

**ETHNIC TENSION, INSTABILITY AND TRADE:  
CASE OF TURKISH EXPORTS TO IRAQ**

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**Abstract:**

This paper investigates the effects of instability and ethnic tension on Turkish exports to Iraq. It focuses on the fluctuations of international trade before, during and after periods of regional and global instability and ethnic tension. We find that during periods of higher ethnic tension exports from Turkey to Iraq decrease. Based on our results, trade costs of instability in Iraq need to be evaluated carefully. Policy implications suggest that a long-term and sustained stability and a solution towards building high-quality institutions and easing the ethnic tension in Iraq might be preferred to a hasty and ad hoc resolution.

**Key Words:** International Trade, Ethnic Tensions, Internal/External Conflict, Iraq, Turkey.

**JEL Classifications:** F51, F52, H56

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This paper analyzes the effects of ethnic tension, internal and external conflict and economic risk on the bilateral trade between Iraq and Turkey. It specifically looks at Turkish exports to Iraq and inspects fluctuations in exports before, during and after periods of ethnic tension and conflict<sup>1</sup>. Although our analysis has connections to the literature in the study of trade and conflict, we diverge from the existing pool of papers in several ways. Martin, Mayer and Thoenig (2005) question if the intuition that trade promotes peace is true. They claim that “multilateral trade openness increases more the probability of war between countries which are close to each other”. Polachek (1992) also shows that “increased trade is associated with significantly reduced levels of conflict, and that the direction of causation is from trade to conflict reduction”. In our paper, we are not interested in how trade affects conflict, but rather the opposite. Morrow (1999) finds that “if higher trade flows reduce both sides’ resolve for war, then the effect of trade on the likelihood of conflict is indeterminate”. However, we are also not interested in such causality questions. Neither does this paper intend to measure the costs of Iraqi wars for Turkey (see Wallsten and Kosec (2005) and Nordhaus (2002) for economic costs of war in Iraq). Lastly, while most of the existing literature is concerned with the direct effects of instability on trade<sup>2</sup>, we are looking at the effects of Iraq’s ethnic tension, wars and conflict with other countries on Turkey.

Our main motivation is similar to Barbieri and Levy’s (1999) who find that “in most instances war has no permanent long-term effect on trading relationships, in fact, trade often increases in the postwar period” and Anderton and Carter’s (2001) who disagree with Barbieri and Levy and claim that there is “reasonably strong evidence that major power war is associated with a decline in trade relative to pre- and postwar periods”.

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<sup>1</sup> The import data is believed to be less reliable (the investigation about the corruption of the UN’s “Oil-For-Food” program and the unrecorded border trade between Iraq and Turkey are some of the reasons).

The entire region in general and Iraq in particular, has experienced repeated and prolonged periods of ethnic tension, conflict and war. The UN embargo and implementation of many changes over time, along with the mismanaged “Oil-For-Food” program of the UN make it more difficult to build a complete dataset and identify the narrow definition of “conflict” and “instability”<sup>3</sup>. To quantify internal conflict, external conflict, ethnic tension and economic risk, we utilize the International Country Risk Guide (ICRG)<sup>4</sup> ratings of the Political Risk Services (PRS)<sup>5</sup>. Internal conflict, external conflict and ethnic tension are components of the ICRG political risk rating.

We find that an environment with increased economic risks, as well as external and internal conflict, has positive effects on Turkish exports to Iraq. However, increasing ethnic tension affects exports to Iraq negatively.

### ***Data and Methodology***

We investigate the effects of instability on Turkish and Iraqi bilateral foreign trade using a panel dataset of exports in 60 sectors in the years 1984 through 2005. Data on total exports of Turkey and exports to Iraq are from the United Nations Comtrade Database. We have used data by Standard International Trade Classification (SITC) Revision 1 since sectoral trade

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<sup>2</sup> See Han Dorussen, “Balance of Power Revisited: A Multi-Country Model of Trade and Conflict,” *Journal of Peace Research*, Vol.36, No.4 (1999), pp. 443-462, for extending the model for more than two players and emphasizing that intra-alliance trade may be more efficient.

<sup>3</sup> The United Nations imposed economic sanctions on Iraq after it invaded Kuwait in 1990. After 1996, under the Oil-For-Food program, Iraq was allowed to export oil and use the proceeds to purchase goods to address essential civilian needs, including food, medicine, and infrastructure spare parts. Until 20 March 2003, when war intervened and oil exports under the program ended, the Oil-For-Food Program was funded exclusively from the proceeds of Iraqi oil exports, authorized by the Security Council. With the lifting of UN sanctions in 2003, Iraq is gradually resuming trade relations with the international community. Iraq was granted observer status at the World Trade Organization (WTO) in February 2004, and began its WTO accession process in December 2004. Also see See Kenneth Katzman and Christopher M. Blanchard, “Iraq: Oil-For-Food Program, Illicit Trade, and Investigations,” Congressional Research Service Report for the US Congress, Order Code RL30472, (14 June 2005).

