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Foreign Direct Investment and Private Sector External Financing: Do Credit Ratings Matter?

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Abstract

This study investigates the relationship between inward foreign direct investment (FDI) and private sector external financing over the last decade with regard to 61 developing countries, 30 of them enjoying "investment" ratings and the remainder having "non – investment" ratings. Our analysis employing fixed effect two stage least squares (FE-2SLS) technique with simultaneous-equation for panel data show that increasing private sector external financing negatively affects FDI between 1999 and 2010. Yet, private sector external financing is not directly affected by FDI. There is not a statistically significant relationship. Over the last decade, the private sector in developing countries has fulfilled its external financing demands without being greatly affected by any changes in FDI. These two findings verify the increasing credibility of developing countries, regardless of having non – investment credit rating.

Keywords: *Foreign direct investment, private sector external financing, fixed effect two stage least squares (FE-2SLS), credit rating.*

Introduction

FDI is one of the healthiest forms of capital inflow to developing countries. It positively affects the economic development of countries via the narrowing of the gap between saving and investment. The rationale

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behind the increased efforts of countries in attempting to attract higher levels of FDI stems from the belief that FDI exerts several positive effects on sustainable growth (Alfaro et al., 2004). Compared with short – term capital inflows (short – term credits, portfolio investments, etc.), FDI is much more stable and remains immune to cyclical changes in the economic environment (Hayakawa et al., 2011). While FDI contributes positively to growth, it also relieves the financing requirement considering the fact that saving and investment imbalance is severe in many developing countries. Yet, the need for foreign financing and the level of FDI may increase in size simultaneously. The reason for this may be as follows: i) FDI is not sufficient to accommodate the saving gap, and/or ii) external financing proceeds may be used for any purpose other than investment expenditures, e.g. financing budget deficit, reimbursement of foreign debt etc.

The private sector is known to play a pivotal role in the development endeavors of developing countries. Yet, the financing needs of the private sector in developing countries are so huge that they need to finance their needs from international capital markets, given that domestic markets in these countries are not so developed. Therefore, the interaction between FDI and private sector foreign debt provide a deep insight when examining the dynamics of private sector foreign financing in developing countries.

There is a common agreement in the existing literature that developing countries have started to attract capital in greater volumes since for many decades. The surge in capital inflows to developing countries was attributed initially to domestic developments, such as sound policies and stronger economic performance, implying both the profitability of such funds in the recipient country and the positive judgment of investors toward the developing world. Yet, capital inflows to developing countries have provided a mixed outlook since the last decade. On the one hand, ample global liquidity during the early years of the last decade has paved the way to rising equity investment in developing countries both in the form of portfolio investment or in FDI format. On the other hand, during the early years of global crisis, uncertainties surrounding the global economic outlook have dampened capital inflows to developing countries. During this period there also occurred a sharp contraction in FDI in the aftermath of the collapse of Lehman Brothers. Yet, the relative resilience of developing countries, even after the collapse of Lehman Brothers, has attracted international capital due to their high growth potential and rising credibility, which is reflected in their credit ratings.

This recent trend is unprecedented in a sense that many developing countries have shown great resilience to the financial crisis in contrast to many developed countries. It is highly likely that the FDI inflow to developing countries will catch up with pre-crisis levels. Recent studies that have investigated FDI in its various aspects did not focus on the recent transformation in the dynamics of FDI over the course of the last decade. There are a few but increasing number of studies that concentrate on institutional factors that influence the inflows of FDI. Lee and Rajan (2009) find that APEC member countries with lower country risk are likely to attract more FDI. In particular, they find the most important component of any country risk is the political risk. Ali et al. (2010) also find that institutions are a robust predictor of FDI and that property rights security is the most important aspect of institutions in determining FDI flows. Specifically, they find that institutions exert a significant impact on FDI. Therefore, while exploring the dynamics of FDI in developing countries, the sovereign credibility should also be taken into consideration. Hayakawa et al. (2011) investigate the effect of various components of political and financial risk on FDI. Allegedly, their study is the first to comprehensively investigate the various risk factors on FDI. Trying to look ahead, I investigate the relationship between FDI and private sector external financing by controlling for various risk factors with also taking into account the investment grade and non – investment grade classification of developing countries. In doing so, I study whether external financing may emanate signals that create sufficient positive/negative effects in the recipient economy so as to attract more FDI. My study handles the issue by segregating the countries into two categories: investment grade and non investment grade.

The remainder of this paper is designed as follows: Section 2 briefly discusses recent literature concerning FDI and external financing. Section 3 describes the data and methodology. Section 4 focuses on the findings of the empirical models. Section 5 concludes as usual.

Brief Literature

There are various strands of studies in literature that investigate FDI in developing countries. Broadly speaking, the literature related with our study investigates the determinants of FDI and external financing in developing countries. This study mainly relies on this literature which sheds light on country-specific factors affecting FDI and private sector foreign external financing.

To some extent the capital inflows to developing countries depict a contradictory vision. In his seminal work, Lucas (1990) argued that it was a puzzle that more capital does not flow from rich countries to poor countries, in spite of massive differences in physical rates of return in favor of capital poor countries. Lucas (1990) argued that the scarcity of capital flows to poor countries must be rooted in fundamental economic forces, such as externalities in human capital formation favoring further investment in already capital-rich countries. Reinhart et al. (2003) approach the issue from a different perspective. Reinhart et al. (2003) mainly argue that the capital flow to developing countries is mainly related with the track record of governments' debt payment. The *serial default* of developing countries is the common concern of international investors. Many developing countries that have been experiencing external debt problems have defaulted several times in their history.[1] Developing countries who have external debt problems typically show some other weaknesses as well, including high inflation, poor macroeconomic policies, the weak rule of law etc. Arguably, the history of repeated defaults and other economic weaknesses make developing countries less stable and more vulnerable to capital outflow.

From this perspective, the key explanation to the puzzle of Lucas (1990) of why so little capital flows to developing countries is that they do not repay their debts (Reinhart et al., 2003). In a similar vein, the empirical study of Alfaro et al. (2008) shows that during the period 1970 – 2000 low institutional quality constitutes the leading explanation for Lucas' (1990) puzzle. Their findings suggest that policies aimed at strengthening institutional capacity should be at the top of the priority list of policymakers seeking to increase capital inflows to developing countries. Their results indicate that FDI might be a channel through which institutions affect long-run development. The quality of institutions as an important determinant of FDI activity, particularly for less-developed countries is well defined by Bloningen (2005). In the same vein, Busse and Hefeker (2007) study the effect of political risk and quality of institutions on FDI. They both argue that poor legal protection of assets increases the chance of expropriation of a firm's assets and makes investment less likely. Doing business in a low-quality country becomes more costly and thereby reduces attractiveness for FDI inflow.

Against this backdrop, Alfaro et al. (2004) examine the various links between FDI, financial markets and growth. They argue that FDI constitutes a large portion of total capital flows in developing countries. This fact, they contend, is attributable to synchronous policy shift toward attracting more foreign capital. Arguably, this policy shift has enhanced the country specific factors to attract FDI (Taylor and Sarno, 1997).

In the past decade, the main factor encouraging capital flows to developing countries was continued low interest rates in the developed world. For instance, expansionary monetary policy in the United States has continued over the last decade. Lower interest rates in developed countries attracted investors to the high returns offered by developing countries in Asia and Latin America. Given the high gross external debt burden of many of these countries, low interest rates also turned out to improve their credit-worthiness and to reduce their default risk.

A low-interest rate environment, however, has not been the sole factor in increasing FDI to developing countries. A low-interest environment together with many reforms that improve business environment and domestic developments, such as sound policies and stronger economic performance, have spurred long – term investments, such as FDI, in developing countries. Interestingly, Wilson et al. (2010) find that private-sector capital flows, including FDI, have not been 'return chasing'. This argument may be supported with an explanation of the very argument of this study, that recent FDI seeks a well-balanced risk and return. Good economic performance, high institutional capacity, low political risk etc. are the merits investors also deeply look for.[2]

Data and Methodology

Data

This study investigates the relationship between FDI and private sector external financing, utilizing the panel data technique during 1999-2010. It attempts to find out whether the credit rating classification of countries has an effect on FDI as well. Models also control for the variables that are deemed to be influential on FDI, i.e. private sector debt stock, growth rate, openness, general public budget balance and official foreign currency reserves.[3] Since we deem the previous years' realizations as influential determinants on both FDI and private sector external financing, we included them into our analysis.[4] Therefore, one-year lags of control variables are included in these model specifications. The countries in our sample are quite heterogeneous in terms of the size of their economies. Therefore, all variables excluding lagged growth rates were normalized by the GDP of the belonging country. The variables that we control for in the models mainly proxy the countries' ability to repay of its foreign liabilities (ability to repay). These variables give an indication of the long – term credit outlook of a country. Unlike short-term investors, FDI investors are more sensitive to the long-term vision of a country.

As the amount of external debt increases relative to the borrowing country's GDP, the countries' ability to repay will decline and local economies will be much more prone to deterioration. Therefore, firms will find the countries with higher external debt less attractive to invest in. Countries' ability to repay will further deteriorate if they suffer severe budget deficits. This will exacerbate external financing conditions and will pose higher risk to their operations. Openness shows the volume of foreign trade activities. Integration of a country with the world economy through trade and investment is an important channel for the transfer of technology, skills, and management, as well as a powerful force for greater competition in local markets. As openness increases, the countries in question will be in turn more likely to repay their external debts. In the same vein, the countries that have higher official reserves carry less risk, since official reserves will function as a financial buffer. The countries that have higher growth capacity will attract FDI, since profit potential is higher in those countries. The annual percentage change in nominal GDP is generally a significant variable, since a decline in nominal GDP that results from the combination of weak or negative growth and falling prices, may represent a signal of extreme distress. In such circumstances, consumers and businesses may postpone purchases, expecting goods to be cheaper in the future, and the real burden of household and corporate debt will increase. This, in turn, can exert stress on the financial system and accentuate a deflationary spiral.

The variables that affect the ability to repay of the countries are not limited to those ones that we have a level of control over. There are many other factors that have an impact on countries' ability to repay, e.g. inflation, political risk, current account balance, exchange rate etc. Yet, we control for credit rating (investment – grade versus non-investment grade) to capture the effect of missed variables to some extent.

Credit ratings are expected to predict countries' ability to repay. In our analysis, we have categorized countries into two categories: investment grade and non – investment grade countries. Although this discrimination is quite broad, it provides quite useful insight as to whether sovereign credibility is an issue for FDI inflows or not.[5]

Both the country ratings and the whole data used in the analysis are obtained from Moody's. According to Moody's rating classification, there are twenty possible credit ratings for a country: Aaa, Aa1, Aa2, Aa3, A1, A2, A3, Baa1, Baa2, Baa3, Ba1, Ba2, Ba3, B1, B2, B3, Caa1, Caa2, Caa3, and Ca; Aaa being the highest rank that a country can get and Ca, the lowest. A rating between Aaa and Baa3 signals a good investment environment for a country whereas any rating between Ba1 and Ca is speculative.

Table 1 illustrates the whole country set by rating. There is a set balance across countries in terms of investment grade and non – investment grade separation. In our whole country sample, 30 of them constitute investment-grade countries with the remainder being non – investment grade countries. In our analysis we have utilized investment and non – investment grade separation. Allegedly, this definition serves indirectly as a signal as to whether "to invest" or "not to invest" for FDI investors too. OECD (2007) asserts that higher credit ratings signal greater stability and investor confidence to stimulate FDI.

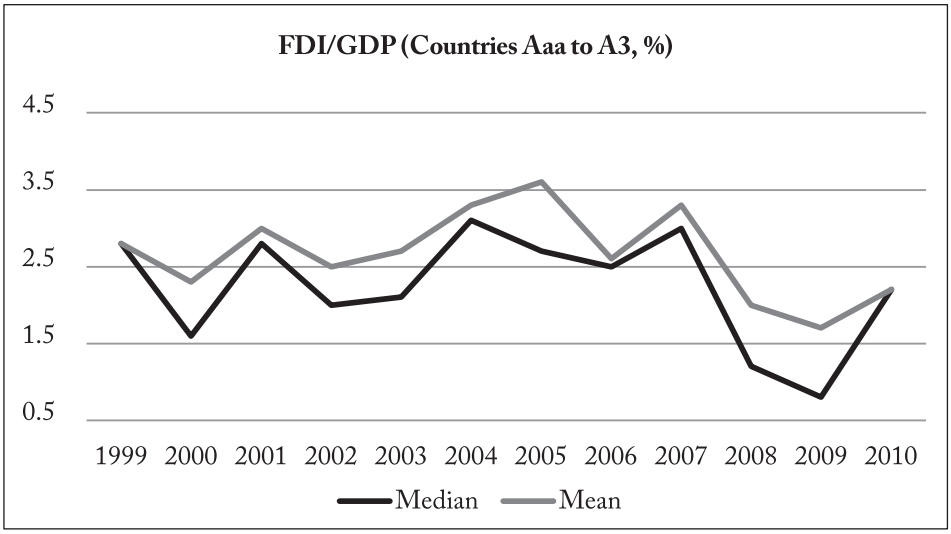
Table 1. Countries by Rating

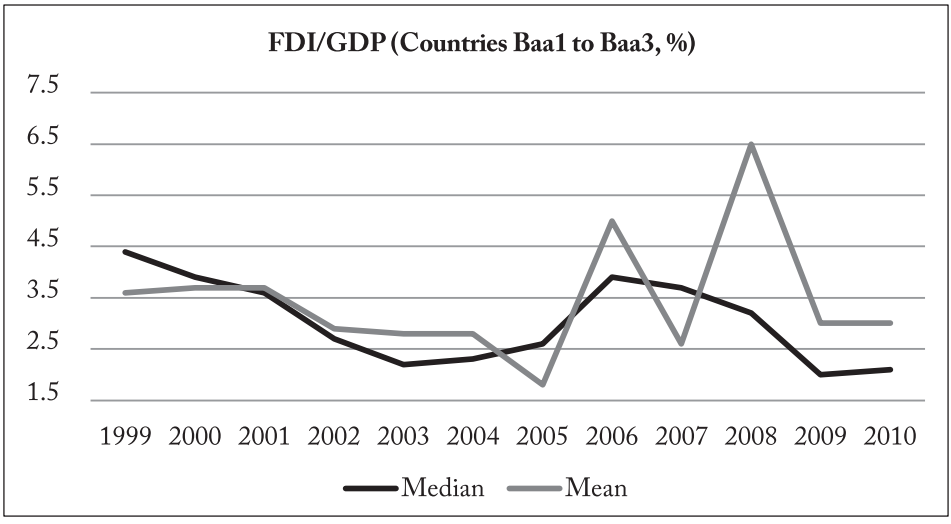
(Aaa to A3)	**(Baa1 to Baa3)**	**(Ba1 to Ba3)**	**(B1 to C)**
Bahamas	Barbados	Armenia	Albania
Bahrain	Brazil	Azerbaijan	Argentina
Bermuda	Bulgaria	Colombia	Belarus
Botswana	Croatia	Costa Rica	Belize
Chile	Hungary	El Salvador	Bolivia
Czech Republic	Iceland	Guatemala	Cambodia
Estonia	India	Indonesia	Dominican Republic
Israel	Kazakhstan	Morocco	Ecuador
Kuwait	Latvia	Panama	Fiji Islands
Malaysia	Lithuania	Peru	Honduras
Oman	Mauritius	Turkey	Jamaica
Poland	Mexico	Uruguay	Pakistan
United Arab Emirates	Romania	Vietnam	Papua New Guinea
	Russia		Paraguay
	Thailand		St. Vincent and the Grenadines
	Trinidad & Tobago		Suriname
	Tunisia		Ukraine
			Venezuela

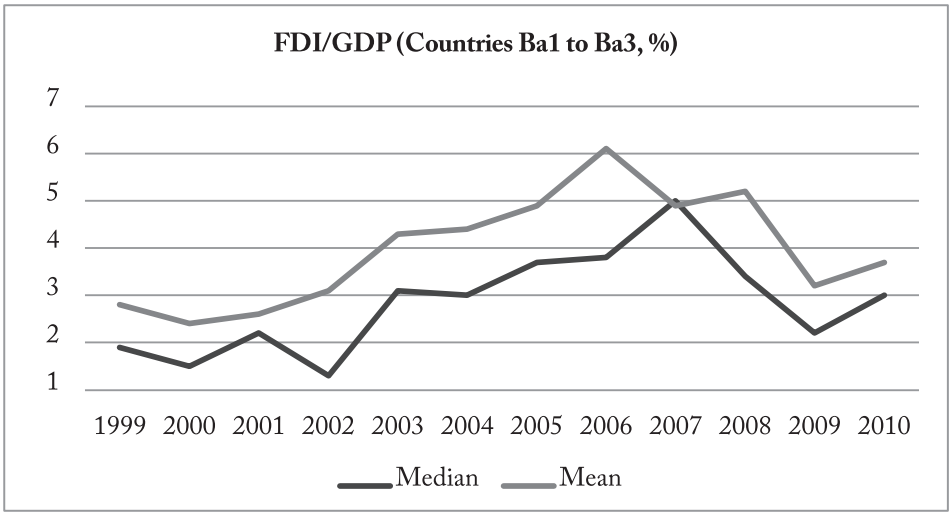
Figure 1 presents the FDI/GDP by rating classification during 1999-2010. A common generalization on charts is that just before the collapse of Lehman Brothers there has been an increasing trend in both country groups. The increasing trend is more visible in non – investment grade countries (the last two charts). For instance in the Ba1 to Ba3 country group, on average terms, the FDI/GDP has risen from the level of 3% to 6%. This is also valid for B1 to C country group. Yet, FDI/GDP has stayed almost stable even before the collapse of Lehman Brothers in the investment- grade country group.

