	**-0.399a**	0.094	0.096
	[0.049]	[0.090]	[0.035]	[0.120]	[0.065]	[0.131]
OIL	-0.313a	-0.332a	-0.269a	-0.321a	-0.331a	-0.307a
	[0.081]	[0.102]	[0.035]	[0.077]	[0.121]	[0.077]
INST	0.653b	0.653b	0.379b	0.647b	0.509b	0.593b
	[0.285]	[0.310]	[0.159]	[0.312]	[0.231]	[0.286]
EDUC	-0.667	-0.581	-0.327	-0.412	-0.864c	-0.654
	[0.532]	[0.572]	[0.285]	[0.374]	[0.464]	[0.581]
YEAR	0.019	0.018	0.013	0.01	0.029	0.02
	[0.025]	[0.025]	[0.020]	[0.021]	[0.025]	[0.024]
Observations	47	47	47	47	47	47
Wald test χ^2	1203.9	4457.1	20834.1	510.6	3882.7	4521.1
Sargan test χ^2	51.58	51.08	51.34	45.0	50.2	52.33
Serial correlation test	0.173	0.160	0.172	0.221	0.181	0.160
Short-term impact (%)	-	-	**337.5**	**-32.9**	-	-
Long-term impact (%)	-	-	**1156.0**	**-112.7**	-	-

Robust standard errors in brackets. Coefficients of the difference of lagged FDI, OIL, INST, EDUC, and BIT reported. Letters a, b, c significant at 1, 5, 10% level, respectively. H_0 for Sargan over-identification test: instruments not correlated with residuals. H_0 for serial correlation test: errors in first-difference regression exhibit no second-order serial correlation (*p* values reported).

Table 5: Impact of BITs on FDI in GCC Countries (1990–2002): + FDI_{-2}

	All	OECD	non-OECD	UM	LM	L
			Signed			
	(1A)	**(2A)**	**(3A)**	**(4A)**	**(5A)**	**(6A)**
FDI_{-1}	0.935a	0.862a	0.811a	0.849a	0.803a	0.948a
	[0.228]	[0.194]	[0.210]	[0.225]	[0.216]	[0.256]
BIT	0.062	0.103	-0.414	0.302	-0.033	**0.145b**
	[0.048]	[0.086]	[0.265]	[0.214]	[0.046]	[0.072]
OIL	-0.243a	-0.284a	-0.258a	-0.249a	-0.292a	-0.266a
	[0.071]	[0.090]	[0.080]	[0.083]	[0.102]	[0.078]
INST	0.561a	0.660b	0.617b	0.627b	0.664b	0.537b
	[0.177]	[0.260]	[0.270]	[0.251]	[0.271]	[0.225]
EDUC	-1.290c	-1.293	-1.372c	-1.186	-1.145c	-0.943b
	[0.692]	[0.853]	[0.762]	[0.745]	[0.613]	[0.475]
YEAR	0.026	0.02	0.04	0.025	0.026	0.019
	[0.030]	[0.032]	[0.032]	[0.033]	[0.027]	[0.021]
FDI_{-2}	-0.465	-0.373c	-0.375c	-0.403	-0.339	-0.413c
	[0.298]	[0.220]	[0.227]	[0.266]	[0.216]	[0.243]
Wald test χ^2	6241.9	1578	35.9	79.2	2181.7	46.6
Sargan test χ^2	42.87	46.35	47.76	44.69	44.79	42.03
Serial correlation test	0.378	0.278	0.23	0.409	0.245	0.458
Short-term impact (%)	-	-	-	-	-	**15.6**
Long-term impact (%)	-	-	-	-	-	**300.1**
			Ratified			
	(1B)	**(2B)**	**(3B)**	**(4B)**	**(5B)**	**(6B)**
FDI_{-1}	0.797a	0.781a	0.833a	0.828a	0.818a	0.836a
	[0.212]	[0.217]	[0.197]	[0.209]	[0.213]	[0.216]
BIT	-0.016	-0.068	**1.425a**	**-0.384a**	0.069	0.098
	[0.043]	[0.074]	[0.071]	[0.105]	[0.055]	[0.129]
OIL	-0.280a	-0.300a	-0.250a	-0.294a	-0.298b	-0.280a
	[0.074]	[0.090]	[0.046]	[0.076]	[0.117]	[0.080]
INST	0.676b	0.687b	0.422b	0.692b	0.579a	0.642b
	[0.266]	[0.292]	[0.170]	[0.311]	[0.224]	[0.267]
EDUC	-1.130c	-1.013c	-0.651c	-0.836b	-1.224b	-1.091c
	[0.680]	[0.584]	[0.395]	[0.378]	[0.597]	[0.588]
YEAR	0.026	0.024	0.018	0.015	0.032	0.025
	[0.028]	[0.026]	[0.022]	[0.021]	[0.027]	[0.026]
FDI_{-2}	-0.35	-0.327c	-0.256	-0.341	-0.323c	-0.363
	[0.213]	[0.189]	[0.212]	[0.221]	[0.193]	[0.227]
Observations	47	47	47	47	47	47
Wald test χ^2	1545.3	16.63	868.2	17158.9	2232.2	40.6
Sargan test χ^2	44.85	44.58	43.46	39.61	44.2	44.55
Serial correlation test	0.271	0.296	0.182	0.517	0.229	0.272
Short-term impact (%)	-	-	**315.8**	**-31.9**	-	-
Long-term impact (%)	-	-	**1890.9**	**-185.4**	-	-