<sup>4</sup> See <http://www.icrgonline.com/>

<sup>5</sup> See <http://www.prsonline.com/>

data for a longer period was available under this classification. We extracted data for SITC 01-99. There are ten broad categories under this classification: food and live animals (00-09), beverages and tobacco (10-19), crude materials, inedible except fuel (20-29), mineral fuels, lubricants and related materials (30-39), animal and vegetable oils and fats (40-49), chemicals (50-59), manufactured goods classified chiefly by material (60-69), machinery and transport equipment (70-79), miscellaneous manufactured articles (80-89), commodities and transactions not classified according to kind (90-99). Trade in certain subsectors is sporadic over the 1980-2005 period where we may see exports for several years followed by no trade for a few years. In subsectors where there was trade, levels declined after the first Gulf war and only managed to pick up in the last couple of years. The sectors in which Turkey was not exporting a lot in the earlier years, show major leaps in the last couple of years. During the embargo, there are no exports to Iraq as reported in the Comtrade database although some other sources will report positive export figures for this period.

**- Insert Table 1: 2005 Export Figures -**

Table 1 above presents the volume of total Turkish exports and exports to Iraq for 2005 and relative weight of each sector in exports. Exports to Iraq mirror total exports in the largest export sectors. 27.7 percent of Turkish exports and 29 percent of exports to Iraq are in manufactured goods. Machinery and transport constitute 29.2 percent of total exports and 18.8 percent of exports to Iraq. Mineral exports constitute a minor percentage of total exports (3.6 percent) but with 19.6 percent, represent the second largest sectoral group in exports to Iraq. Share of food exports to Iraq (18 percent) is also greater than the share of food exports in total exports (8.9 percent).

In addition to the trade data, we employ risk factors and conflict indices developed by the PRS Group to describe the trade environment. Internal conflict, external conflict and ethnic tension are components of the ICRG political risk rating.

The PRS Groups defines internal and external conflict, ethnic tensions and economic risk as follows:

**Internal Conflict** is “an assessment of political violence in the country and its actual or potential impact on governance. The highest rating is given to those countries where there is no armed or civil opposition to the government and the government does not indulge in arbitrary violence, direct or indirect, against its own people. The lowest rating is given to a country embroiled in an on-going civil war. The risk rating assigned is the sum of three subcomponents; civil war/coup threat, terrorism/political violence and civil disorder”.

**External Conflict** is “an assessment both of the risk to the incumbent government from foreign action, ranging from non-violent external pressure (diplomatic pressures, withholding of aid, trade restrictions, territorial disputes, sanctions, etc) to violent external pressure (cross-border conflicts to all-out war). The risk rating assigned is the sum of three subcomponents; war, cross-border conflict, and foreign pressures<sup>6</sup>”.

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<sup>6</sup> Each has a maximum score of four points and a minimum score of 0 points. A score of 4 points equates to Very Low Risk and a score of 0 points to Very High Risk.

**Ethnic Tension** is “an assessment of the degree of tension within a country attributable to racial, nationality, or language divisions. Lower ratings are given to countries where racial and nationality tensions are high because opposing groups are intolerant and unwilling to compromise. Higher ratings are given to countries where tensions are minimal, even though such differences may still exist”.

The **Economic Risk** rating “provides a means of assessing a country’s current economic strengths and weaknesses”. Its components are GDP per head, real GDP growth, annual inflation rate, budget balance as a percentage of GDP and current account as a percentage of GDP.

Even though we do not employ a full-fledged trade model, our choice of regressors capture the basic dynamics of trade models. We only look at exports because imports from Iraq are more sporadic in nature and they are concentrated in relatively few sectors which make statistical analysis less reliable due to small sample bias. Furthermore, unreported trade is a bigger issue for imports and thus more likely to taint statistical results. We include total Turkish sectoral exports as an indicator of size of trade, the real effective exchange rate index to measure changes in terms of trade, economic risk index, external and internal conflict indices and index for ethnic tensions<sup>7</sup>.

In Figure 1, Iraq’s economic risk rating is high at the beginning and the end of the sample period as well as for a period of three years 1995 through 1997.