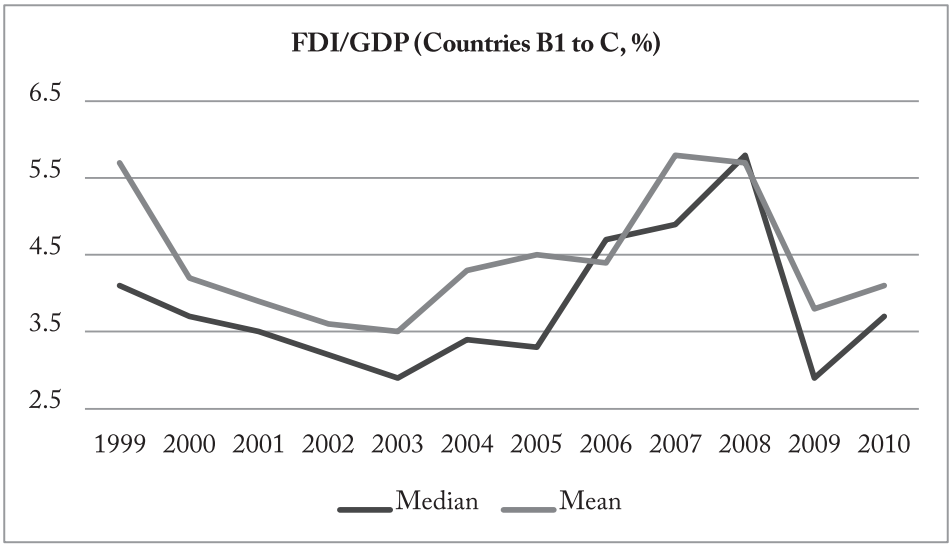
Another thing that is worth underlining is that in every country group FDI/GDP have slumped. This is visible both in non – investment grade and investment-grade countries. Therefore investment-grade countries were not immune to the destructive effects of the collapse of Lehman Brothers as the general economic outlook has deteriorated across the globe.

Figure 1. FDI/GDP by Rating







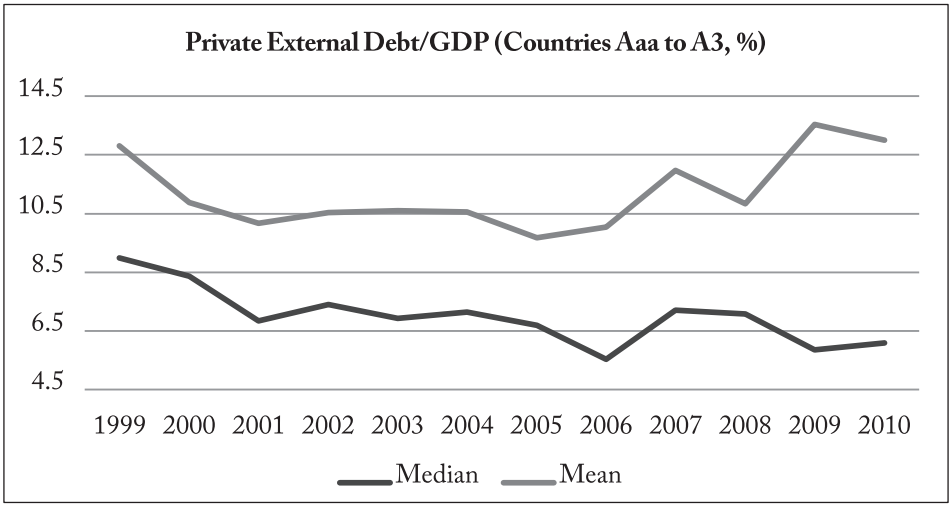


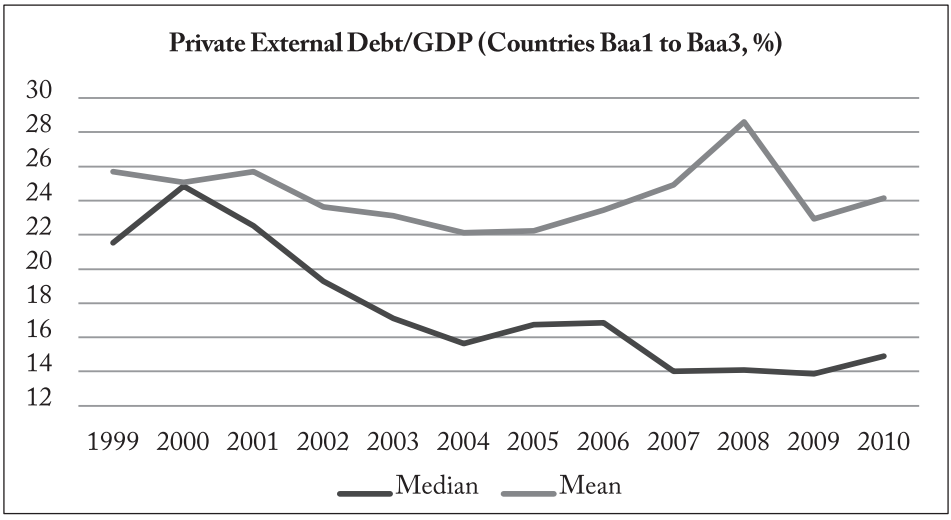
Source: Moody's and author's calculations

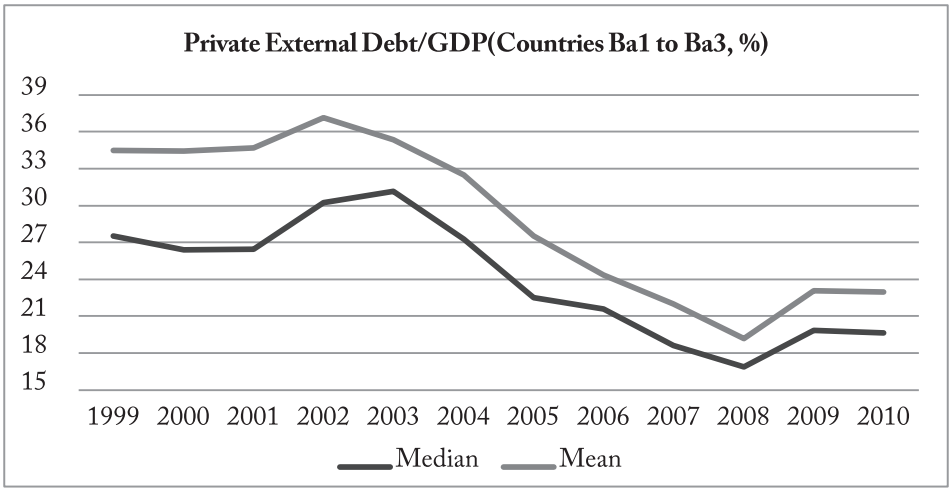
Figure 2 presents the private sector external debt stock/GDP by rating classification during 1999-2010. Private sector external debt stock/GDP shows an interesting case. As can be followed from Figure 2, the ratio for investment grade countries(in first two charts), in average terms, remained almost stable, even displaying an increasing trend in Aaa to A3 country group. The reverse outlook is valid for the non – investment grade country group. There has been a tremendous slump in private sector external debt/ GDP in non – investment grade countries starting from 2002 through to

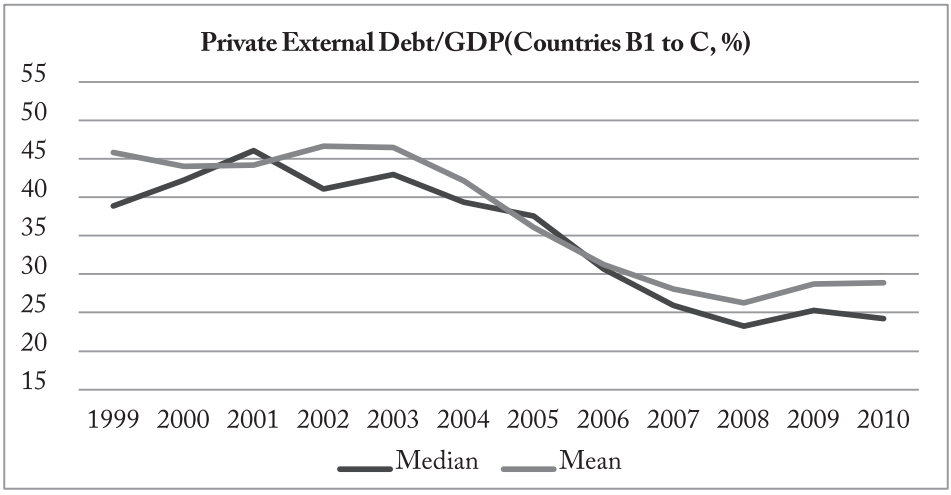
2008 The ratio starts to increase from 2008. The private sector external debt stock/GDP has decreased from the level of 36% to a level of 21% in the Ba1 to Ba3 country group during 2002 – 2008. By the same token, the levels come down from levels of 45% levels to 30% during the same period. This may be induced from both FDI/GDP increase in that period and may prove to be delevaraging. As mentioned above, there was an upward trend in non – investment grade countries in terms of FDI/GDP up until 2008 which may well have contributed to private sector external financing.

Figure 2. Private External Debt/GDP by Rating









Source: Moody's and authors' calculations

Method

Equation (1) and equation (2) are the equations we estimate to assess the impact of private sector external financing on FDI. We adopt a system equation approach. That is to say, both equations are estimated simultaneously.

$$FDI_{it} = \alpha + \beta EXT\_FIN_{it} + \sum_{n=1}^{5} \delta_n CONTROL_{nit-1} + \phi RATING_{it} + u_i + u_t + \varepsilon_{it} \quad (1)$$

$$EXT\_FIN_{it} = \alpha + \beta FDI_{it} + \sum_{n=1}^{5} \delta_n CONTROL_{nit-1} + \phi RATING_{it} + u_i + u_t + \varepsilon_{it} \quad (2)$$

where $i = \{1,...,61\}$ are the whole countries and $i = \{1999,...,2010\}$ represents the time dimension of yearly data. EXT_FIN denotes private sector external financing and CONTROL denotes private sector external debt stock, growth rate, openness, general government budget balance, official foreign reserves. RATING is a dummy variable for the country rating. It takes 1 if the country has an investment grade and 0 if the country has a non-investment grade.

In both equations, one-year lagged values of control variables are taken into account. We think that it is the most appropriate way to check for the mentioned variables as FDI investors consider the realizations of the previous year before reaching a decision on investment. We have also normalized all variables, other than growth rate, with the GDP figures of the country in question. Thus, all variables should be interpreted as *per $ GDP*.

In our estimations, we have utilized standard fixed effects (FE) with country and time fixed effects. u_i and u_t represent the country and time dummies respectively and e_{it} represents the error term. As suggested by Baltagi (1981) we have utilized the simultaneous equation solution due to the reciprocity of the causal relationship between external financing and FDI. Otherwise, a standard FE estimation with ordinary least squares (OLS) would be biased and inconsistent. Aysan et al. (2007) have also investigated a similar problem with the same approach. To incorporate the two-way causality, Aysan et al. (2007) created a system of equations to estimate the share of private investment in GDP and the quality of governance institutions simultaneously.

Due to the reciprocity of the mentioned causal relationship, we have structured our study over two model specifications. The first specification takes FDI as the dependent variable and foreign external financing as the explanatory variable. The second model takes external financing as the dependent variable and FDI as the explanatory variable. All control variables are the same in both models. In all models, parameters are estimated through the fixed effect two staged least squares (FE-2SLS).[7]

Table 2. Unit Root Tests

LLC		IMPS	ADF	PP
FDI	-7,26***	-3,85***	194,16***	308,08***
Private Sector External Debt Stock	2,29***	8,03	63,64	54,06
Private Sector External Financing	-16,13***	-9,24***	324,53***	310,22***
Growth	-13,20***	-8,40***	298,53***	297,43***
Openness	-6,78***	-2,37***	166,49***	172,39***
General government budget balance	-7,40***	-4,28***	199,58***	176,36***
Official foreign reserves	3,51	9,61	60,15	79,14
Note: "***" denote 1% level of significance.				

To be able to assess the differences in the rating structures of countries with different development levels, the data are divided into two sub-samples of investment grade and non – investment grade developing countries. Therefore, in addition to estimating the models on a pooled sample of all developing countries, separate models for investment grade and non – investment grade developing countries are also estimated. To abstain from multi-collinearity, both equation (1) and (2) are also estimated without including the private sector external debt stock variable.

The Results

Simultaneous panel data models are estimated for the whole sample as well as separately for the investment grade and non – investment grade developing countries. Disaggregating the data by use of the credit rating differentiation will allow us to observe the differing effects of the explanatory variables as well as to assess the relative effect of the credit ratings on FDI.

In the first model specification, the signs of estimated coefficients for the explanatory variable and control variables are generally as expected and, in most cases, values are statistically significant. Estimation results, except for the first model in the pooled estimation, suggest that, holding everything else constant, there is a negative relation between FDI and private sector external financing/GDP. The parameter estimates for control variables are also in line with our expectation. For instance, the parameter estimate for lagged private sector debt stock is negative, showing that

higher debt stock is perceived to be a risk factor among investors. However, this is valid only for the investment grade country group. In the non – investment and pooled country group, the parameter estimate is negative and statistically significant. This indicates that even when private sector debt stock for the non – investment grade country group increases, these countries are eligible to attract FDI. The parameter estimate for the growth variable is statistically significant only in investment grade countries and has a positive value, implying rising growth rates do have a positive effect on FDI in the investment grade country group. In the pooled estimation group and non – investment grade group, the sign of parameter estimates are negative, though they are statistically insignificant. Openness has a positive effect on FDI inflows. The parameter estimate is significant. The increasing capacity of foreign trade attracts FDI. General public budget balance, however, has a negative effect on the FDI, as expected. Budget deficit, being a problem for many developing countries, has a negative effect on FDI. This relation is found in the pooled estimate group and investment grade group. Yet, in the non – investment country group, a positive sign is found with a 5% statistical significance. The official foreign currency reserves function as insurance for foreign liabilities, *i.e.* a higher volume of foreign reserves attracts foreign investors. Therefore the parameter estimate for official foreign currency reserves is expected to have a positive effect. The parameter estimate is found to be positive with a 1% significance. Interestingly, our findings suggest that higher credit ratings of countries have a negative effect on FDI. There may be two explanations for this inverse relationship. First, FDI/GDP is lower in the investment grade group than in the non – investment grade group. Second, credit ratings may not be an influential factor among investors in determining the level of the FDI of a country. And for the last ten years, the FDI/GDP is found to be negatively affiliated with increasing credit rating. Some developing countries that have a positive growth capacity, sound business environment etc. may have lower/non – investment credit rating. Gultekin-Karakas et al. (2011) argue that credit ratings may not be a so fair representation of sovereign credit risk and may even be biased toward developed countries.