Robust standard errors in brackets. Coefficients of the difference of lagged FDI, OIL, INST, EDUC, and BIT reported. Letters a, b, c significant at 1, 5, 10% level, respectively. H_0 for Sargan over-identification test: instruments not correlated with residuals. H_0 for serial correlation test: errors in first-difference regression exhibit no second-order serial correlation (*p* values reported).

Table 6: Impact of BITs on FDI in GCC Countries (1984–2002): + *FDIOUT*

	All	**OECD**	**non-OECD**	**UM**	**LM**	**L**
			Signed			
	(1A)	**(2A)**	**(3A)**	**(4A)**	**(5A)**	**(6A)**
FDI_{-1}	0.261a	0.263a	0.249a	0.250a	0.246a	0.246a
	[0.062]	[0.071]	[0.071]	[0.073]	[0.073]	[0.073]
BIT	0.016	0.055	-0.372	0.084	-0.018	-0.018
	[0.028]	[0.045]	[0.271]	[0.054]	[0.044]	[0.044]
OIL	-0.204a	-0.216a	-0.206a	-0.206a	-0.217a	-0.217a
	[0.052]	[0.068]	[0.065]	[0.067]	[0.057]	[0.057]
INST	0.597	0.649	0.591	0.61	0.622	0.622
	[0.417]	[0.468]	[0.459]	[0.432]	[0.430]	[0.430]
EDUC	-0.595	-0.622	-0.669	-0.568	-0.613	-0.613
	[0.509]	[0.534]	[0.534]	[0.499]	[0.538]	[0.538]
YEAR	-0.007	-0.012	0.001	-0.009	-0.007	-0.007
	[0.013]	[0.016]	[0.013]	[0.015]	[0.014]	[0.014]
FDIOUT	0.008	0.013	-0.001	0.014	0.01	0.01
	[0.033]	[0.032]	[0.044]	[0.030]	[0.037]	[0.037]
Wald test χ^2	**10.17**	**11.77**	**15.24**	**11.06**	1598.9	**12.02**
Sargan test χ^2	62.45	62.74	66	61.65	62.24	61.42
Serial correlation test	0.111	0.111	0.102	0.115	0.103	0.101
Short-term impact (%)	-	-	-	-	-	-
Long-term impact (%)	-	-	-	-	-	-
			Ratified			
	(1B)	**(2B)**	**(3B)**	**(4B)**	**(5B)**	**(6B)**
FDI_{-1}	0.230a	0.236a	0.270a	0.283a	0.258a	0.248a
	[0.054]	[0.061]	[0.075]	[0.060]	[0.071]	[0.069]
BIT	**-0.073b**	-0.096	**1.509a**	**-0.380a**	0.064	-0.053
	[0.035]	[0.073]	[0.061]	[0.121]	[0.067]	[0.090]
OIL	-0.213a	-0.217a	-0.196a	-0.244a	-0.212a	-0.208a
	[0.063]	[0.063]	[0.046]	[0.061]	[0.060]	[0.059]
INST	0.687	0.651	0.281	0.662c	0.579	0.616
	[0.426]	[0.426]	[0.267]	[0.363]	[0.413]	[0.448]
EDUC	-0.543	-0.562	-0.255	-0.552	-0.658	-0.634
	[0.493]	[0.529]	[0.489]	[0.450]	[0.531]	[0.545]
YEAR	-0.009	-0.007	-0.01	-0.008	-0.004	-0.006
	[0.014]	[0.014]	[0.015]	[0.013]	[0.013]	[0.013]
FDIOUT	0.021	0.021	0.003	0.01	0.005	0.012
	[0.031]	[0.036]	[0.029]	[0.041]	[0.045]	[0.036]
Observations	61	61	61	61	61	61
Wald test χ^2	188.8	**12.72**	47.06	14.59	**11.43**	10.79
Sargan test χ^2	58.85	60.6	60.3	54.4	62	62.36
Serial correlation test	0.101	0.107	0.1	0.115	0.082	0.104
Short-term impact (%)	**-7.0**	-	**352.2**	**-31.6**	-	-
Long-term impact (%)	**-9.1**	-	**482.5**	**-44.1**	-	-