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<sup>7</sup> The PRS database also has other risk factors. In particular, we investigated the effect of socioeconomic risk and composite risk on exports to Iraq and failed to uncover any significant effect.

**- Insert Figure 1: Economic Risk Index -**

As seen in Figure 2 below, ethnic tension does not vary much during the sample period; however the consistently low score indicates the presence of continuous ethnic tensions in the country. External conflict index shows substantial variation. The last twenty years have been marked with episodes of high levels of external conflict for Iraq. From 1998 to 2003, there is a rapid increase in the external conflict risk of Iraq, which starts to decline from the beginning of 2004 on. It is noteworthy to mention that around the same time when the external conflict risk starts to decline the internal conflict risk of Iraq starts to rise sharply. Overall, internal conflict displays an upward trend with a brief period of relative stability in 2002 and 2003.

**- Insert Figure 2: Conflict and Ethnic Tension Indices -**

In Table 2, we provide descriptive statistics on the above variables.

**- Insert Table 2: Descriptive Statistics -**

Average sectoral exports to Iraq are about 7 million dollars compared to 319 million dollars of total exports. We urge the reader to note the large standard deviation of both export series. This is partly due to the zeros as we have sectors where no trade has taken place in the sample period. In addition, trade in different subsectors varies quite substantially. The effective exchange rate index also shows substantial variation. It has ranged between 85.3 and 162.4 during the period under analysis. The mean economic risk index is 21 with a standard deviation of 6.7. Conflict indices show less variation. Ethnic tensions index varies between 1 and 2.5 with a mean value of 1.6. Mean internal and external conflict indices are 4.2 and 3.9

respectively. However, variation in the external conflict index is larger as reflected by the standard deviation even though the range of variation is not that different.

Sectoral exports from Turkey to Iraq vary significantly in volume, and this suggests that the appropriate estimation technique is the least-squares dummy-variable approach also known as the covariance or the fixed-effects model. This model is usually denoted as:

$$y_{it} = \sum_j \beta_j X_{it,j} + \sum_n \gamma_n D_{it,n} + \varepsilon_{it} \quad (1)$$

where Xs are the explanatory variables and Ds are the dummies for each sector. It is common practice, when dealing with pooled cross-section and time-series data, to also estimate what is known as the error component or random-effects model and compare the relative efficiency of the two models<sup>8</sup> (Hsiao 1989). The random effects model failed to provide an increase in the efficiency of the parameter estimates and therefore is not presented here.

## ***Results***

In Table 3 below, we report the estimates from the fixed-effects regression described in the previous region which illustrate the effects of ethnic tension and conflict on Turkish exports to Iraq.

### **- Insert Table 3: Estimates from Fixed-effects Regression -**

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<sup>8</sup> The reasoning behind the random-effects model is that, since the error term is generally considered to represent the effect of omitted variables, and some of the omitted variables could represent factors peculiar to individuals or time periods or both, the error term should be treated as consisting of three components. Cheng Hsiao, *Analysis of Panel Data* (Cambridge, UK: Cambridge University Press, Paperback edition, 1989).



The effective real exchange rate has a significant positive effect on sectoral exports, that is, as the Turkish Lira appreciates against the trade-weighted basket, imports from Turkey become more attractive to Iraq. Although, this result seems to be counter-intuitive, looking at the trade relationship of Turkey and Iraq more closely may provide some explanation. During the period of the Iran-Iraq war and the international isolation thereafter, Iraq relied on Turkey as a major source of commodities and as a gateway to western resources. Geographical proximity, as well as Turkey declaring herself neutral in the Iran-Iraq war, but politically maintaining a closer relationship to Baghdad than Tehran, are among other reasons. Another motivation which contributed to the increasing volume of exports from Turkey to Iraq was the generous credit terms Turkey offered to Iraq. By the end of the Iran-Iraq war, the Iraqi government found itself increasingly unable and/or unwilling to pay for its purchases from Turkey. By 1988, Iraq owed about 3 billion US \$ to Turkey<sup>9</sup>. In addition, when we observe Turkey's exports to other countries, we find the same positive relationship with the appreciation of Turkish Lira and Turkey's export performance. Hence, we decide that effective exchange rate does not have an overriding effect<sup>10</sup>.

Total exports fail to explain changes in exports to Iraq<sup>11</sup> which suggests that trade with Iraq is subject to different dynamics from trade with the rest of the world. Previous explanations of the special circumstances of trade between Turkey and Iraq also support this finding.