Table 3. Estimation Results for FDI

	Pooled Estimation (61 Countries)		Investment Grade Countries (30 Countries)		Non – Investment Grade Countries	
Private Sector External Financing	0,05017	-0,15570***	-0,21074***	-0,25611***	-0,00349	-0,08189
Private Sector External Debt Stock	0,02502***		-0,02304**		0,03176***	
Growth	-0,00036	-0,00098***	0,00104***	0,00078***	-0,00037	-0,00063
Openness	0,00026***	0,00019***	0,00010***	0,00032***	0,00025***	0,00010**
General government budget balance	-0,00051***	-0,00131***	-0,00148***	-0,00111***	0,00138**	0,00164**
Official foreign reserves	0,03251***	0,02353***	0,01774**	0,04905***	0,05805**	0,02076
Rating	-0,00802***	-0,00808***				

Note: "***" and "**" denote 1% and 5% level of significance. For the sake of space, detailed results for country and time effects are not presented here but are available upon request. All control variables, other than growth rate, are normalized with the GDP figures of the country in question. Thus, all control variables, other than growth rate, should be interpreted as per $ GDP. Additionally, control variables (private sector external debt stock, growth rate, openness, general government budget balance, official foreign reserves) are one year lags. The second column in each estimation group, i.e. pooled estimation, investment grade countries and non-investment grade countries, are the estimations without private sector external debt stock. Rating dummy takes 1 if the country have investment grade, 0 if the country have non – investment grade.

In the second model specification, the signs of estimated coefficients for the explanatory variable and control variables are not statistically significant, as expected. These findings reveal that external financing does not directly influence FDI in our country sample. Although country credibility and FDI inflows pose a downward trend, this may not affect the motivation of private sector external financing. This is plausible in the sense that, while many developing countries have succeeded in finding financing abroad even during bad times as in the last decade, the cost of funding has proved costly.

Table 4. Estimation Results for Private Sector External Financing

	Pooled Estimation (61 Countries)		Investment Grade Countries (30 Countries)		Non – Investment Grade Countries	
FDI	0,00757	0,00062	-0,00607	-0,00669	0,00239	0,00134
Private Sector External Debt Stock	-0,06508		-0,09323		-0,34062	
Growth	-0,00356	-0,00213	-0,00193	-0,00158	-0,00311	-0,00217
Openness	-0,00002	0,00003	0,00014	0,00013	-0,00044	-0,00054
General government budget balance	0,00054	-0,00027	-0,00148	-0,00114	-0,00663	-0,00788
Official foreign reserves	-0,03397	-0,03611	-0,00896	-0,00717	-0,31112	-0,10143
Rating	0,00323	0,01173				

Note: All the estimated coefficients are statistically insignificant. For the sake of the space detailed results for country and time effects are not presented here but are available upon request. All control variables, other than growth rate, are normalized with the GDP figures of the country in question. Thus, all control variables, other than growth rate, should be interpreted as per $ GDP. Additionally, control variables (private sector external debt stock, growth rate, openness, general government budget balance, official foreign reserves) are one year lags. The second column in each estimation groups, i.e. pooled estimation, investment grade countries and non-investment grade countries, are the estimations without private sector external debt stock. Rating dummy takes 1 if the country have investment grade, 0 if the country have non – investment grade.

Concluding Remarks

In this study, we tried to shed light on the financing behavior of the private sector in developing countries. The basic finding of the paper is that increasing external financing in developing countries distracts FDI inflow. It is expected that investment-grade countries would be the most advantageous group of developing countries in terms of attracting FDI. Yet, our analysis suggests that being an investment -grade country actually reduces the amount of FDI. This is plausible in the sense that FDI per GDP is lower in investment grade groups than in non – investment grade groups. Second, credit rating may not be an influential factor in determining the FDI motivation. This is due to the fact that some developing countries that have good growth capacity, sound business environment etc. may have lower/non – investment credit rating. Last but not least, private sector external financing is not influenced by the variation in FDI, maybe due to the ability of developing countries to reach external funding sources even during financial crisis in spite of high costs.

Endnotes

1 Reinhart et al. (2003) presents a brief record of developing countries' default history.

2 Sovereign credit ratings that are widely perceived as an overall risk measurement for countries monitor all these factors influencing the debt-payment capacity of a country. Therefore, sovereign credit ratings are incorporated into our analysis in the next section

3 The existing literature pays particular attention to the determinants of FDI and shows that government size, political stability, and openness play an important role (Edwards 1991, Wei and Wu 2002). In terms of the determinants of bilateral equity flows and external debt some studies find support for theories emphasizing imperfections in international credit markets (Lane 2004, Portes and Rey 2005). Our models in the next section, particularly investigating FDI and external financing, control for similar variables in the mentioned literature.

4 Investors monitor the recipient country with their previous year's realizations. So the lag values are influential in their decision – making process.

5 In a similar fashion Reinhart et al. 2003, use the Institutional Investor (IIR) ratings, which are compiled twice a year, as a determinant of debt intolerance. The ratings grade each country on a scale going from zero to 100, with a rating of 100 given to countries which are perceived as having the lowest chance of defaulting on its government debt obligations. Hence, one may construct the variable 100 minus IIR as a proxy for default risk.

6 See Guillen 2010, for the similar data used in their analysis investigating the determinants of successful re-access of developing countries to international capital markets.

7 We have estimated the system by using FE-3SLS. We have also tested random effects both for two stage and three stage estimations. We have obtained roughly the same results and we report only the FE-2SLS results. The other results are available upon request.

References

Alfaro, L., A. Chandam, S. Kalemli-Özcan, and S. Sayek. (2004). "FDI and economic growth: The role of local financial markets." *Journal of International Economics*, vol. 64, no. 1, pp. 89-112.

Alfaro, L., S. Kalemli-Özcan, and V. Volosovych. (2008). "Why doesn't capital flow from rich to poor countries? An empirical investigation." *The Review of Economics and Statistics*, vol. 90, no. 2, pp. 347-368.

Ali, F.A., N. Fless, and R. MacDonald. (2010). "Do institutions matter for foreign direct investment?" *Open Economies Review*, vol. 21, no. 2, pp. 201-219

Aysan, A., Z. Ersoy, and M.A. Véganzonès–Varoudakis. (2007). "What types of perceived governance indicators matter the most for private investment in Middle East and North Africa." *Economics Bulletin*, vol. 5, no. 8, pp. 1-16.

Baltagi, B.H. (1981). "Simultaneous equations with error components." *Journal of Econometrics*, vol. 17, no. 2, pp. 189-200.

Bloningen, B.A. (2005). "A review of the empirical literature on FDI determinants" NBER Working Papers no. 11299.

Busse, M., and C. Hefeker. (2007). "Political risk, institutions and foreign direct investment." *European Journal of Political Economy*, vol. 23, no. 2, pp. 397-415.
Edwards, S. (1991). "Capital flows, foreign direct investment, and debt-equity swaps in developing countries" In *Capital Flows in the World Economy*, H. Siebert (ed.), J.C.B. Mohr, Tubingen.
Guillen, J. (2010). "Financial distress and access to capital in emerging markets." *Prague Economic Papers*, no. 1, pp. 5-20.
Gültekin-Karakaş, D., M. Hisarcıklılar, and H. Öztürk. (2011). "Sovereign risk ratings: Biased toward developed countries?" *Emerging Markets Finance and Trade*, vol. 47, no. 2, pp. 69–87.
Hayakawa, K., F. Kimura, and L. Hyun-Hoon. (2011). "How does country risk matter for foreign direct investment." IDE Discussion Paper Series no. 281
Lane, P. (2004). "Empirical perspectives on long-term external debt" *Topics in Macroeconomics*, vol. 4, pp. 1-21.
Lee, H.H., and R.S. Rajan. (2009). "Cross-border investment linkages among APEC economies: The case of foreign direct iinvestment." APEC Secretariat.
Lucas, R.E. (1990). "Why doesn't capital flow from rich to poor countries?" *American Economic Review*, vol. 80, no. 2, pp. 92-96.
OECD (2007). "Investment compact for south East Europe." Report of Activities, Paris: France.
Portes, R., and H. Rey. (2005). "The determinants of cross-border equity transaction flows." *Journal of International Economics*, vol. 65, no. 2, pp. 269-296.
Reinhart C.M., K.S. Rogoff, and M.A. Savastano. (2003). "Debt intolerance." NBER Working Papers no. 9908.
Taylor, M.P., and L. Sarno. (1997). "Capital flows to developing countries: Long- and short-term determinants." *World Bank Economic Review*, vol. 11, no. 3, pp. 451-70.
Wilson, D., K. Daly, C. Burgi, and S. Carlson. (2010). "Why doesn't capital flow to where returns are high?" *Global Economics Weekly*, pp.10-41, Goldman Sachs Inc.
Wei, S.J., and Y. Wu. (2002). "Negative alchemy? Corruption, composition of capital flows, and currency crises" In *Preventing Currency Crises in Emerging Markets*, S. Edwards and J.A. Frankel (eds.), Chicago: The University of Chicago Press.

Appendix

Moody's Data - Sources and Rationale

Growth (% change in nominal GDP, local currency)
Source: IFS, Moody's, Eurostat
Rationale: The annual percent change in nominal GDP (in local currency) is not in itself generally a significant variable, since analysts are more often interested in its two components: the change in real GDP (Table 6) and the change in the broadest index of price movements, the GDP deflator (not shown in this Handbook). However, a decline in nominal GDP that

results from the combination of weak or negative growth and falling prices, as in Argentina and Japan at various times in the past decade, can be a signal of extreme distress. In such circumstances, consumers and businesses may postpone purchases, expecting goods to be cheaper in the future, and the real burden of household and corporate debt will increase. This, in turn, can stress the financial system and accentuate a deflationary spiral.

Openness (Sum of Exports and Imports of Goods and Services/GDP) (%)
Source: IFS, Moody's, Eurostat
Rationale: Integration of a country with the world economy through trade and investment is an important channel for the transfer of technology, skills, and management, as well as a powerful force for greater competition in local markets. Many studies have shown a significant correlation between openness and above-average rates of economic growth. This indicator is one of the most widely used measures of openness, focusing on the trade channel. However, two important distortions qualify its use. First, the goods and services encompassed in the numerator (foreign trade) are valued at international dollar prices, while the denominator (GDP) includes the large non-tradable goods sector and domestic services. The latter may be significantly undervalued in the national accounts (as shown in the sometimes very large differences between GDP per capita on a current- exchange-rate basis and the same aggregate on a purchasing-power-parity basis). In addition, a country that has a large export sector mainly dependent on imports of materials, semi-finished products, and capital goods, will measure high on this indicator, but the value added in foreign trade may be quite small. For these reasons, the high openness shown in China (74%), Mexico (61%), Bulgaria (145%), Thailand (158%), and others, may be exaggerating the situation. Large continental-scale economies, such as the United States, Brazil, and India, would be expected to have a lower degree of openness, while distance from major markets and the resulting transport cost barriers could also reduce trade below what other factors might imply. Even with all of these caveats, however, the trend of rising openness seen in so many countries over the past decade is a good indicator of the strength of globalization.

General Government Budget Balance (%)
Source: Moody's, OECD, Eurostat, IMF, Official National Source
Rationale: The fiscal balances and debt stocks of the various levels of

government are among the most important indicators examined by sovereign risk analysts. The ability of government to extract revenues from the population of taxpayers and users of services, the elasticity of revenue with respect to the growth or decline of national income, and the rigidity of the composition of government expenditures are key factors that determine whether central and local governments will be able to make full and timely payments of interest and principal on outstanding debt.

Official Foreign Exchange Reserves
Source: IFS, Moody's
Rationale: Foreign exchange reserves held by a country's central bank are the first line of defense against withdrawal of foreign credit. These are measured at the end of year in US dollars at current exchange rates. (Again, it should be kept in mind that annual fluctuations in reserves are very much affected by choice of monetary standard. But with most countries still holding the bulk of their reserves in dollars and much of international trade carried out in dollars, it is appropriate to measure in this way. If the euro should grow over time to play a more important role in trade and in reserve holdings, some composite or basket method of common measurement might become necessary.) Central bank reserves are only one component of international liquidity. It is important also to take into account the liquid high-credit-quality foreign-currency assets of the commercial banks as well as the foreign currency assets of the corporate sector. Countries with freely floating exchange rates and stable financial systems may need lower reserves than those actively managing their exchange rates or facing the risk of a banking crisis. The currency crises of 1997-1999 have led many experts to suggest that developing countries need to hold higher levels of reserves to protect themselves against volatility in perceptions of currency and default risk on the part of lenders and depositors. In addition, apparent reserve levels can be misleading if the central bank has sold foreign exchange forward or has placed reserves in the foreign branches of the country's own banks. More accurate and more frequent reserve disclosure is one of the main goals of the IMF's efforts to improve data dissemination.

External Debt/GDP (%)
Source: Moody's
Rationale: Because countries of different sizes would naturally be expected to have debt of different size, division by GDP allows for normal international

comparisons. The ratio of external debt to GDP is one contributing factor to the future flow of interest payments that the residents of the country will have to pay overtime to nonresidents, relative to the capacity of the country to generate income. (The other is the average interest rate paid on the debt). As with the ratio of the current-account balance to GDP, the ratio of external debt/GDP can be somewhat misleading for large, relatively closed, economies, like India and Brazil. The low ratio of exports to GDP means that these countries can have high debt service requirements, while debt/GDP doesn't clearly signal the debt problem. On the positive side, however, such countries have a high potential for switching productive resources from the nontradeables to the tradeables sector, thereby increasing the rate of growth of external receipts. Such a trend to greater openness depends on structural reforms of the trade regime and improvements in the flexibility of labor and product markets.
Note: We have produced private sector external debt stock/GDP statistics by subtracting public sector external debt from total external debt stock.

Net Foreign Direct Investment/GDP (%)
Source: IFS, Moody's, Eurostat
Rationale: This indicator measures the difference in the annual inflows and outflows of FDI in relation to GDP. Since inflows are recorded as positive and outflows as negative, the typical developing country shows up here as having a positive net FDI while most advanced industrial countries, except for the US and resource-rich countries like Canada and Australia, have a negative net flow. FDI, defined as equity inflows involving control over productive assets, is generally viewed from two different perspectives. On the one hand, it is a major instrument for technology and skills transfer and for introducing greater competition into domestic markets. It also helps build up an export base by tying a country more closely into global production chains. On the other hand, FDI is important, along with more fragmented equity inflows that don't bring control, as a financing item in the balance-of-payments, allowing a country's investment to exceed its domestic saving without a dangerous buildup of external debt. FDI, however, is not an unalloyed positive. The dividends, royalties, and service fees generated by the foreign capital put in place can themselves be a major item in the current account. In addition, FDI is often accompanied by intercompany loans that add to external debt.

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The Narrow Pathway to A Sustainable Energy System

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Abstract

Achieving a sustainable energy system is a wide and complex area of debate and is also one of the most crucial issues facing the modern world. Despite all the environmental concerns associated with its generation and consumption, its use, from very basic human activities such as making a cup of tea to the most complex industrial processes, is unavoidable and will continue to be at the heart of the many challenges that arise globally. A sustainable energy system can be summarized as a system that provides access to affordable energy, ensures that the supply is secure, while minimizing the associated environmental impacts. This article, written mainly from the UK/ EU perspective, attempts to provide a brief overview of the current challenges and mitigation measures and targets as well as focusing on the EU Emissions Trading System, which is one of the key elements in the discussion, imposing cost as a driver.