Robust standard errors in brackets. Coefficients of the difference of lagged FDI, FDIOUT, OIL, INST, EDUC, and BIT reported. Letters a, b, c significant at 1, 5, 10% level, respectively. $\chi^2(7)$ at 1 and 5% level is 18.48 and 14.07, respectively. H_0 for Sargan over-identification test: instruments not correlated with residuals. H_0 for serial correlation test: errors in first-difference regression exhibit no second-order serial correlation (*p* values reported).

Table 7: Impact of BITs on FDI in GCC Countries (1984–2002): + *FDIOUT* - *EDUC*

	All	**OECD**	**non-OECD**	**UM**	**LM**	**L**
			Signed			
	(1A)	**(2A)**	**(3A)**	**(4A)**	**(5A)**	**(6A)**
FDI_{-1}	0.727a	0.744a	0.727a	0.735a	0.731a	0.730a
	[0.065]	[0.062]	[0.069]	[0.063]	[0.063]	[0.058]
BIT	**0.019a**	**0.055c**	**-0.153c**	0.01	**0.011a**	**0.102a**
	[0.004]	[0.030]	[0.091]	[0.009]	[0.003]	[0.030]
OIL	-0.240a	-0.236a	-0.239a	-0.238a	-0.239a	-0.263a
	[0.064]	[0.067]	[0.067]	[0.065]	[0.063]	[0.051]
INST	0.541c	0.542c	0.588c	0.565c	0.565c	0.543c
	[0.313]	[0.311]	[0.356]	[0.333]	[0.332]	[0.316]
YEAR	-0.007	-0.007	-0.005	-0.006	-0.006	-0.007
	[0.008]	[0.008]	[0.008]	[0.008]	[0.008]	[0.007]
FDIOUT	-0.054b	-0.049c	-0.053c	-0.050c	-0.051b	-0.067a
	[0.025]	[0.026]	[0.029]	[0.027]	[0.026]	[0.020]
Wald test χ^2	1624.8	648.7	806.7	1843.2	1770	780.9
Sargan test χ^2	94.1	94.8	94.6	93.7	94	94.1
Serial correlation test	0.117	0.125	0.117	0.117	0.12	0.135
Short-term impact (%)	**1.9**	**5.7**	**-14.2**	-	**1.1**	**10.7**
Long-term impact (%)	**7**	**22.1**	**-52**	-	**4.1**	**39.8**
			Ratified			
	(1B)	**(2B)**	**(3B)**	**(4B)**	**(5B)**	**(6B)**
FDI_{-1}	0.748a	0.740a	0.785a	0.745a	0.734a	0.737a
	[0.056]	[0.055]	[0.045]	[0.057]	[0.064]	[0.062]
BIT	**-0.033b**	-0.044	**1.361a**	**-0.234a**	0.019	-0.036
	[0.013]	[0.038]	[0.036]	[0.021]	[0.029]	[0.076]
OIL	-0.237a	-0.232a	-0.220a	-0.251a	-0.235a	-0.234a
	[0.066]	[0.069]	[0.052]	[0.054]	[0.064]	[0.059]
INST	0.596c	0.579c	0.247a	0.649b	0.580c	0.564c
	[0.343]	[0.337]	[0.078]	[0.311]	[0.340]	[0.327]
YEAR	-0.004	-0.005	0.001	-0.007	-0.007	-0.005
	[0.008]	[0.008]	[0.006]	[0.007]	[0.008]	[0.008]
FDIOUT	-0.051c	-0.052c	-0.060a	-0.050c	-0.052c	-0.050c
	[0.030]	[0.027]	[0.022]	[0.027]	[0.027]	[0.027]
Observations	98	98	98	98	98	98
Wald test χ^2	3,542.7	2,378.6	137,860	2,455.8	3,525	3,739.7
Sargan test χ^2	92.6	93.5	95	91.5	94	93.5
Serial correlation test	0.12	0.116	0.126	0.138	0.12	0.101
Short-term impact (%)	**-3.2**	-	**290**	**-20.9**	-	-
Long-term impact (%)	**-12.9**	-	**1348.9**	**-81.8**	-	-