The economic risk index, as well as internal and external conflict, has a significant negative effect on exports to Iraq. As the economic risk rating of Iraq increases (and hence as its economic risk goes down), Turkish exports to Iraq decrease. Similarly, as there is a decline in

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<sup>9</sup> For more detail see Barkey (1989) and Altinkas (2005).

<sup>10</sup> Regression results without the exchange rate variable give us similar results where there is no change in the signs and relative magnitudes of other coefficients.

<sup>11</sup> "Exports" is the only variable which is not statistically significant.

internal and external conflict risk, Turkey seems to sell less to Iraq. This might be due to the crowding out effect of other potential trading partners entering into the Iraqi market as the economic risk in Iraq starts to decline. Turkish exporters, who have experience trading with Iraq in the presence of conflict, instability and economic risk for more than 20 year may lose some of their advantages as the environment becomes more encouraging for less experienced and more risk averse entrants.

However, a decrease in ethnic tension affects exports to Iraq positively. During periods of lower ethnic tension, sectoral exports to Iraq increase by approximately 14 million dollars per year, twice as much as the average sectoral exports to Iraq. Exports will decline by on average 3 million dollars for every point increase in the internal conflict index (indicating a decrease in internal conflict) and 0.86 million dollars for every point increase in the external conflict index (indicating a decrease in internal conflict). The effect of internal and external conflict indices are nevertheless dwarfed by the large positive effect of the ethnic tensions index.

We conclude that during periods of internal and external conflict Turkish exports to Iraq increase. This result confirms previous findings in Oğus and Erbil (2005) where they uncover higher Turkish exports to Iraq during periods of global and regional instability. However, in their analysis they do not account for ethnic conflicts. In this paper, we show that ethnic conflict is the dominating force for Turkish exports to Iraq. When ethnic conflict is also accounted for, we can determine that instability acts as a deterrent to Turkish-Iraqi bilateral trade.

## ***Conclusions and Policy Implications***

There are important policy implications to be drawn from our results. Our analysis shows that during periods of conflict there is an increase in the average exports of Turkey to Iraq. This is not entirely puzzling if one keeps in mind that although conflict makes foreign trade more costly by destabilizing trade routes, trade that Iraq might otherwise have with other trading partners, is diverted to Turkey. One reason that the trade route between Turkey and Iraq is less sensitive to conflict is proximity. There are no other major economies among the bordering countries with the exception of Iran, and unlike Iran, Turkey and Iraq were never engaged in direct military conflict.<sup>12</sup>

Moreover, Turkish exporters to Iraq have operated in an environment of high economic risk for over 20 years. This experience, which could be a barrier to entry for other potential exporters, can be interpreted as a relative advantage to Turkish exporters.

One important result and contribution of this paper is that it uncovers the negative impact of increased ethnic tension on Turkish-Iraqi bilateral trade. Hence, recent escalations in ethnic and sectarian tensions between the Sunni-Shiite sects in Iraq causes special concern. For many years, Iraq was under the ruling of the Ba'ath Party, which claimed to be the stronghold of pan-Arabism and engaged in repeated conflicts with Islamic fundamentalist Iran which had and still has a great influence on the Shiite majority in Iraq. In the presence of a power vacuum, sectarian splits, nationalism, pan-Arabism, fundamentalism and above all the ambition to dominate a region full of valuable, non-renewable energy sources is constantly increasing the ethnic tension in the region. Based on our analysis, although Turkish exports

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<sup>12</sup> Relations have been sour from time to time, however. For a discussion see Ibrahim Al-Marashi, "Middle Eastern Perceptions of US-Turkey Relations After the 2003 Iraq War", *Turkish Policy Quarterly*, Vol.4 , No. 1,

may survive and even benefit from periods of internal and external conflict and high economic risk, they will ultimately suffer losses from the increased ethnic tension in the region. The advantages that they may have utilized as exporters with an ethnic/sectarian and regional connection to business groups in Iraq<sup>13</sup> will quickly turn around and in some cases identify them as targets of ethnic/sectarian violence.

Furthermore, our paper suggests that trade costs of instability, economic risk and ethnic tension in Iraq, need to be evaluated carefully. The losses in the embargo period and the potential losses due to economic strains of instability on the Iraqi economy need to be contrasted with the positive effect of instability on Turkey's exports to Iraq in the pre- and post-embargo period. Conflicts Iraq had at the regional or global level may be helping to strengthen the trade relations between Iraq and Turkey as Turkey has to compete with less of Iraq's trading partners in times of conflict. As the market share of Turkish exports in Iraq increases, Turkey might be gaining the advantage of becoming the largest and most comprehensive trading partner in many sectors in Iraq. These sectors are, and will be, reconstruction over the next decade<sup>14</sup>. However, if the ethnic and sectarian polarization continues to escalate, our study expects the overall impact to be negative on the bilateral trade of Turkey with Iraq.