Keywords: *Energy, Energy Efficiency, Environment, EU Emissions Trading System, Sustainability, Green House Gases.*

Introduction

The modern world has been witnessing increasingly significant challenges in terms of achieving a sustainable global energy system globally. (Department of Environment, Food and Rural Affairs (GB DEFRA) (2005, p.7) defines sustainable development as "*The goal of sustainable development is to enable all people throughout the world to satisfy their basic*

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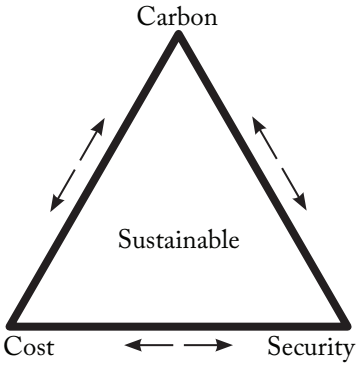
needs and enjoy a better quality of life without compromising the quality of life of future generations". In addition to this, and also so as to relate the question of sustainability to the energy system, the energy trilemma Fig. 1, which was first described by E.ON (2008), illustrates the main challenges of Energy Security, Cost/Social Equity and Carbon/Environmental impact in order to achieve a sustainable Energy System, Boston (2012). Basically, all three key aspects of the trilemma should be satisfied and taken into consideration in order to secure an energy supply to meet current and future demand for both home and industrial users, ensuring that supply is accessible and affordable while addressing the related climate change and environmental issues that might arise.

Figure 1. The Energy Trilemma



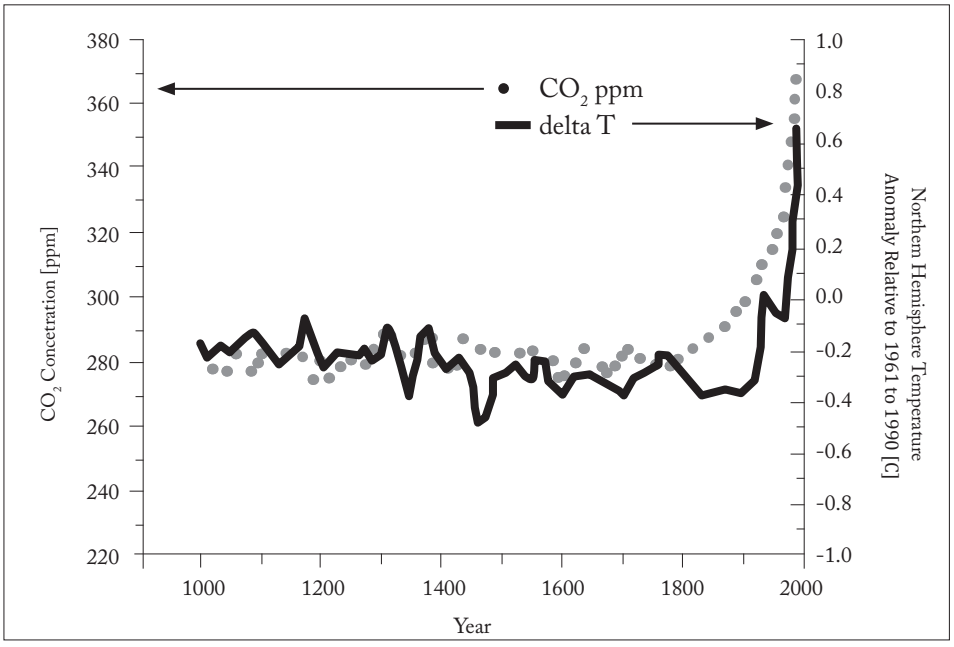
Source: E.ON (2008)

In order to effectively tackle these complex challenges and also to meet the climate change targets in particular, the current and future demand for energy should be first reduced through the best practice energy management techniques and then the "corrected" demand should be met by renewable and low carbon technologies utilizing nuclear and fossil fuel (using carbon capture and storage technology) sources so as to ensure that supply is secure for the base load in the short and medium term. In terms of promoting efficiency measures, reducing Green House Gases (GHG) emissions and making low carbon and green technologies more economically feasible, the EU Emissions Trading System (EU ETS) will also be discussed as it has a key role to play, in spite of significant concerns associated with it.

Environmental Impacts and the Mitigation Targets

World Energy Council (WEC) (1993) argues that the major responsibility for the emissions of greenhouse gases (GHG) may be strongly attached to fossil fuel combustion as scientific understanding on the elements that cause climate change continuously grows. It was also suggested by Elliot (2003) that there was possibly a link between increasing amounts of carbon emissions from fossil fuel combustion and the rise of carbon dioxide concentration in the atmosphere as well as continuously rising global average surface temperatures. Also to support this argument, Ghoniem (2011) demonstrated the relationship between CO2 concentration in the atmosphere and global average temperatures over the past 1000 years and it is evident that the rise of temperature follows the increase in atmospheric concentration. The graph below illustrates the rises in CO2 concentrations and global temperature with particular reference to the past 100 years, Fig. 2.

Figure 2. The rise in atmospheric concentration of CO2 and global average temperature over the past 1000 years



Source: Ghoniem (2011)

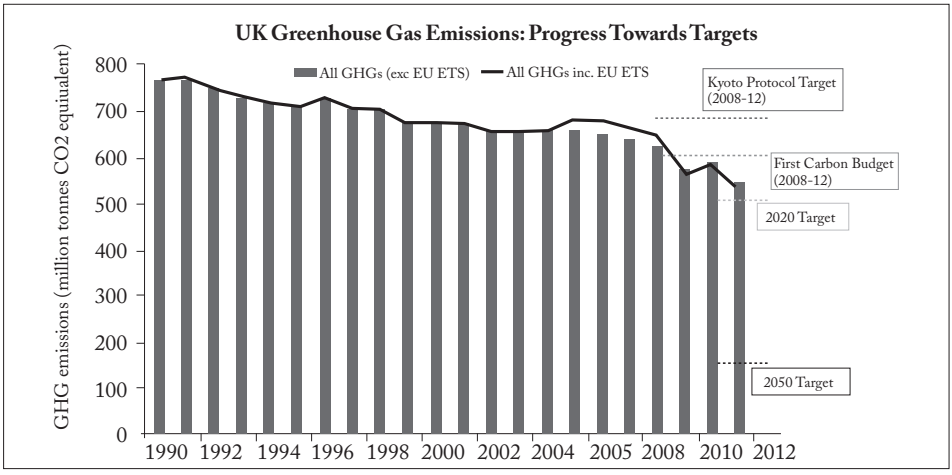
As a result of these concerns, there are now legally binding and ambitious emissions targets set by the UK and international organizations such as the European Union and the United Nations. The UK Climate Change Act 2008 which targets at least 80% cuts in emissions compared to 1990 levels through 5-year carbon budgets, four of which have been set in law up to 2027 and are now legally binding. Table 1 below shows the target reduction in emissions on a phased basis with regard to each carbon budget that has been issued to date. Also to demonstrate the progress of the UK that has been made up to the year 2011, Great Britain Department of Energy and Climate Change (GB DECC) (2012) has issued the chart illustrated below (Fig. 3), which shows the performance against the targets using provisional figures for the year 2011.

Table 1. UK Emission reduction targets for the budgets 1-4 up to 2027

	First carbon budget (2008-12)	Second carbon budget (2013-17)	Third carbon budget (2018-22)	Fourth carbon budget (2023-27)
Carbon budget level (million tonnes carbon dioxide equlvalent ($MtCO_2e$)	3,018	2.782	2,544	1,950
Percentage reduction below base year levels	23%	29%	35%	50%

Source: GB DECC (2011)

Figure 3. UK green house emissions: progress towards targets



Source: GB DECC (2012).

The UN Kyoto Protocol 1997, the first international treaty in this regard, set out a reduction of 5.2% below 1990 levels between 2008 and 2012 for the countries that agreed to it. In addition to this, the other international legally binding targets are set out by The EU Climate Change and Energy Package European Commission (EC) (2012a), includes what are also referred to by the European Commission as "20-20-20" targets and introduces 3 main objectives for 2020:

- A 20% reduction in EU greenhouse gas emissions from 1990 levels;
- A rise in the share of EU energy consumption produced from renewable resources to 20%;
- A 20% improvement in the EU's energy efficiency.

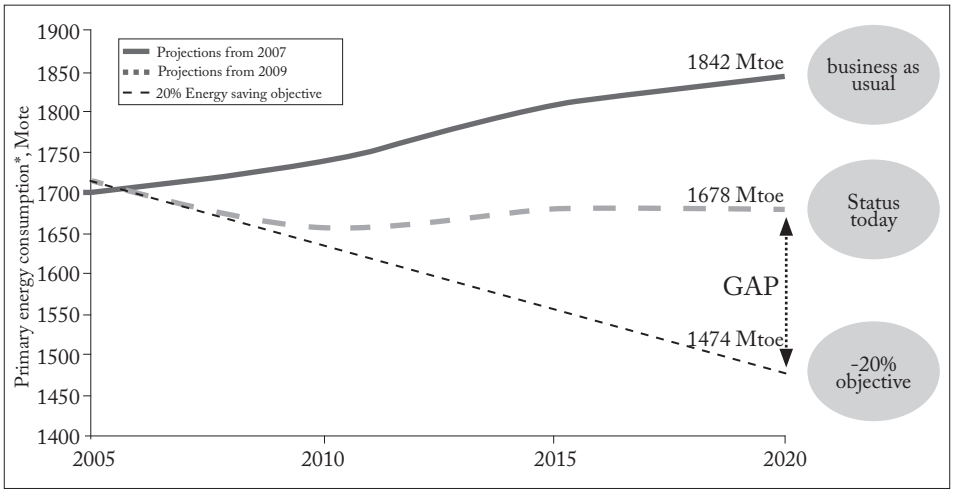
Demand Reduction through Efficiency and Energy Management

Reducing the demand for energy by increasing efficiency and encouraging savings will not only contribute to achieving those ambitious targets but also enable policy makers to develop more accurate projections with regard to the future demand for energy. It was also suggested in "The New Policies Scenario" by the International Energy Agency (IEA) (2011), International Energy Agency, that the reduction of the demand due to improved efficiency, in other words, the energy that is not consumed, represented the most important factor contributing to meeting energy security and climate change targets in the scenario.

The target of a 20% improvement in the EU energy efficiency, which is one of the 20-20-20 targets is very unlikely to be achieved Fig. 4. The graph suggests that the primary energy consumption projection from 2009 up to 2020 is significantly higher than the EU 2020 objective of a 20% reduction. In terms of the GHG emissions, the European Environment Agency (EEA) (2012) report suggests a sudden drop in 2008, however the immediately following trend for 2009/2010 is upwards and indicates that it will be a real challenge to meet the 2020 target of 20% reduction, compared to the 1990 baseline level, Fig.5. A study by Ecofys and Fraunhofer Institute (2010) estimated that the gap in 2020 would be 208 Mtoe (million tonnes of oil equivalent) compared to the EU target for primary energy consumption and argued that in order for the EU to achieve this target by 2020, the effects of energy policies needed to be tripled. Regarded by the EC (2012b) as a move in the right direction, the European Parliament (EP) voted in favour of the Energy Efficiency Directive (EED) on 11 September 2012 which is now legally binding on all member states to use energy more efficiently including its generation, distribution and final consumption.

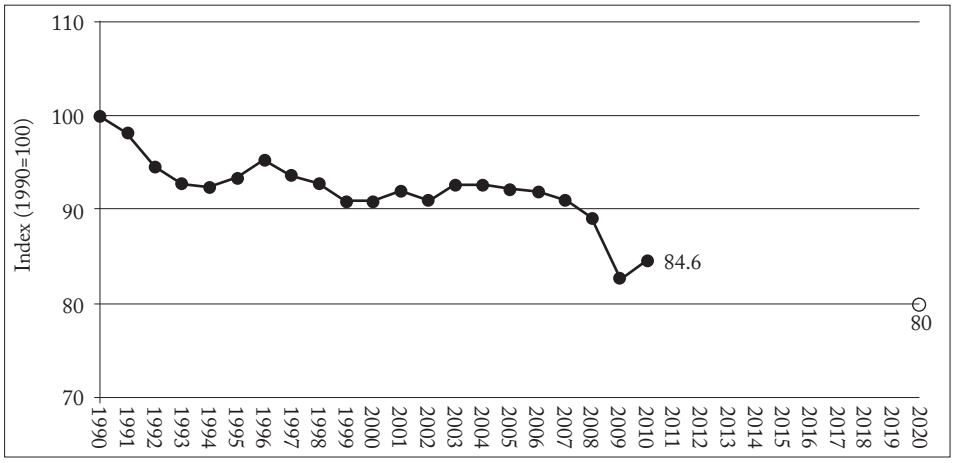
In addition to this, at the UK level, it is hoped that the "Green Deal" regulations established in 2012 will enable homes and businesses to install some energy-efficiency measures in the buildings without having to pay upfront costs by making repayments through electricity bills. The scheme is to be rendered effective from January 2013 and is also funded by energy suppliers as part of the "Energy Company Obligation".

Figure 4. Primary Energy Consumptions Projections to EU 2020 Targets



Source: EC (2011)

Figure 5. EU-27 GHG Emissions 1990-2010 (Excluding Land Use, Land Use Change and Forestry)



Source: EEA (2012)

Concerning the importance of energy management, Backlund et al. (2012) argue that inclusion of energy management in future energy policies will significantly contribute to the chance of achieving not only the EU 2020 targets but also those of later periods up to 2050. In this regard, the new ISO 50001:2011 Energy Management Standard which replaced the EN 16001:2009 is expected to play a key role in order to promote exercising of the best energy management practices worldwide by providing organizations with a comprehensive framework of the requirements.

Further Actions to Meet the Targets – The EU Emissions Trading System and Concerns

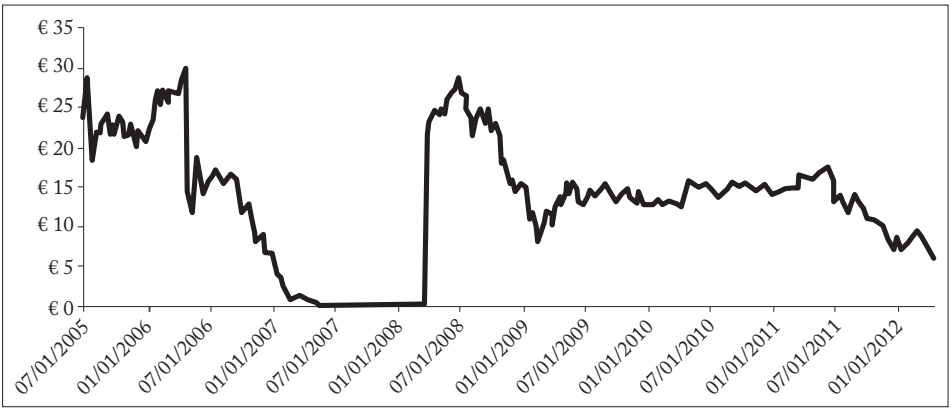
Yet another initiative in order to achieve the EU 2020 targets, also as part of the EU Climate and energy package, the reform of the current EU Emissions Trading System (EU ETS) is a major piece of complimentary legislation, which underpins the Emissions Trading Directive. According to Skjærseth and Wettestad (2010), the system aims to establish a low carbon energy economy based on imposed emission limits, renewable energy generation, increased energy efficiency and innovative technologies that aim to put the EU on track to meet its ambitious environmental targets. Covering some 11,000 power stations and industrial plants in 30 countries, EU ETS is the first and biggest scheme for trading GHG allowances internationally. The basic principle of the system is to cap and trade the emissions by which companies can receive allocated emission allowances that they can sell to or buy from other companies within the system or keep the surplus amount for their future needs. The other fundamental element of the scheme is the limit on the allowances to ensure that they have a market value for trading. As outlined by EC (2012c), these limits will be ambitiously reduced over time, such as the available allowances by 2020 which will be 21% lower compared to 2005.