Robust standard errors in brackets. Coefficients of the difference of lagged FDI, FDIOUT, OIL, INST, and BIT reported. Letters a, b, c significant at 1, 5, 10% level, respectively. H_0 for Sargan over-identification test: instruments not correlated with residuals. H_0 for serial correlation test: errors in first-difference regression exhibit no second-order serial correlation (*p* values reported).

Table 8: Impact of BITs on FDI in GCC Countries (1990–2002): + *FDIOUT - EDUC*

	All	OECD	non-OECD	UM	LM	L
			Signed			
	(1A)	**(2A)**	**(3A)**	**(4A)**	**(5A)**	**(6A)**
FDI_{-1}	0.705a	0.732a	0.708a	0.712a	0.727a	0.715a
	[0.048]	[0.045]	[0.050]	[0.051]	[0.064]	[0.041]
BIT	**0.021a**	0.079	**-0.154c**	**0.049a**	-0.009	**0.092a**
	[0.008]	[0.052]	[0.081]	[0.015]	[0.021]	[0.029]
OIL	-0.253a	-0.243a	-0.247a	-0.238a	-0.244a	-0.282a
	[0.082]	[0.082]	[0.083]	[0.084]	[0.079]	[0.071]
INST	0.742c	0.730b	0.807c	0.761c	0.785c	0.758c
	[0.391]	[0.368]	[0.447]	[0.404]	[0.432]	[0.410]
YEAR	-0.008	-0.009	-0.006	-0.007	-0.007	-0.009
	[0.006]	[0.007]	[0.006]	[0.007]	[0.007]	[0.007]
FDIOUT	0.001	0.013	0.005	0.011	0.01	-0.018
	[0.028]	[0.027]	[0.030]	[0.028]	[0.028]	[0.021]
Wald test χ^2	554.4	617	35917.3	997.1	4778	1016.8
Sargan test χ^2	69.3	71.4	69.2	68.5	64.5	68.7
Serial correlation test	0.381	0.066	0.153	0.414	0.224	0.282
Short-term impact (%)	**2.1**	-	**-14.3**	**5**	-	**9.6**
Long-term impact (%)	**7.2**	-	**-48.9**	**17.4**	-	**33.8**
			Ratified			
	(1B)	**(2B)**	**(3B)**	**(4B)**	**(5B)**	**(6B)**
FDI_{-1}	0.729a	0.728a	0.801a	0.734a	0.717a	0.720a
	[0.054]	[0.053]	[0.090]	[0.051]	[0.053]	[0.049]
BIT	-0.018	-0.04	**1.325a**	**-0.221a**	0.032	0.033
	[0.018]	[0.038]	[0.102]	[0.029]	[0.033]	[0.066]
OIL	-0.239a	-0.231a	-0.198a	-0.243a	-0.240a	-0.255a
	[0.083]	[0.087]	[0.053]	[0.076]	[0.081]	[0.083]
INST	0.792c	0.791c	0.362a	0.846b	0.804c	0.794c
	[0.427]	[0.437]	[0.119]	[0.418]	[0.458]	[0.437]
YEAR	-0.005	-0.006	0	-0.008	-0.009	-0.008
	[0.007]	[0.007]	[0.004]	[0.006]	[0.008]	[0.007]
FDIOUT	0.007	0.006	-0.02	0.004	0.001	0.008
	[0.029]	[0.027]	[0.024]	[0.027]	[0.031]	[0.027]
Observations	74	74	74	74	74	74
Wald test χ^2	8929.1	1689.9	227615.9	2494.3	499.6	634.7
Sargan test χ^2	68.1	68.5	74.5	66.8	68.6	68.5
Serial correlation test	0.458	0.325	0.186	0.855	0.229	0.299
Short-term impact (%)	-	-	**276.2**	**-19.8**	-	-
Long-term impact (%)	-	-	**1388**	**-74.5**	-	-

Robust standard errors in brackets. Coefficients of the difference of lagged FDI, FDIOUT, OIL, INST, and BIT reported. Letters a, b, c significant at 1, 5, 10% level, respectively. H_0 for Sargan over-identification test: instruments not correlated with residuals. H_0 for serial correlation test: errors in first-difference regression exhibit no second-order serial correlation (*p* values reported).