In the short-run, if it is not clear that Turkey is losing in one of its major export markets in times of instability then, purely from a trade point of view, one might take the political stance

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(Spring 2005) and Michael Rubin, "A Comedy of Errors: American-Turkish Diplomacy and the Iraq War", *Turkish Policy Quarterly*, Vol.4, No.1 (Spring 2005).

<sup>13</sup> See Casella and Rauch (2002) for a detailed analysis of "anonymous market and group ties in international trade".

<sup>14</sup> For a discussion of economic reconstruction of Iraq see Ayad Allawi, "The Democratization Process in Iraq", *Turkish Policy Quarterly*, Vol.4, No. 2, (Summer 2005).

for stabilization in Iraq “from within” rather than “from above”<sup>15</sup>. Stabilization in Iraq from within, although it will take longer, will provide a more solid solution and possibly reduce the ethnic tension in the long-term. It is undisputable that a stable and growing economy in the region is more beneficial to Turkey than a country crippled by war, conflict and ethnic tension. However, our findings suggest that a policy standpoint which allows Iraq enough time to build its own institutions, improve the quality of those which already exist and reach a solution towards sectarian, ethnic co-existence<sup>16</sup> (or at the very least tolerance) is crucial for Turkey. Rubin (2000) claims that “the most effective method to reduce the level of ethnic conflict maybe reliance on increased gains from trade”. Although we principally agree with his stance, in the case of Iraq, the loss of gains from trade alone doesn’t seem to curb ethnic/sectarian tensions. While our focus is different from Easterly, Ritzen and Woolcock (2006) who investigate the effects of social cohesion<sup>17</sup> on growth via institutional quality, our results converge in emphasizing the significance of ethnic and sectarian tensions on the economy and we also believe the importance of building high quality institutions as a solution. Essentially, we agree with Easterly (2001) who states “ethnic diverse nations that wish to endure in peace and prosperity must build good institutions”. Phillips (2005) in “Power-Sharing in Iraq” lays out several practical ground rules about how such institutions could be build and strengthened in Iraq in the presence of the current ethnic and sectarian divide<sup>18</sup>.

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<sup>15</sup> During January-September 2005, the largest increase in exports was experienced with Iraq. Turkish exports increased by 52.9% up to 2 billion dollars. In 2005, Iraq became Turkey’s 7th largest export market. (from the Undersecretariat of the Prime Ministry for Foreign Trade).

<sup>16</sup> In “What to Do in Iraq: A Roundtable,” Foreign Affairs, July/August 2006, Leslie Gelb argues for “a variation of sectarian division — a loose federation of three largely autonomous regions that might help stop Iraq’s slide into civil war while avoiding a complete breakup of the country”.

<sup>17</sup> Including income inequality and ethnic fractionalization.

<sup>18</sup> One of the practical recommendations to Iraq, mentioned on p.31 of the Council Special Reports for the Council of Foreign Relations is “...to give priority to Turkish business and emphasize the purchase of Turkish goods, ...”

Lastly, any additional source for ethnic tension which involves Turkey more directly, such as any kind of conflict with the Kurdish ethnic group in Northern Iraq<sup>19</sup>, is expected to affect Turkish export to Iraq negatively.

The reader should be reminded once more that this is purely from a foreign trade point of view based on an empirical analysis of officially reported foreign trade data from UN sources. It is widely acknowledged that a portion of the trading activity goes unreported at the Turkish-Iraqi border. Hence our analysis is based on conservative estimates of Turkish exports to Iraq.

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<sup>19</sup> A recent crisis was diverted when the Iraqi government asked Turkish firms operating through Northern Iraq to obtain trade permission from Kurdish local authorities in Northern Iraq, but then backed down under heavy pressure from the Turkish government. Turkish authorities also use the Turkmen minority in Northern Iraq, specifically residing in oil-rich Kirkuk, Mosul and Arbil, to maintain some influence in the region by offering defense to the Turkmen, which are claimed to represent the third largest ethnic group in Iraq. See Barkey (2005) for more detail on this subject. There are also contradicting opinions by experts whether a Kurdish declaration of independence or a direct takeover of the oil fields of Kirkuk province would trigger a full-scale invasion of Iraq by Turkey. See Olson (2006) for more detail.