Following the first two phases of he EU ETS, the scheme is now due to enter its third phase from 2013 with some significant changes such as the phasing out of free allocation of the allowances and the gradual replacement of this system with auctioning, which starts initially with the implementation of electricity generators. As Clò (2010) summarizes, the new ETS Directive was approved in December 2008 developed on the basis that, 80% of initial allowances will be allocated freely in 2013 and after that, free assigned allowances will be reduced by an equal amount every year, resulting in a situation in which only 30% of the overall allowances will be

freely assigned by 2020 and full auctioning only becomes the rule by 2027. Since the start of 2012, the aviation companies that serve the airports in the EU area were also included in the system, and from 2013, the system is to expand covering (N2O) emissions from nitric, adipic and glyocalic acid production and perfluorocarbons from the aluminium sector. The cap for 2013 has been determined by EC (2012d, 2012e) to be slightly less than 2.04 billion EUAs (European Union Allowances, 1 EUA represents the right to emit 1 ton of CO_2). In addition to this, as a sign of the possible global roll-out of the scheme, Australia will be able to purchase allowances from the system from July 2015 and will also be in a position to trade its allowances with the EU no later than July 2018. It is also known that there are plans at various stages for similar trading systems in China, California and Korea (Chemical Week, 2012). These are positive signs for the EU ETS in terms of a possibility for a global roll-out of the system.

In terms of maintaining stable market conditions within the system, there have been major issues with the volatility of the carbon price in the past. Fig. 6 below shows the volatility of the carbon prices traded within the EU ETS during the phases 1 and 2 since 2005. According to Venmans (2012), carbon prices crashed in 2006 and fell further in 2007 during the first phase due to National Allocation Plan (NAP) through which the member states determined the free allocations to each plant within the countries according to national criteria, which eventually led to allocations exceeding the verified emissions each year and consequently led to a price crunch. Following the first-pilot phase, prices decreased significantly again in 2009 in the second phase mainly due to the financial crisis that emerged in 2008.

Figure 6. Evolution of carbon price



Source: Venmans (2012)

There are currently significant concerns over the new scheme that will progressively reduce allowances further and potentially result in competitiveness issues for European businesses. The OECD (2006) defines the risk of this situation as "carbon leakage", which stresses the risk of businesses having to displace and relocate their carbon intensive productions to unregulated countries/regions. Unlike the energy sector, which remains virtually unexposed to international competition, the carbon leakage issue directly threatens other energy intensive sectors such as manufacturing. Clò (2010) argues that, as these businesses are being pushed into a difficult position in which increased cost of production due to the cap on emissions is passed onto the final product price thus resulting in the significant loss of market share against their non-EU competitors, the industries concerned may be forced to relocate their production and investments to non-EU countries, as industrial lobbies claim.

In addition to this, Antimiani et al. (2012) suggest that another type of leakage could also become a concern as the decrease in carbon-energy demand in abating countries may consequently result in energy prices to fall internationally. According to Reyer and Onno (2007), as a result of this potential decrease in carbon-energy prices, in non-abating countries where carbon-energy is substituting for other inputs, demand for carbon-energy would likely increase and this situation is referred to as the Energy Market Model. It is evident that should such a scenario become a wide reality, all the efforts to reduce carbon emissions within the EU might become ineffective, as the increasing demand for carbon-energy and resulting higher emissions in the non-abating parts of the world would continue to worsen the situation of climate change, which is a global issue and requires collective action.

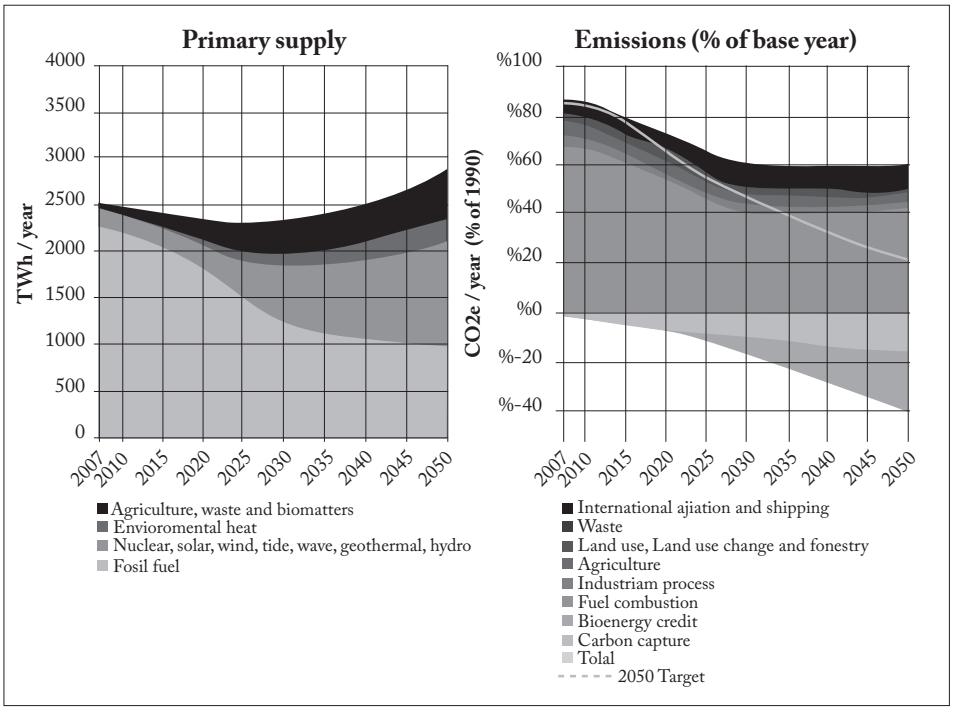
The Way Forward and Conclusions

Encouraging energy efficiency and savings and reducing demand through effective energy management practices appear to be the key issues to be taken into account when developing policies as this will provide great benefits with regard to all aspects (security, cost and environment) of the sustainable energy trilemma. Backlund et al. (2012) suggest that promoting investments in developing more energy-efficient technologies proves to be an important step in order to achieve ambitious energy- efficiency and climate targets. In addition to this, when discussing how to form the industrial energy systems in the future, energy management practices are to be considered at the heart of the solution. The way to improving energy efficiency in a cost-effective way is the combination of good energy management practices and investments in energy-efficient technologies.

The new (third) phase of the EU ETS is one of the key schemes that uses the cost as a driver and forces industries to invest more in energy efficiency measures and look for ways to utilize low carbon energy sources. However, since the major concerns such as competitiveness and carbon leakage that may hinder the achievement of the whole system to actually deliver the intended outcomes, a significant amount of effort that should be made to address. Supporting this point, given the fact that environmental impact and consequently climate change are global issues, the initiatives need to be developed and applied in a collective manner rather than only by a fraction of the world in isolation. The WEC (1993, p.35), the World Energy Council, describes the challenge of achieving global sustainable development as:

> "*... the utmost importance to address these widely different concerns in a realistic and balanced manner to reduce – as far as possible – the associated stresses between countries and regions. Without sufficient attention to this dimension of the world energy problem, there will not be sustainable development consistent with the expected population explosion in the developing world*".

Figure 7. 2050 Pathway Analysis, Pathway Alpha



Source: GB DECC (2010)

Achieving the goal of a sustainable energy system globally will be the practical result of the efforts of individual countries in developing strategies and national energy policies that should be in line with global targets and consensuses. As a good example of solutions on a national scale, the 2050 Pathway Analysis Report by GB. DECC (2010) studied a number of scenarios and one of which, the Pathway Alpha above Fig. 7, shows how it can be made possible to meet the projected demand in an environment-friendly way, also by utilizing measures with regard to efficiency increases and demand reduction and achieve both national and EU emissions targets by 2050. It can be seen that the supply side is well structured by progressively increasing the share of low carbon (nuclear in particular) and renewable technologies and also by deploying CCS (Carbon Capture and Storage) technology for fossil fuel powered plants, while reducing the use of fossil fuels progressively so as to ensure that the supply for base load is secured going forward into the future.

References

Antimiani, A., V. Costantini, C. Martini, L. Salvatici, and M.C. Tommasino. (2012). "Assessing alternative solutions to carbon leakage." *Energy Economics*, vol. 36, no.3, pp.299-311.

Backlund, S., P. Thollander, P., J. Palm, M. Ottosson. (2012). "Extending the energy efficiency 2012 gap." *Energy Policy*, vol. 51, no. 12, pp.392-396.

Boston, A. (2013). "Delivering a secure electricity supply on a low carbon pathway." *Energy Policy*, vol. 52, no. 1, pp.55-59.

Chemical Week (2012). "EU, Australia to link emissions trading systems." vol. 174, no. 22, p.6, Business Source Complete, EBCO*host* (retrieved on 07 November 2012).

Clò, S. (2010). "Grandfathering, auctioning and carbon leakage: Assessing the inconsistencies of the new ETS Directive." *Energy Policy*, vol. 38, no. 5, pp.2420-2430.

Ecofys and Fraunhofer Institute (2010). "Energy Savings 2020—how to triple the impact of energy savings policies in Europe (final version)." Available at: http://www.roadmap2050.eu/contributing_studies (retrieved on 06 November 2012).

European Environment Agency (2012). "Annual European Union greenhouse gas inventory 1990–2010 and inventory report 2012." Technical report No 3/2012 Submission to the UNFCCC Secretariat. Available at: http://www.eea.europa.eu/publications/european-union-greenhouse-gas-inventory-2012 (retrieved on 06 November 2012).

Elliot, D. (2003). *Energy, society and environment*. 2nd edition. London: Routledge.

E.ON (2008). "Carbon, *cost and consequences*." E.ON UK publication. [Online]. Available at: http://www.eon-uk.com/generation/carboncostandconsequences.aspx (retrieved on 02 November 2012).

European Commission (2011). "A new directive on energy efficiency - Challenges addressed & solutions proposed." Directorate-General for Energy, Available at: http://ec.europa.eu/energy/efficiency/eed/eed_en.htm (retrieved on 03 November 2012).

European Commission (2012a). "The EU Climate and Energy Package." Available at: http://ec.europa.eu/clima/policies/package/index_en.htm (retrieved on 28 October 2012)

European Commission (2012b). "Energy efficiency." Available at: http://ec.europa.eu/energy/efficiency/eed/eed_en.htm (retrieved on 30 October 2012)

European Commission (2012c). "Emissions trading system." Available at: http://ec.europa.eu/clima/policies/ets/index_en.htm (retrieved on 06 November 2012).

European Commission (2012d). "Cap." Available at: http://ec.europa.eu/clima/policies/ets/cap/index_en.htm (retrieved on 29 October 2012).

European Commission (2012e). "Reducing emissions from the aviation sector." Available at: http://ec.europa.eu/clima/policies/transport/aviation/index_en.htm (retrieved on 28 October 2012).

Ghoniem, A.F. (2011). "Needs, resources and climate change: Clean and efficient conversion technologies." *Progress in Energy and Combustion Science*, vol. 37, no. 1, pp.15-51.

Great Britain Department of Energy and Climate Change (2010). "2050 pathway analysis." Available at: http://www.decc.gov.uk/en/content/cms/tackling/2050/calculator_exc/calculator_exc.aspx (retrieved on 31 October 2012).

Great Britain Department of Energy and Climate Change (2011). "The Carbon Plan: Delivering our low carbon future." Available at: http://www.decc.gov.uk/en/content/cms/tackling/carbon_plan/carbon_plan.aspx# (retrieved on 03 November 2012)

Great Britain Department of Energy and Climate Change (2012). "UK greenhouse gas emissions: Performance against emissions reduction targets – 2011 Provisional Figures." Available at: http://www.decc.gov.uk/en/content/cms/statistics/climate_stats/gg_emissions/targets/targets.aspx (retrieved on 02 November 2012)

Great Britain Department of Environment, Food and Rural Affairs (2005). "One Future – different paths, UK Strategic Framework for Sustainable Development." Available at: http://archive.defra.gov.uk/sustainable/government/publications/uk-strategy/framework-for-sd.htm (retrieved on 03 November 2012).

International Energy Agency (2011). *World Energy Outlook 2011*. OECD Publishing, Available at: doi: 10.1787/weo-2011-en (retrieved on 29 October 2012).

OECD (2006). *The Political Economy of Environmentally Related Taxes*. OECD Publishing, Available at:doi: 10.1787/ 9789264025530-en (retrieved on 05 November 2012)

Reyer, G., and K. Onno. (2007). "Carbon Leakage With International Technology Spillovers." FEEM Working Paper No. 33.2007. Available at: http://dx.doi.org/10.2139/ssrn.979915 (retrieved on 02 November 2012).

Skjærseth, J., and J. Wettestad. (2010). "Fixing the EU Emissions Trading System? Understanding the Post-2012 Changes" *Global Environmental Politics*, vol. 10, no. 4, p.101-123.

Venmans, F. (2012). "A literature-based multi-criteria evaluation of the EU ETS." *Renewable and Sustainable Energy Reviews*, vol. 16, no. 8, pp.5493-5510.

World Energy Council (1993). *Energy for Tomorrow`s World.* London: Kogan Page Limited.

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International Tourism and Economic Development in Turkey: A Vector Approach

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Abstract

Being a developing country, Turkey is endeavoring to achieve sustained economic growth. An important tool Turkey uses for sustained economic growth is that of international tourism earnings. In turn higher real income of the country attracts more tourists and leads to higher tourism earnings as well. The direction of causality between income and tourism earnings is tested for Turkey with the help of other variables; those of real export volume and real exchange rate in a multivariate vector autoregressive model. Quarterly data from 1980 to 2011 is (are) used and tourism earnings are shown to be an essential contributor to the real GDP of the country. After the elections in 2002, a more assertive party as regards their setting of tourism targets of international scale came into power. The effects of this new aggressive tourism strategy of the government, and this relationship with the tourism sector are studied for the first time in the literature.

Keywords: *tourism earnings, economic development, Turkey, VECM, Granger causality test*

Introduction

For the Mediterranean countries, tourism is an essential dynamo of economic growth. Countries such as Italy, Spain and Greece have direct tourism incomes close to 3% of their respective GDPs. In addition to these direct incomes coming from abroad, tourism creates many opportunities in the domestic economy through tourism-based jobs. Cultural and knowledge-based exchanges are considered as additional benefits of

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tourism. According to the estimates of the World Tourism Travel Council, the scale of the world tourism industry will reach roughly 11% of the world's GDP in 2014.

With the direct income and other positive side effects the tourism industry provides to the host country's economy, tourism is considered as an important determinant of economic growth in many studies in the subject-related literature. (Belloumi, for Tunusia, 2010; Akinboade, Braimoh, for South Africa, 2010; Brida, Risso, for Chile, 2009) Brau et al. (2003) showed that a rising number of tourists to the world's main destinations is associated with a corresponding growth in both GDP and employment rates. In addition, tourism-based economies are shown to achieve higher rates of growth on average than other economies by Brau et. al. (2003).

Although international tourism contributes to the growth of many countries, it is in turn, impacted by growth in those economies. An undirectional temporal relationship ranging from economic development to tourism activity is detected in the literature for Fiji, Tonga, Solomon Islands and Papua New Guinea (Narayan et al., 2010) for African countries (Lee and Chang, 2008) and for Cyprus (Katircioglu, 2009)

Demiröz, Ongan, (for Turkey, 2005) Dritsakis (for Greece, 2004) Chen and Chiou-Wei (for South Korea, 2009) found bi-directional relationship between tourism revenues and national income.

The direction of causality between tourism incomes and economic growth is a subject of ongoing discussion in the related literature. In this paper, by using Granger causality tests and quarterly data for the period 1980 to 2011, we try to understand and evaluate the relationship between international tourism and economic growth in Turkey.

For Turkey, Arslantürk and Atan (2012) claim that, international tourism helps to fix the balance of payments, provides the necessary financial tools for the technological equipment used in the manufacturing process, increasing employment and leading to economic growth. Gunduz and Hatemi (2005), by using bootstrap techniques, show that tourism-led growth hypotheses are supported empirically in the case of Turkey. In addition, as we mentioned above, Demiröz, Ongan (2005) showed a bi-directional relationship between tourism receipts and GDP.

Many studies in the literature, including the one by Gunduz and Hatemi (2005) focus on the last 20-30 years using annual data. The lack of observations may reduce the reliability of the estimations in these studies.

The paper by Demiröz and Ongan uses quarterly data for the period between 1980 and 2003, hence allowing certain degrees of freedom. However, the data for the end year of the study is a bit problematic. After the economic crisis in 2001, with a new government which showed particular interest in tourism revenues reached a high rate of economic growth and tourism volume. Therefore, the data included in this particular period offers a useful insight into understanding the relation between tourism income and economic growth in Turkey. Our paper will be the first in the literature with an emphasis on this period.