Table 9: Impact of BITs on FDI in GCC Countries (1990–2002): + *FDIOUT* + *BITOTHERS* - *EDUC*

	All	OECD	non-OECD	UM	LM	L
			Signed			
	(1A)	**(2A)**	**(3A)**	**(4A)**	**(5A)**	**(6A)**
FDI_{-1}	0.705a	0.744a	0.711a	0.712a	0.727a	0.719a
	[0.048]	[0.042]	[0.051]	[0.050]	[0.063]	[0.044]
BIT	**0.020a**	0.073	**-0.161b**	**0.050a**	-0.009	**0.093a**
	[0.007]	[0.047]	[0.078]	[0.018]	[0.021]	[0.031]
OIL	-0.248a	-0.185a	-0.249a	-0.239a	-0.243a	-0.317a
	[0.079]	[0.070]	[0.086]	[0.084]	[0.078]	[0.085]
INST	0.735c	0.606c	0.816c	0.763c	0.784c	0.810c
	[0.385]	[0.324]	[0.440]	[0.402]	[0.427]	[0.445]
YEAR	-0.009	-0.012c	-0.005	-0.007	-0.007	-0.005
	[0.007]	[0.007]	[0.007]	[0.006]	[0.009]	[0.005]
FDIOUT	0	0.007	0.006	0.01	0.008	-0.02
	[0.028]	[0.027]	[0.030]	[0.028]	[0.030]	[0.018]
BITOTHERS	0.001	**0.028a**	-0.026	0.002	0.002	-0.021
	[0.002]	[0.009]	[0.016]	[0.015]	[0.010]	[0.016]
Wald test	516.2	2446.3	709.5	946.2	551.5	895.7
Sargan test	68.4	71.2	67.9	67.5	67.5	68.1
Serial correlation test	0.392	0.103	0.224	0.415	0.27	0.236
Short-term impact (%)	**2.0**	-	**-14.9**	**5.1**	-	**9.7**
Long-term impact (%)	**6.8**	-	**-51.5**	**17.8**	-	**34.7**
			Ratified			
	(1B)	**(2B)**	**(3B)**	**(4B)**	**(5B)**	**(6B)**
FDI_{-1}	0.712a	0.716a	0.806a	0.733a	0.722a	0.735a
	[0.055]	[0.054]	[0.089]	[0.043]	[0.047]	[0.038]
BIT	-0.004	-0.043	**1.344a**	**-0.237a**	0.03	0.021
	[0.028]	[0.041]	[0.099]	[0.045]	[0.033]	[0.054]
OIL	-0.235a	-0.242a	-0.174a	-0.243a	-0.223a	-0.234b
	[0.076]	[0.073]	[0.038]	[0.073]	[0.085]	[0.097]
INST	0.811c	0.850c	0.290b	0.947b	0.802c	0.742
	[0.417]	[0.435]	[0.125]	[0.478]	[0.453]	[0.461]
YEAR	-0.02	-0.011	0.001	-0.009	-0.014	-0.003
	[0.016]	[0.010]	[0.004]	[0.007]	[0.009]	[0.011]
FDIOUT	0.001	0.006	-0.014	0.005	-0.001	0.016
	[0.030]	[0.028]	[0.026]	[0.027]	[0.031]	[0.031]
BITOTHERS	0.022	**0.025c**	**0.134c**	-0.054	**0.015c**	-0.038
	[0.018]	[0.014]	[0.075]	[0.065]	[0.008]	[0.048]
Observations	74	74	74	74	74	74
Wald test	1548.4	2578	1550.1	67832.9	488	1264.7
Sargan test	65.8	66.3	74.2	66.1	66.6	65.7
Serial correlation test	0.995	0.878	0.134	0.72	0.29	0.454
Short-term impact (%)	-	-	**283.4**	**-21.1**	-	-
Long-term impact (%)	-	-	**1461.0**	**-79.0**	-	-

Robust standard errors in brackets. Coefficients of the difference of lagged FDI, FDIOUT, OIL, INST, BIT, BITOTHERS reported. Letters a, b, c significant at 1, 5, 10% level, respectively. H_0 for Sargan over-identification test: instruments not correlated with residuals. H_0 for serial correlation test: errors in first-difference regression exhibit no second-order serial correlation (*p* values reported).