## **REFERENCES:**

- Altinkas, E., 2005, The Iran-Iraq War and Its Effect on Turkey. *Review of International Law and Politics*, 1/4, 137-144.
- Anderton, C. H. and J. R. Carter, 2001, The Impact of War on Trade: An Interrupted Times-Series Study. *Journal of Peace Research*, 38/4, 445-457.
- Barbieri, K. and J.S. Levy, 1999, Sleeping with the Enemy: The Impact of War on Trade. *Journal of Peace Research*, Vol.36/4, 463-479.
- Barkey, H. J., 2005, Turkey and Iraq: The Perils (and Prospects) of Proximity. *Iraq and Its Neighbors Series* United States Institute of Peace, Special Report No. 141.
- Barkey, H.J., 1989, The Silent Victor: Turkey's Role in the Iran-Iraq War, in: E. Karsh, ed., *The Iran Iraq War: Strategic and Political Implications* (London: Macmillan), 133-153.
- Blanchard, C.M., Katzman, K., Migdalovitz, C. Prados, A. and J. Sharp, 2007, Iraq: Regional Perspectives and U.S. Policy. *CRS Report for Congress*, Order Code RL32025.
- Casella, A. and J.E. Rauch, 2002, Anonymous Market and Group ties in International Trade. *Journal of International Economics*, 58, 19-47.
- Easterly, W., 2001, Can Institutions Resolve Ethnic Conflict?. *Economic Development and Cultural Change*, 49(4), 687-706.
- Easterly, W., Ritzen, J. and M. Woolcock, 2006, Social Cohesion, Institutions, and Growth. *Economics & Politics*, 8/2, 103-120.
- Jones, V.C., 2005, Iraq's Trade with the World: Data and Analysis. *CRS Report for Congress*, Order Code RL33793.
- Martin, P., Mayer, T. and M. Thoenig, 2005, Make Trade not War?. *Centre for Economic Policy Research Discussion Papers*, No.5218.
- Morrow, J. D., 1999, How Could Trade Affect Conflict?. *Journal of Peace Research*, 36/4, 481-489.

Nordhaus, W.D., 2002, The Economic Consequences of a War with Iraq. *NBER Working Paper Series*, No.9361.

Ogus, A. and C. Erbil, 2005, The Effect of Instability on Bilateral Trade with Iraq. *Turkish Policy Quarterly*, 4/4, 169-177.

Olson, R., 2006, Relations among Turkey, Iraq, Kurdistan-Iraq, the Wider Middle East, and Iran. *Mediterranean Quarterly* 17/4, 13-45.

Phillips, D.L.,2005, Power-Sharing in Iraq. *Council Special Reports No.6*, Council of Foreign Relations.

Polachek, S.W., 1992, Conflict and Trade: An Economics Approach to Political International Interactions in: W. Isard and C. H. Anderson, eds., *Economics of Arms Reduction and the Peace Process*, (New York: Elsevier Science) 89-120.

Rubin, P., H., 2000, Does Ethnic Conflict Pay?. *Politics and the Life Sciences*, 10/1, 59-68.

Wallsten, S. and K. Kosec, 2005, The Economic Costs of the War in Iraq. *AEI-Brookings Joint Center for Regulatory Studies Working Paper Series*, No.05-19.



**TABLES AND FIGURES:****Table 1: 2005 Export Figures**

	<b>Turkish Exports (US \$)</b>	<b>Share in Total Exports</b>	<b>Exports to Iraq (US \$)</b>	<b>Share in Total Exports to Iraq</b>
<b>Food (0)</b>	\$6.494.610.543	8.9%	\$494.193.411	18.0%
<b>Beverages and Tobacco (1)</b>	\$736.444.873	1.0%	\$56.255.879	2.0%
<b>Crude materials (2)</b>	\$1.325.492.683	1.8%	\$5.792.086	0.2%
<b>Minerals (3)</b>	\$2.645.772.142	3.6%	\$538.237.376	19.6%
<b>Animal and vegetable oils (4)</b>	\$405.299.676	0.6%	\$35.736.389	1.3%
<b>Chemicals (5)</b>	\$2.659.314.462	3.6%	\$143.497.150	5.2%
<b>Manufacturing (6)</b>	\$20.343.533.106	27.7%	\$796.711.782	29.0%
<b>Machinery and Transport (7)</b>	\$21.406.750.108	29.2%	\$517.213.931	18.8%
<b>Misc. Manuf. (8)</b>	\$16.333.858.766	22.3%	\$161.093.447	5.9%
<b>Other (9)</b>	\$988.807.731	1.3%	\$1.348.959	0.0%