In Khan, Rex and Chua, 2005 and Kadir and Jusoff, 2010; the inclusion of export volume as an explanatory variable tourism – growth analysis, is shown to be significant. Following on from this contribution, this paper will be first to analyze Turkey's tourism and growth in international relations with an eye on the exports of the country. The econometric methods which are shown to offer the best estimates for the subject will be used for the analysis. More information about the econometric methods is presented in the section that deals with methodology.

Tourism in Turkey

As in most countries, in Turkey, the major objective of macroeconomic policies is sustained economic growth. By using different sectors and different markets Turkey is trying hard to achieve this goal. The tourism sector became very important for Turkey's economic development over recent decades. In 2009, combined with the travel sector, the industry generated approximately 10.2% of Turkey's GDP. (TL 95.3 billion) with a share of 7.2% of Turkey's total employment. (1.7 million people) (See Figures 1 and 2.)

Turkey is centrally located between Asia and Europe; the Black Sea to the north and the Mediterranean tothe south. In comparison to many European countries Turkey can be said to possess a large territorial area that stands at 814.578 sq. km.

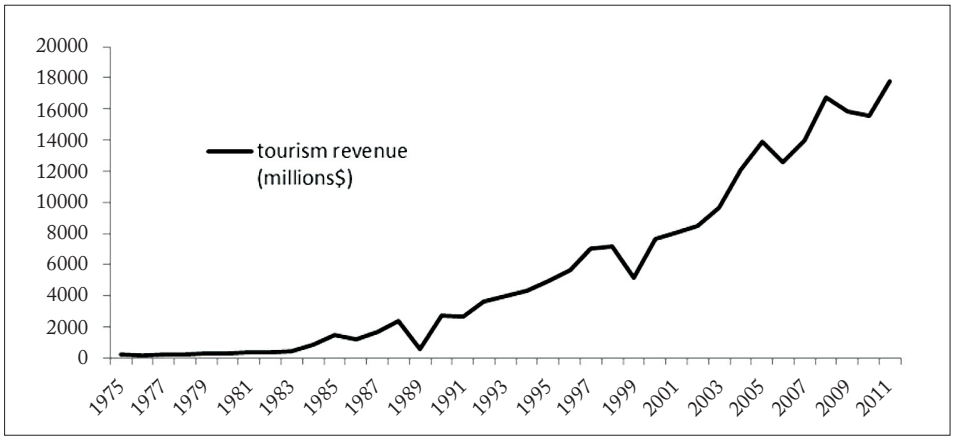
Turkey has various climatic types in its different regions. The Black Sea region experiences a temperate rainy climate, the Central Anatolian region a continental , and the south a partially subtropical Mediterranean climate respectably. From west to east there are also considerable differences and contrasting climatic regions. In the Marmara and the Aegean regions hot summers and mild winters are the norm, and in and Eastern Anatolia

it is common to experience extremes of temperature where the winters are long with heavy snowfall.

Having this variation in climatic conditions, the flora and fauna of Turkey are correspondingly diverse. The flora varies from those of lush forests, that of the wild steppes to typical Aegean and Mediterranean vegetation. Turkey has nearly ten thousand species, hundreds of which are endemic to Turkey. Turkey is on the migratory routes of birds and there are a number of areas which are the natural habitat for many different species, including many rare ones.

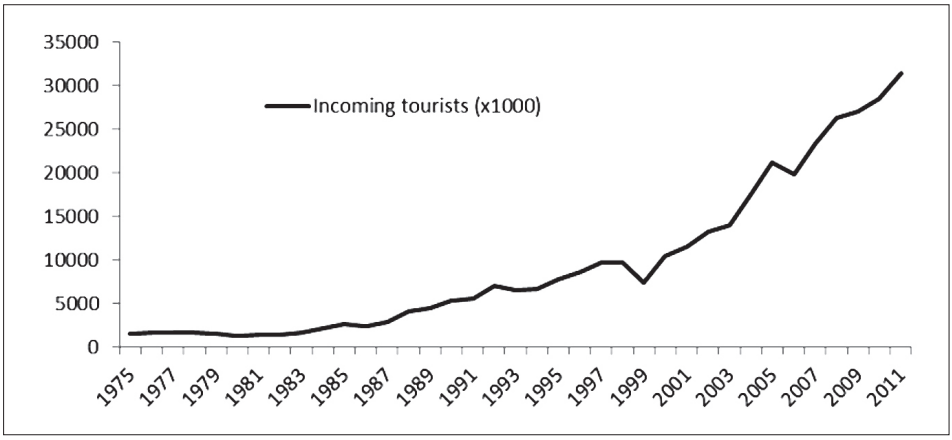
Turkey is an attractive destination for international tourists who are interested in historical sightseeing. It has historical traces from numerous civilizations such as Hittites, Phrygians, Lycians, Lydians, Ionians, Romans, and Byzantines to the Seljuks and Ottomans. The history of humanity has continuously merged and accumulated, from that of the earliest settlements, to theat of contemporary Turkey today.

Figure 1. Tourism Revenues



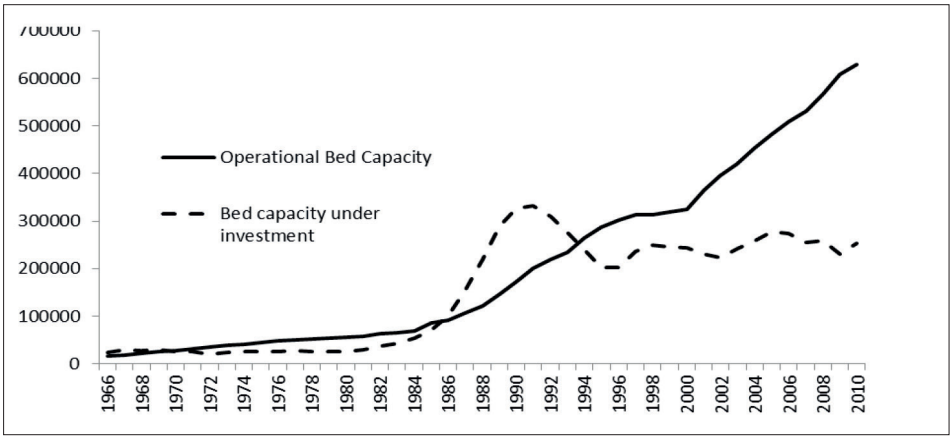
Citizens of Germany, the Russian Federation and the United Kingdom comprise 36% of all tourist arrivals to Turkey and are the top sources of tourism revenue. Currently, hotels in Turkey have a capacity of 629.465 beds and this number is still increasing. (See Figure 3.)

Figure 2. Incoming Tourists



Tourism receipts and international tourism arrivals have been growing rapidly over recent years. The growth in Turkish tourism industry has been faster than world averages. The share of Turkish tourism on the world scale has increased from 1.1% in 1990 to 2.8% in 2009. (See Figures 1 and 2.)

Figure 3. Bed Capacity



When graphs regarding tourism volume are examined it should be noted that, despite the onset of the economic crisis in 2008, Turkish tourism industry managed to grow in 2008 and has broken records for tourism revenues every year since. Currently coastal tourism is the most popular type of tourism in Turkey. Although coastal tourism is by far the most popular tourism type in Turkey, the country also has developed

several unique fields of tourism including conference and expo tourism, cruise ships and yachting, mountain climbing, winter sports, health and tourism resources. To take advantage of these vast non-utilized resources, the Ministry of Culture and Tourism has issued 'Turkey's Tourism Strategy 2023'. 2023 is the 100th anniversary of Turkish Republic and the ministry wants to provide a guide for tourism investors interested in Turkey. This will provide guidance to investors in the phases of planning, production management and implementation. The charecteristics and conditions of such incentives will be determined on a yearly basis. Turkey expects a lot from tourism and endeavours to offer better guidance to the sector.

It is obvious that, tourism is a fastly developing sector for Turkey and with the ongoing investments; it strives to retain its major position as regards growth-related issues. The country expects a lot from the industry, therefore, the relationship is in need of reexamination keeping the latest developments of the sector and the newest findings of the literature in mind. The study will attempt to provide new evidence on the issue of tourism-led growth hypothesis in the case of Turkey. In addition, the government which came to power in 2002, has started to apply a more assertive tourism strategy. This study will allow us to consider this new term as well while testing the accompanying hypothesis.

Data and Methodology

The two key variables that are included for analysis are obviously tourism and growth indicators. In the literature, there is a consensus for growth-indicator choice. In this context, real GDP per capita is included to keep track of the changes in total economic activity. The IMF database is used for real GDP of Turkey for the period 1980-2011. However there are different papers which use different tourism indicators. For example, Gunduz and Hatemi (2005) discussed alternative measures for the volume of international tourism including tourism receipts and international tourist arrivals. They decided to focus on arrivals. However, in this paper, as in Akainborade and Bramioh (2010) we are going to use tourism receipts as the tourism activity indicator which is shown to give the most meaningful estimates in this regard. As suggested by Oh (2005) and Gunduz and Hatemi (2005) real exchange rates and export volume are included in the analysis to deal with the potentially- omitted variable problems. Real

exchange rate and real export volume data are taken from World Bank Development Indicators.

To understand whether policies should be designed in a 'tourism first' or 'development first' manner we tested the causal relationship between tourism receipts and economic development in Turkey. By causality, we mean causality in the Granger sense. In that sense, we will find out whether one variable precedes another variable or not. For this purpose we designed a four variable vector autoregressive (VAR) model.

In econometrics whenever time series data is used, several statistical techniques should be applied. First of all, to gain an insight as to whether data is stationary, unit root tests should be used individually for each series. The existence of unit root makes the analysis unreliable. (Non-stationary data contains unit roots.) Hence, we start our causality analysis with a unit root test: the Augmented Dickey Fuller Test (ADF). By this test we check for the existence of unit roots and determine the degree of differences in order to establish a stationary series which will help us to arrive at reliable results. The ADF test is based upon estimations of the following equations.

The results of the ADF test in Table 1 indicate that the series of each variable are not stationary in their level form but are stationary in the first differences. Therefore, we concluded that each series used in the analysis are integrated as of order 1. To determine the correct specification of the unit root tests, Akanke's information criterion is used to determine the lag length in various specifications. Related lag lengths are provided in the table as well.

Table 1. Unit Root Test

LEVELS	**LGDP**	**Lag**	**LTUR**	**Lag**	**LEXPO**	**Lag**	**LRER**	**Lag**
Constant	-1.33 (0.61)	4	-3.62 (0.006)	9	-1.99 (0.29)	1	-2.35 (0.15)	0
Const & trend	-2.46 (0.34)	4	-2.28 (0.47)	9	-2.78 (0.20)	1	-2.53 (0.31)	0
FIRST DIFFERENCES	**LGDP**	**Lag**	**LTUR**	**Lag**	**LEXPO**	**Lag**	**LRER**	**Lag**
constant	-6.82 (0.00)	3	-5.29 (0.00)	7	-14.80 (0.00)	0	-7.39 (0.00)	3
const & trend	-6.88 (0.00)	3	6.09 (0.00)	8	-14.99 [0.00)	0	-7.63 [0.00)	3

In the section above we conclude that all variables in the study are integratedaccording to order one. To determine the most stationary linear combination of the time series variables we will employ a Johansen Cointegration test. (1988) Cointegaration test, including an intercept and a non- deterministic trend in the co-integration equation are used. The results of the cointegration tests are shown in Table 2. The null of no cointegration is rejected and we found only one cointegration relationship. Therefore we can claim that long term relationship is detected between the variables of interest. For the test, several lag intervals are tested and the most efficient results are reached with lag intervals of 1 to 3.

Results

To understand the direction of causality in the short run, we employed a Granger causality test. Through this we determine whether international tourism earnings Granger cause or Granger caused by economic growth. In this part we also examined the results of the causality tests to find out the direction of causality for the variables real exports and real exchange rate.

It is seen; from Table 3 that, neither growth Granger causes tourism earnings nor tourism earnings causes growth in the short run. It is not a surprise in the sense that, tourism being a construction- driven sector in Turkey, has been expected to have its interaction with growth in the longer term. It is worth noting from the results of the causality tests that, real exchange rate granger creates both economic growth and tourism earnings.

The results we get in the cointegration tests allow us to use a vector error correction model to investigate the relationship between variables under consideration. By this we will be able to formulate the dynamic of the system. The vector error correction model can be specified as follows. In this model the emphasis is on the Z terms which represent the residuals from the previously estimated cointegration equations. By checking the significance of these terms we will be able to interpret whether the independent variables in each equation Granger cause the dependent variable or not.

The results of the vector error correction model are presented in Table 4. As seen from the highly significant results, we can assert that the direction of the causality in the long run is from economic growth to tourism earnings. When the results of the four variable analyses are

examined from Table 4, it is actually seen that tourism earnings are caused by real GDP, real exports and real exchange rate. The relationship seems to be uni-directional. GDP does not seem to be caused by the triple of tourism earnings, real export and real exchange rate.

For further information and statistical purposes we did a bivariate analysis for real GDP and tourism earnings. The results of this bivariate analysis are presented in Tables 5 and 6. Similarly in this bivariate case the direction of the causality is from real GDP to tourism earnings. That is, real income Granger causes tourism earnings.

In Turkey after the elections in 2002 a more conservative party, AKP (Turkish initials for Justice and Development Party) came to power. They have given special importance to earnings from tourism. Accordingly the increase in tourism earnings is observable in the Graph 1. For this reason we examined the relation between tourism and other variables of interest for Turkey in two periods in the case of a characteristic change. However, the results for the whole period (1980-2011) mentioned above are valid for the subperiods as well. (1980-2001 and 2002-2011) The results for these subperiods are presented in Tables 7, 8 and Tables 9, 10. The number of observations may decrease the reliability of the results for the subperiod analysis. However, we still believe that in Turkey the direction of causality can easily asserted to be from GDP to tourism earnings for all periods especially after observing the reliability of the analysis for the whole period.

Discussion

The reasons why economic growth causes higher tourism earnings in Turkey should be carefully examined. The first reason that we can suggest is the structure of tourism in the country. In Turkey, more than 60% of the tourism is conducted at all-inclusive hotels. Five, four and three star hotels account for 40%, 31% and 20% of the operational bad capacity respectively. These hotels have huge facilities and need large investments. Therefore they contribute a lot to the increase in GDP, especially in the construction period. After the investments are completed, and these hotels have started to operate, an increase in the tourism earnings is observed as well. This can explain the direction of causality between economic development and tourism earnings which is from the former to the latter.

In addition we have to make a socio-economic observation at this point. Turkey attracts tourists from both the developed western countries

and developing eastern European and Middle Eastern countries. So as to attract tourists from eastern European and some Middle Eastern countries, having higher economic and development standards than the tourist sending country is a key factor. Tourists are likely to expect better conditions for accomodation, travel, shopping etc. Hence economic growth brings extra tourists from these countries in particular. (For example newly constructed ultra-modern shopping malls in Istanbul can be easily observed to be full of international tourists.) Thus this may be another reason why economic development leads to higher tourism earnings in Turkey.

Furthermore, economic growth leads to better infrastructure and security standards in a country. Hence, international tourists from developed countries who were previously reluctant to come to Turkey, have now started to consider Turkey as a must see tourism destination. Also, higher levels of GDP have allowed Turkey to transfer more funds to its promotion agencies. This better advertising of the country may contribute to higher GDP which in turn leads to higher tourism earnings.

Conclusion

In this paper, we tested the tourism-led growth hypothesis for the case of Turkey. Tourism is a key sector for this rapidly developing country, Turkey, that deserves to be analyzed in detail.

The results when the co-integration and causality test is applied, tell us that tourism earnings are caused by real GDP, real exports and a real exchange rate. The relationship seems to be uni-directional. Higher GDP does not seem to be caused by the tripling of tourism earnings, real export and real exchange rate. A bivariate analysis is also applied excluding the explanatory variables real exports and real exchange rate. No change is observed in the results, in the sense that, tourism earnings appeared to be caused by real GDP growth.

After the elections in 2002, a more assertive party with regard to international tourism targets came into power. This raises the necessity of a revisiting by the analysis of Turkish tourism earnings. With this motivation, the subperiods before 2002 and after 2002 are examined as well. These analyses give us an opportunity to claim with greater conviction that the direction between tourism earnings and real GDP is unidirectional and flows from real GDP to tourism earnings.