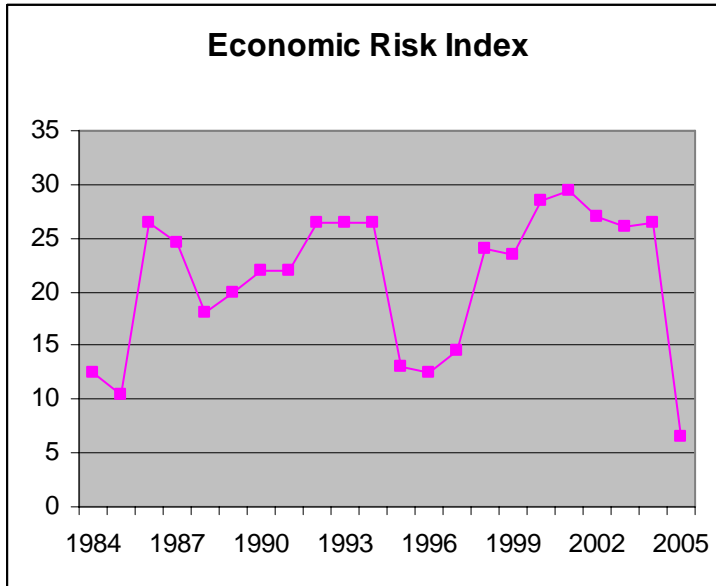
**Table 2: Descriptive Statistics**

	Turkish Exports	Xs to Iraq	Xrate	Economic Risk	Ethnic Tension	Internal Conflict	External Conflict
<b>Average</b>	319,226,716	6,873,040	119	21	1.6	4.2	3.9
<b>Std Dev</b>	921,235,912	21,808,260	16	6.7	0.6	1.8	2.9
<b>Min</b>	0	0	85.3	6.5	1	2	0
<b>Max</b>	11,382,342,764	278,642,560	162.4	29.5	2.5	9.5	8

**Table 3: Estimates from Fixed-effects Regression**

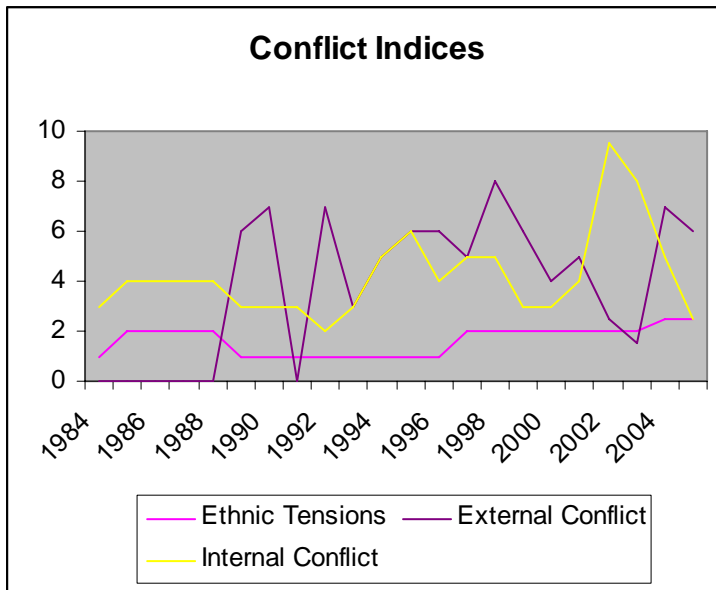
	<b>Coefficient</b>	<b>Std. Error</b>	<b>p-value</b>
<b>Exchange rate</b>	221122	61092	0,00
<b>Exports</b>	0,0007	0,0015	0,65
<b>Economic Risk Index</b>	-435607	165262	0,01
<b>Ethnic Tensions</b>	14112206	2058364	0,00
<b>External Conflict</b>	-860236	375427	0,02
<b>Internal Conflict</b>	-3075242	779227	0,00
<b>Regression F</b>	9,8166		

**Figure 1: Economic Risk Index<sup>20</sup>**



<sup>20</sup> Note that, overall, an economic risk rating of 0.0% to 24.5% indicates a very high risk; 25.0% to 29.9% high risk; 30.0% to 34.9% moderate risk; 35.0% to 39.9% low risk; and 40.0% or more very low risk.

**Figure 2: Conflict and Ethnic Tension Indices<sup>21</sup>**



<sup>21</sup> Note that, in every case the lower the risk point total, the higher the risk, and the higher the risk point total the lower the risk.