Policy makers in Turkey hence may wish to become more aware of the fact that an increase in tourism earnings is achieved by the help of the increase in real GDP. In addition to the attractions of nature; an improved infrastructure, greater security and promotion which stems from a higher GDP seem to make Turkey an attractive destination for international tourists.

Table 2. Results of the Cointegration Test

	Unrestricted Cointegration Rank Test (Trace)				**Unrestricted Cointegration Rank Test (Maximum Eigenvalue)**			
Hypothesized No. of CE(s)	Eigenvalue	Statistic	Critical Value	Prob.**	Eigenvalue	Statistic	Critical Value	Prob.**
None *	0.20035	50.5639	47.8561	0.027	0.20035	27.7252	27.5843	0.048
At most 1	0.10369	22.8387	29.7970	0.254	0.10369	13.5750	21.1316	0.400
At most 2	0.06953	9.26368	15.4947	0.341	0.06953	8.93635	14.2646	0.291
At most 3	0.00263	0.32733	3.84146	0.5672	0.002636	0.327330	3.841466	0.5672

Trace test indicates 1 cointegrating eqn(s) at the 0.05 level
* denotes rejection of the hypothesis at the 0.05 level
**MacKinnon-Haug-Michelis (1999) p-values

Table 3. Granger Causality Test Results

VEC Granger Causality/Block Exogeneity Wald Tests (Dependent Variable)								
	LGDP		**LTUR**		**LEXPO**		**LRER**	
(Excluded)	Chi-square	Prob.	Chi-square	Prob.	Chi-square	Prob.	Chi-square	Prob.
LGDP			3.689208	0.2970	5.002581	0.1716	2.834119	0.4179
LTUR	1.069833	0.7844			6.275094	0.0990	5.001837	0.1717
LEXPO	3.636250	0.3035	3.110751	0.3749		0.9824	0.749856	0.8614
LRER	9.060632	0.0285	12.37569	0.0062	0.168917			

Table 4. Results of the Long-Run Causality Test

Vector Error Correction Estimates				
	LGDP	**LTUR**	**LEXPO**	**LRER**
Cointegrating equations	-0.009537	-0.267785	-0.011623	-0.118384
	(0.01993)	(0.06523)	(0.03892)	(0.03789)
	[-0.47863]	[-4.10507]	[-0.29865]	[-3.12442]
	Included observations: 124 after adjustments Standard errors in ( ) & t-statistics in [ ]			

Table 5. Results of the Cointegration Test (Bivariate)

	Unrestricted Cointegration Rank Test (Trace)				**Unrestricted Cointegration Rank Test (Maximum Eigenvalue)**			
Hypothesized No. of CE(s)	Eigenvalue	Statistic	Critical Value	Prob.**	Eigenvalue	Statistic	Critical Value	Prob.**
None *	0.167478	29.20622	25.87211	0.0185	0.167478	22.36206	19.38704	0.0179
At most 1	0.054555	6.844161	12.51798	0.3611	0.054555	6.844161	12.51798	0.3611

Trace test indicates 1 cointegrating eqn(s) at the 0.05 level

* denotes rejection of the hypothesis at the 0.05 level

**MacKinnon-Haug-Michelis (1999) p-values

Table 6. Results of the Long-Run Causality Test (Bivariate)

Vector Error Correction Estimates		
	LGDP	**LTUR**
Cointegrating equations	0.013161	-0.142468
	(0.01427)	(0.04804)
	[0.92207]	[-2.96591]
	Included observations: 124 after adjustments Standard errors in ( ) & t-statistics in [ ]	

Table 7. Results of the Cointegration Test (1980-2001)

	Unrestricted Cointegration Rank Test (Trace)				**Unrestricted Cointegration Rank Test (Maximum Eigenvalue)**			
Hypothesized No. of CE(s)	Eigenvalue	Statistic	Critical Value	Prob.**	Eigenvalue	Statistic	Critical Value	Prob.**
None *	0.309978	49.15150	47.85613	0.0376	0.309978	31.16663	27.58434	0.0166
At most 1	0.124100	17.98487	29.79707	0.5672	0.124100	11.13033	21.13162	0.6343
At most 2	0.078059	6.854544	15.49471	0.5946	0.078059	6.827052	14.26460	0.5098
At most 3	0.000327	0.027491	3.841466	0.8682	0.000327	0.027491	3.841466	0.8682

Trace test indicates 1 cointegrating eqn(s) at the 0.05 level

* denotes rejection of the hypothesis at the 0.05 level

**MacKinnon-Haug-Michelis (1999) p-values

Table 8. Results of the Long-Run Causality Test (1980-2001)

Vector Error Correction Estimates				
	LGDP	**LTUR**	**LEXPO**	**LRER**
Cointegrating equations	-0.018122	-0.080455	0.019610	-0.058106
	(0.01126)	(0.03905)	(0.02250)	(0.02001)
	[-1.60873]	[-2.06010]	[0.87150]	[-2.90333]
	Included observations: 124 after adjustments Standard errors in ( ) & t-statistics in [ ]			

Table 9. Results of the Cointegration Test (2002-2011)

	Unrestricted Cointegration Rank Test (Trace)				**Unrestricted Cointegration Rank Test (Maximum Eigenvalue)**			
Hypothesized No. of CE(s)	Eigenvalue	Statistic	Critical Value	Prob.**	Eigenvalue	Statistic	Critical Value	Prob.**
None *	0.467072	52.09762	47.85613	0.0189	0.467072	25.17475	27.58434	0.0986
At most 1	0.334785	26.92288	29.79707	0.1035	0.334785	16.30579	21.13162	0.2075
At most 2	0.174035	10.61708	15.49471	0.2362	0.174035	7.648107	14.26460	0.4156
At most 3	0.071537	2.968976	3. 3.841466	0.0849	0.071537	2.968976	3.841466	0.0849

Trace test indicates 1 cointegrating eqn(s) at the 0.05 level

* denotes rejection of the hypothesis at the 0.05 level

**MacKinnon-Haug-Michelis (1999) p-values

Table 10. Results of the Long-Run Causality Test (2002-2011)

Vector Error Correction Estimates				
	LGDP	**LTUR**	**LEXPO**	**LRER**
Cointegrating equations	-0.025510	-0.402428	-0.279649	0.026990
	(0.05470)	(0.19000)	(0.06787)	(0.13883)
	[-0.46639]	[-2.11805]	[-4.12018]	[0.19441]
	Included observations: 124 after adjustments Standard errors in ( ) & t-statistics in [ ]			

References

Akinboade, O., and L. Braimoh. (2010). "International tourism and economic development in South Africa: a Granger causality test." *International Journal of Tourism Research*, vol. 12, no. 2, pp. 149–163.

Algieri B. (2006). "International tourism specialization of small countries." *International Journal of Tourism Research*, vol. 8, no.1, pp. 1–12.

Arslantürk, Y., and S. Atan. (2012). "The Dynamic relationship between economic growth, foreign exchange and tourism incomes: An econometric perspective on Turkey." *Journal of Business Economics and Finance*, vol. 1, no. 1, pp. 30-37.

Belloumi M. (2010). "The relationship between tourism receipts, real effective exchange rate and economic growth in Tunisia." *International Journal of Tourism Research*, vol.12, no. 5, pp. 550–560.

Brau, R., A. Lanza, and F. Pigliaru. (2003). "How fast are the tourism countries growing? The international evidence." *Nota di Lavaro* 85 2003. Fondazione Eni Enrico Mattei.

Brau, R., A. Liberto, and F. Pigliaru. (2011). "Tourism and development: A recent phenomenon built on old (institutional) roots?" *The World Economy*, vol. 34, no. 3, pp. 444-472.

Brida, J.G, and W.A Risso. (2009). "Tourism as a factor of long-run economic growth: an empirical analysis for Chile." *European Journal of Tourism Research*, vol. 2, no. 2, pp. 178-185.

Chen, C., and W. Song. (2009). "Tourism expansion, tourism uncertainty and economic growth: New evidence from Taiwan and Korea." *Tourism Management*, vol. 30, no. 3, pp. 812-818.

Choka, S., J. Macbetha, and C. Warren . (2007). "Tourism as a tool for poverty alleviation: A critical analysis of 'pro-poor rourism' and implications for sustainability." *Current Issues in Tourism*, vol. 10, no. 2-3.

Demiröz, D., and S. Ongan. (2005). "The contribution of tourism to the long-run Turkish economic growth." *Ekonomicky Casopis*, vol. 9, no. 1, pp. 880-894.

Dritsakis, N. (2004). "Tourism as a long-run economic growth factor: an empirical investigation for Greece using causality analysis." *Tourism Economics*, vol. 10, no. 3, pp. 305-316.

Durbarry, R. (2004). "Tourism and economic growth: The case of Mauritius." *Tourism Economics*, vol. 10, no. 4, pp. 389-401.

Eeckels, B., G. Filis G, C. Leon. (2012). "Tourism income and economic growth in Greece. Empirical evidence from their cyclical compenents." *Tourism Economics*, vol. 18, no. 4, pp. 817-834.

Engle, R.F., and C.W.J. Granger. (1987). "Co-integration and error correction: representation, estimation and testing." *Econometrica*, vol. 55, pp. 251–276.

Gündüz, L., and A. Hatemi. (2005). "Is the tourism-led growth hypothesis valid for Turkey?" *Applied Economics Letters*, vol. 12, no. 5, pp. 499-504.

Kadir, N., and K. Jusoff. (2010). "The cointegration and causality tests for tourism trade in Malaysia." *International Research Journal of Finance and Economics*, vol. 2, no. 1, pp. 138-155.

Katırcıoğlu, S. (2009). "Tourism, trade and growth: the case of Cyprus." *Applied Economics*, vo. 41, no. 3, pp. 2741-2750.

Lee, C., and C. Chang. 2008. "Tourism development and economic growth: A closer look to panels." *Tourism Management*, vol. 29, no. 1, pp. 180-192.

Khan, H., T. Rex, and L. Chua. (2005). "Tourism and trade: Cointegration and Granger causality tests." *Journal of Travel Research*, vol. 44, pp. 171-176.

Nayaran, P.K, S. Nayaran, and B.C. Prasad. (2010). "Tourism and economic growth: A panel data analysis for Pacific Island Countries." *Tourism Economics*, vol. 16, no. 1, pp. 169-183.

Scheyvensa, R. (2007). "Exploring the trourism-poverty nexus." *Current Issues in Tourism* vol. 10, no. 2-3.

TÜRSAB website. "Turkish Tourism." Retrieved from: http://www.tursab.org.tr/en/statistics/development-of-turkish-tourism-in-brief/turkeys-tourism-potential-and-resources_1079.html.

Vanegas, M., and R. Croes. (2003). "Growth, development and tourism in small economy: evidence from Aruba." *International Journal of Tourism Research*, vol. 5, no. 2, pp. 315-330.

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Determining Strategic R&D Sectors In Turkey: An Import-Based Approach

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Abstract

Based on the postulates of the endogenous growth theory and the findings of a number of related empirical studies, nations that endeavor to sustain considerable economic growth in the long-run should invest more in R&D activities which should be designed in an effective way considering the needs as well as the prospects of the country. Therefore, national R&D policies should be firmly constructed based on effective diagnoses, which ideally require well-established procedures. In this regard, this paper attempts to contribute to the literature by developing an index that would help identify the strategic sectors for a developing country based on an import approach. The index, which is composed of two stages, initially pinpoints the sectors with high import indicators that are further evaluated based on their technological intensity and value-addedness. The trade data on Turkey are also analyzed using the index to figure out the strategic sectors that should be incorporated within the R&D plans of the country. Results show that the most strategic manufacturing sectors for R&D in Turkey are aircraft & spacecraft, optical, photo, technical & medical apparatus and electric/electronic equipment, followed by organic chemicals and machinery.

Keywords: *R&D, strategic sectors, imports, index, decision making models, Turkey*

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Introduction

In order to catch up with the fast pace of development around the globe, research and development (R&D) strategies have increasingly gained importance for nations over the last few decades. For the developed nations who design such strategies, the main focus has been policies for further technological advancements, as the development of those countries have already been realized in technologically- intensive sectors. So, for most developed nations, strategic sectors have been already defined and exploited. In the case of developing countries, however, a need to determine those sectors is still quite apparent. Although some nations in this category present a list of such sectors within their growth plans, the way those areas are determined seems usually ambiguous. Hence, to shape national R&D strategies in today's increasingly competitive world, scientific approaches need to be envisaged and implemented.

In this respect, it should first be underlined that there may exist very different perspectives to enable such an attempt. One possible way of achieving this end would be taking into account the resources that the country possesses and then matching the sectors and products that may be incorporated with those. On the other hand, a focus on exports, considering the latest trends and expectations in world markets may prove to be another avenue. With such an approach, which is based on an export-oriented growth strategy, critical sectors and products that can be produced and sold to potential markets can be determined.

Another perspective that may prove more straightforward would be employing import data to figure out the most basic needs of a country. Since import figures represent the dependency of a country on certain products, the import-based approach would simply reveal the portfolio of products that can be considered for domestic production. Based on this method, sectors with high- import indicators can then be evaluated in terms of technological intensity and value-addedness, as these are the factors that are classified as vital for sustained economic growth. Therefore, in order to find out the areas critical in the design of a proper and effective national R&D program, strategic sectors for import-dependent developing countries can be determined by employing the trade data at hand and designing of a clear decision making process.

In this respect, this paper attempts to model an introductory methodology to employing the import-based approach in shaping national R&D strategies for developing countries. Furthermore, the method developed is directed towards identifying the strategic sectors in Turkey, which is a country that has long exhibited an outstanding performance of growth as a developing economy within the last decade and hence is of interest with respect to its strategic considerations.

The paper proceeds as follows: Section 2 briefly discusses the importance of R&D for developing countries and establishes the relationship between R &D and with imports. Section 3 introduces the methodology developed. Section 4 presents the case study that utilizes data on Turkey. Section 5 concludes the paper.

The Importance of R&D for Developing Nations

Today, it is believed that the developing countries mostly possess comparative advantages in the production of labor-intensive goods and services (IMF, 2001). However, according to endogenous growth models, a country's ability to generate persistent gains in terms of welfare depends critically on its speed of technological advance or innovation. These models clearly recognize the technological change brought about through R&D activities and its impact on productivity and hence growth (Solow, 1957, Grossman &Helpman, 1991). The theory established in these models has also been empirically tested in a number of studies in the literature. Ulku (2004) has analyzed the effects of innovation on income per capita in a set of OECD and non-OECD countries and confirmed the existence of a positive relationship.In a study by UNECE (2004) analyzing a sample of 49 high and middle-income countries, technology competitiveness has exhibited a significantly positive impact on growth. Similarly, Kekic (2007) has found out high returns with regard to innovation in lower-income countries.

In this sense, it can be argued that a developing country with a target of long-term economic growth needs to sustain investment in technology as a vital part of its strategy to remain competitive in a dynamic global economy. Hence, for such a country, certain policy attention is required to increase the scale of research and development activities, not only quantitatively but also qualitatively. That is why; national R&D policies

should be firmly constructed on up-to-date and effective diagnoses. One related approach that could well serve the purpose would be looking at recent import trends as they represent an important aspect of national demand as well as indicating the areas in which the country in question somehow lags behind.

In various sources, economic theory suggests a positive relationship between imports and economic growth, although the direction seems ambiguous. On the one hand, it is argued that a raise in the GDP level increases the national demand and hence import levels. On the other hand, imports are claimed to be an engine of growth through the technology transfers that they lead to. The implication of this argument is that a developing economy can acquire technological know-how through imports at a negligible cost. However, empirical findings on this issue are very mixed. This is because while some recent studies like Kasahara and Rodrigue(2008), Jones (2008) and Halpern et al. (2009) have found a significant role of import or imported intermediary inputs, Lawrence and Weinstein (1999), Van Biesebroeck (2003) and Muendler (2004) have shown insignificant or not very sizable impacts emanating from this activity (Sharma, 2011).