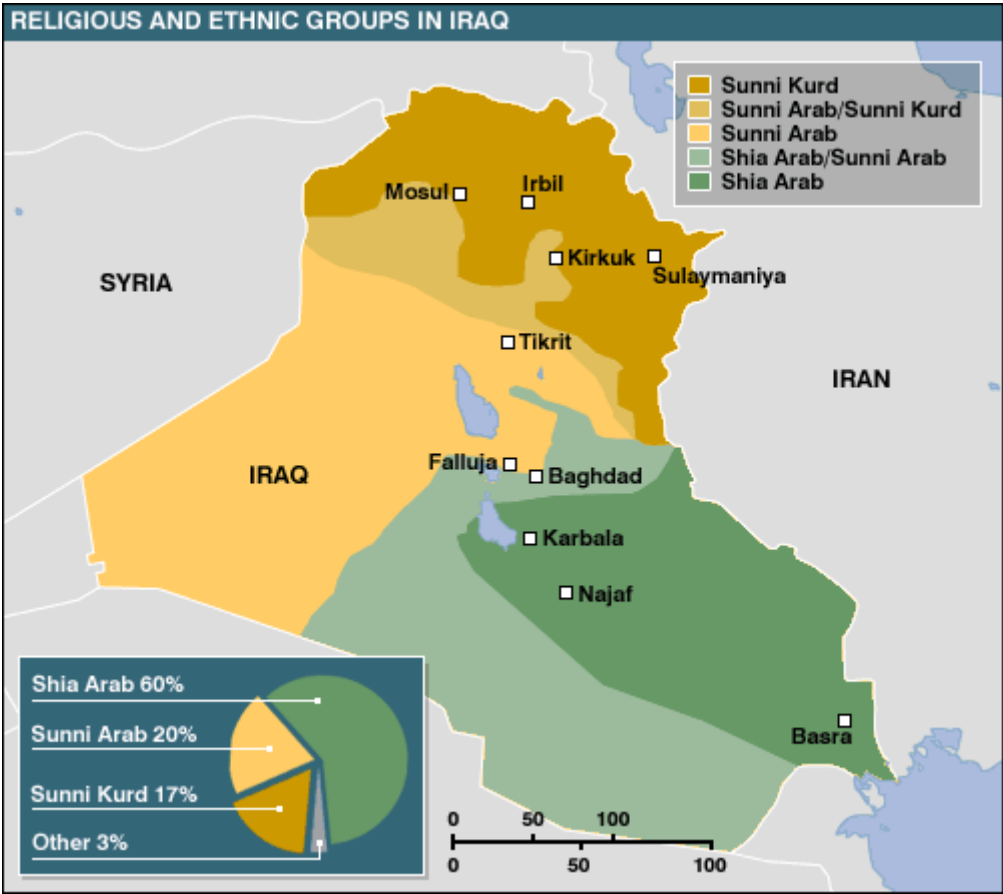
## APPENDIX:

**Table A1: Sectoral Results**

<b>Coefficient</b>	<b>All</b>		<b>Crude</b>		<b>Food</b>		<b>Chemicals</b>		<b>Manuf</b>		<b>Misc Manuf</b>	
<b>Turkish Xs</b>	0.0007 (0.0015)		0.019 (0.022)		-0.0004 (0.0081)		0.0155 (0.0086)	*	0.0031 (0.0055)		0.003 (0.0023)	
<b>Xrate</b>	221122 (35889)	***	383583 (94974)	***	342917 (127252)	***	-30949 (33108)		267425 (163482)		393908 (141880)	***
Economic Risk	-435607 (165262)	***	-54742 (241775)		-686281 (329541)	**	-146960 (94755)		-393440 (451569)		-181380 (383711)	
Ethnic Tensions	14112206 (2058364)	***	4605522 (3017596)		3724468 (4355286)		1391230 (1226817)		24146996 (5511287)	***	19015887 (4727311)	***
External Conflict	-860236 (375427)	**	-589117 (608036)		-1364247 (785037)	*	-458948 (218337)	*	-366679 (1019960)		-89027 (887321)	
Internal Conflict	-3075242 (779227)	***	1139311 (1364714)		-2286694 (1424717)		-699209 (471675)		-4425121 (2257218)	*	-3106298 (1886871)	
<b>Regression F</b>	9.8166	***	4.7414		6.1751	***	2.1104	**	9.9254	***	4.4361	***
<b>Number of Observations</b>	783		58		149		66		159		171	

Notes: The explanation that we provided for the overall economy applies across all the sectors. \*\*\*: significant at <1% level of confidence, \*\*: significant at 1%-5% level of confidence, \*: significant at 5%-10% level of confidence.

**Figure A.1: Ethnic and Sectarian Divide in Iraq**



From BBC.com