In this regard, as presented in a seminal paper by Cohen and Levinthal (1989), some economists argue that firms need to invest in in-home R&D to acquire new technologies, which can alternatively be made available through some other methods including imports. Moreover, the positive relationship between countries' *own R&D activities* and productivity growth has also been confirmed by studies such as those by Frantzen (2000). These findings mainly support the endogenous growth models that draw attention to technological change in order to explain the growth pattern of world economies.

In this framework, the main assumption of this study is the following: In formulating the strategic R&D plans of a developing country, an approach encouraging competition against imports in specific sectors would be more appropriate. This is because thetechnological improvement of a country though a target of a sustainable and competitive growth should not only rely on technology transfers through imports. Therefore, the paper focuses on designing a model that helps determine some critical industries in which research and development funds should be directed to, by adopting an import based approach.

Methodology

To determine the nationally-strategic R&D sectors, a two-step index is developed in this study, using a multi-criteria decision making (MCDM) process. As in most MCDM methods, the following technique is utilized in both steps. (Triantaphyllou et al., 1998)

1. Determining the relevant criteria and alternatives to be evaluated.
2. Attaching numerical measures to the relative importance of the criteria.
3. Processing the numerical values to determine the ranking of each alternative.

At the first stage of the index, a portfolio of promising sectors, which have relatively higher import shares and/or import growth rates are obtained. The portfolio attained is then evaluated and ranked based on two additional criteria: the technological-intensity level and value-addedness level. The scores yielded by this procedure reveal a list of the strategic areas for research and development in the country. Within this framework, the procedure can be summarized as below.

Stage 1: Determining the Promising Sectors

Let $S=\{S_i$, for i=1,2,….n$\}$ be a set of alternative sectors to be ranked *with respect to* the set of criteria $C_1=\{IS, IG\}$, where IS stands for import share and IG represents import growth rate. Hence, let

$$IS= [is_i]_{nx1} \text{ for } i=1,\ldots,n \quad (1)$$

be the vector of the import shares of sectors based on total imports, of which each element takes a value within the range of 0 and 1.

Then, using the import growth rates provided by the dataset, a second vector is formed such that

$$IG= [ig_i]_{nx1} \text{ for } i=1,\ldots,n. \quad (2)$$

Based on these vectors, the scores to be obtained for the purpose of ranking the sectors in the first step of the index are calculated by taking the weighted averages of the two criteria above. It should be noted that the

weighted average approach is the most often used aggregation operator in MCDM models. However, before computing the weighted averages, the vectors have to be normalized. The intuition behind normalization is to use relative values instead of actual ones for an easier way of comparison through the ranking. This approach is also one of the main features adopted by some well-known MCDM models, such as Analytic Hierarchy Process (AHP) which is thoroughly explained by Saaty (2008).

In this sense, for the first vector IS, no normalization process is required due to the fact that import shares would naturally sum up to 1. However, unlike IS, IG has to be normalized and transformed into IG*as below, since the sum of its elements does not equal to 1. Hence,

$$\text{IG}^* = \left[ig_i^*\right]_{nx1} \text{ for i=1,….,n,} \tag{3}$$

$$\text{where } ig_i^* = \frac{ig_i}{\sum_{i=1}^{n} ig_i} \tag{4}$$

Having obtained the normalized values of the criteria for each sector by the two vectors above, both are multiplied by their weights and then the new vectors obtained are summed up. At this point, it should be underlined that determining the weights for the criteria requires another decision-making model which can provide a topic of further research. In this paper, however, for the sake of simplicity, various weight combinations are used to come up with a ranking. In this regard,

$$w_A = [w_1 \quad w_2 \quad \dots \quad w_c]_{1xc} \text{ and } \quad w_B = [1\ 1\ \dots 1]_{1xc} - w_A \tag{5}$$

where w_A and w_B yield the weights assigned to IS and IG*, respectively and c represents the number of combinations. Furthermore, it is assumed that $0 < w_A < 1$ and $0 < w_B < 1$. Then it follows that

$$R = IS\ x\ w_A + IG^*x\ w_B \tag{6}$$

where the matrix represents the final scores obtained through the weighted average calculation. Notice that the rows of the matrix give the scores of each sector based on various weight combinations, which are represented by each column.

As a final procedure to complete the first stage of the index, the columns in the matrix are sorted separately and then by picking the most common sectors in these columns that yield a score above average, a portfolio of the most promising sectors is generated such that

$S^*=\{S_i, \text{ for } i=1,2,\ldots.m\}$, where $m<n$.

Stage 2: Determining the Strategic Sectors

Intuitively, for a developing country that aims to grow in a fast manner, strategic sectors/products would mainly include the ones that offer high technology and/or added value. So, upon determining those sectors, it will be easier for the country to decide on which ones to be possibly engaged in, considering the national capacity. In this regard, at the second stage of the methodology, the portfolio of the sectors chosen at the end of Stage 1, S^*, is subjected to an evaluation of technology intensity as well as value-addedness. Hence, the problem in this step can be defined as follows:

$S^*$is a set of alternatives called the promising sectors to be ranked *with respect to* the set of criteria $C_2=\{TI, VA\}$, where TI and VA stand for technological intensity and value addedness levels, respectively. So, let

$$TI= [ti_i]_{mx1} \text{ for } i=1,\ldots,m \tag{7}$$

be the vector for the technological intensity level for each sector. The elements in this vector are assigned according to the technological intensity index developed by the OECD. Based on the OECD index which comprises of four categories, the scale used in this paper for the level of technology ranges from 0 to 3 in a linear manner, where 0 corresponds to low-technology sectors at one end and 3 represents high-technology at the other. Details regarding the scale and the sectors are presented in Table 1.

TI, is then required to be normalized such that

$$TI^*= [ti_i^*]_{mx1} \text{ for } i=1,\ldots,m \tag{8}$$

$$\text{where } ti_i^* = \frac{ti_i}{\sum_{i=1}^{m} ti_i} \tag{9}$$

Table 1. Manufacturing industries classified according to their global technological intensity

Sector	Technology Level	Scale Assigned
Aerospace	High	3
Pharmaceuticals	High	3
Computers, office equipment	High	3
Electronics-communication	High	3
Precision instruments	High	3
Electrical machinery	Medium-high	2
Motor vehicles	Medium-high	2
Chemicals (except pharmaceuticals)	Medium-high	2
Other transport equipment	Medium-high	2
Machinery and equipment	Medium-high	2
Petroleum refining	Medium-low	1
Rubber and plastics	Medium-low	1
Non-metallic mineral products	Medium-low	1
Shipbuilding	Medium-low	1
Basic metals	Medium-low	1
Fabricated metal products	Medium-low	1
Wood and furniture	Low	0
Paper and printing	Low	0
Textiles, clothing, leather	Low	0
Other manufacturing industry	Low	0

Source: OECD Handbook on Economic Globalization Indicators, 2005

Upon the formation of TI*, the next step is to construct the value-addedness vector, VA. The main challenge that emerges here, which can be mentioned as a likely shortcoming of the methodology, is the measurement of the value-addedness factor. Unfortunately, conventional trade statistics do not reveal those sectors of the economy where value-added originates. This task can only be achieved by disentangling the domestic value chain into its sectoral components but in practice we can never have the level of detail needed to conduct a value-added decomposition for all individual products. One approach to solve this issue is the use of Input-Output Tables which were developed by OECD through using aggregated data (OECD, 2012). However, the industries in the tables are mostly large categories which combine several subsectors, causing a problem to appropriately assign the value-addedness data to the specific sectors provided by the trade data. Also, particularly for the purposes of the empirical part of this study, the tables create a time mismatch due to the unavailability of data for

recent years. The most recent data supplied in the tables belong to the mid-2000's. Due to these caveats, the Input-Output Tables are not utilized as a source of data in this analysis but can be considered as a good reference for further studies when they are updated with recent statistics and/or aligned with trade data.

Hence, as a general proxy for value-addedness, unit prices are employed in the formation of the VA vector. For this purpose, weighted averages of the unit prices of the products for every sector are calculated to get a rough idea about the level of the value-addedness of each sector. However, once the unit prices are obtained, it would most probably be noticed that the data obtained include mainly low and medium price levels but also a few high ones which can be considered outliers. This causes a non-normality situation and that is why a data transformation is needed due to the presence of those outliers.

In this regard, in order to respond to the skewness towards large values and hence improve the normality of the values of the criterion, the "natural log" transformation seems suitable to be employed as a mathematical modification tool. Hence, the "ln" of the unit values attained from the sectors is calculated in the first place. The new values would constitute a more normal and symmetric pattern that limit gigantic differences in the calculations of evaluations.

Having generated the vector of the transformed values, the next step is to normalize it by dividing each element by the sum of the values in the vector. So, to summarize mathematically.

Let VA=$[va_i]_{mx1}$ for i=1,….,m represent the original vector of the unit values of the sectors. Then, the logarithmic transformation is performed as follows:

VA*= $[va_i^*]_{mx1}$ for i=1,….,m (10)

where va_i^* =ln va_i (11)

As a last step to get the final vector of the value-addedness criterion, the values in VA* need to be normalized to obtain

VA**= $[va_i^{**}]_{mx1}$ for i=1,….,m (12)

where $va_i^{**} = \frac{va_i^*}{\sum_{i=1}^{m} va_i^*}$ (13)

Once VA**, the vector of "value-addedness" is built, the final scores for the evaluation of the sectors are easily obtained, along with the vector of "technological intensity". In this sense, one simple algebraic formula is enough to rank the most strategic sectors of the country. In other words, let be the matrix of final scores to be attained through the weighted average calculation for the two criteria in question. Similar to the previous stage, by taking advantage of (5), is calculated through assigning a combination of different weights on TI* and VA** such that

$$R^* = TI^* x\, w_A + VA^{**} x\, w_B \quad (14)$$

As a result of this procedure, R* yields the final scores of the sectors, based on which a ranking can be conducted to isolate the strategic sectors. In this framework, parallel to the last step in the first stage, the sectors with scores above the average value subject to various weight combinations are chosen to be the most strategic ones as below:

$$S^{**}=\{S_i, \text{ for } i=1,2,\ldots,l\}, \text{ where } l<m \quad (15)$$

It should be reminded that the fact that the selection criterion used in this study is chosen as having a value above the mean does not restrict any further applications from employing another threshold value.

Data and Results

The data for Turkey used in this study were derived from the TradeMap which embodies a database of trade statistics at an international level. The raw data utilized in the first stage of the methodology contain the import volumes of chapters for the year of 2011 as well as the import growth rate of each per annum in the period of 2010 and 2011. The import shares calculated as percentages based on the volume of total imports can be found in Tables 2-a and Table 2-b, along with the growth rates.

As the tables reveal, mineral fuels and oils encompass a conspicuously big portion of total imports, with a share of almost one quarter. Imports in the sector of machinery rank second, with a considerably large slice of 11,26%, followed by iron and steel, motor vehicles, electrical/electronic equipment and plastics, each of which have a share higher than 5%.

Table 2-a. Import Shares and Import Growth Rates of Sectors in Turkey

Chapter	Import Share (2011, %)	Import Growth Rate (p.a., 2010&2011,%)
Mineral fuels, oils, distillation products, etc	22.47	41
Machinery, nuclear reactors, boilers, etc	11.26	27
Iron and steel	8.48	27
Vehicles other than railway, tramway	7.13	28
Electrical, electronic equipment	6.99	15
Plastics and articles thereof	5.22	29
Pearls, precious stones, metals, coins, etc	2.92	131
Organic chemicals	2.29	25
Pharmaceutical products	1.95	7
Copper and articles thereof	1.71	25
Optical, photo, technical, medical, etc apparatus	1.71	20
Aircraft, spacecraft, and parts thereof	1.63	25
Cotton	1.50	7
Rubber and articles thereof	1.40	45
Aluminium and articles thereof	1.35	31
Paper and paperboard, articles of pulp, paper and board	1.29	10
Articles of iron or steel	1.05	28
Manmade staple fibres	1.02	18
Miscellaneous chemical products	0.92	23
Manmade filaments	0.83	19
Cereals	0.80	83
Tanning, dyeing extracts, tannins, derivs,pigments etc	0.78	22
Articles of apparel, accessories, not knit or crochet	0.78	21
Inorganic chemicals, precious metal compound, isotopes	0.71	21
Oil seed, oleagic fruits, grain, seed, fruit, etc, nes	0.70	9
Animal,vegetable fats and oils, cleavage products, etc	0.67	62
Ships, boats and other floating structures	0.63	45
Wood and articles of wood, wood charcoal	0.59	30
Furniture, lighting, signs, prefabricated buildings	0.58	29
Fertilizers	0.57	35
Ores, slag and ash	0.53	27
Articles of apparel, accessories, knit or crochet	0.45	8
Essential oils, perfumes, cosmetics, toileteries	0.44	9
Live animals	0.43	208
Footwear, gaiters and the like, parts thereof	0.36	32
Residues, wastes of food industry, animal fodder	0.36	16
Soaps, lubricants, waxes, candles, modelling pastes	0.34	30
Miscellaneous articles of base metal	0.33	18
Tools, implements, cutlery, etc of base metal	0.33	35
Railway, tramway locomotives, rolling stock, equipment	0.31	42
Raw hides and skins (other than furskins) and leather	0.30	53
Glass and glassware	0.29	14
Toys, games, sports requisites	0.27	39
Pulp of wood, fibrous cellulosic material, waste etc	0.25	11
Knitted or crocheted fabric	0.23	50
Stone, plaster, cement, asbestos, mica, etc articles	0.22	27

Table 2-b. Import Shares and Import Growth Rates of Sectors in Turkey

Chapter	Import Share (2011, %)	Import Growth Rate (p.a., 2010&2011,%)
Meat and edible meat offal	0.21	105
Zinc and articles thereof	0.20	14
Albuminoids, modified starches, glues, enzymes	0.20	15
Cocoa and cocoa preparations	0.20	20
Articles of leather, animal gut, harness, travel goods	0.20	17
Miscellaneous edible preparations	0.20	27
Commodities not elsewhere specified	0.20	29
Wool, animal hair, horsehair yarn and fabric thereof	0.19	24
Ceramic products	0.19	16
Miscellaneous manufactured articles	0.18	15
Salt, sulphur, earth, stone, plaster, lime and cement	0.18	41
Wadding, felt, nonwovens, yarns, twine, cordage, etc	0.17	0
Tobacco and manufactured tobacco substitutes	0.17	9
Edible fruit, nuts, peel of citrus fruit, melons	0.16	25
Edible vegetables and certain roots and tubers	0.15	17
Impregnated, coated or laminated textile fabric	0.15	27
Clocks and watches and parts thereof	0.13	24
Vegetable textile fibres nes, paper yarn, woven fabric	0.11	1
Photographic or cinematographic goods	0.10	7
Lead and articles thereof	0.09	26
Nickel and articles thereof	0.09	28
Beverages, spirits and vinegar	0.09	53
Other made textile articles, sets, worn clothing etc	0.09	41
Special woven or tufted fabric, lace, tapestry etc	0.08	14
Cereal, flour, starch, milk preparations and products	0.08	17
Carpets and other textile floor coverings	0.08	7
Fish, crustaceans, molluscs, aquatic invertebrates nes	0.07	30
Printed books, newspapers, pictures etc	0.07	24
Arms and ammunition, parts and accessories thereof	0.05	-19
Coffee, tea, mate and spices	0.05	14
Other base metals, cermets, articles thereof	0.04	25
Furskins and artificial fur, manufactures thereof	0.04	29
Dairy products, eggs, honey, edible animal product nes	0.04	-18
Vegetable, fruit, nut, etc food preparations	0.04	44
Tin and articles thereof	0.03	40
Live trees, plants, bulbs, roots, cut flowers etc	0.03	36
Milling products, malt, starches, inulin, wheat gluten	0.03	28
Sugars and sugar confectionery	0.03	21
Products of animal origin, nes	0.02	48
Explosives, pyrotechnics, matches, pyrophorics, etc	0.02	47
Headgear and parts thereof	0.02	25
Umbrellas, walking-sticks, seat-sticks, whips, etc	0.02	17
Silk	0.02	12
Works of art, collectors pieces and antiques	0.02	84
Musical instruments, parts and accessories	0.02	12
Bird skin, feathers, artificial flowers, human hair	0.02	20
Lac, gums, resins, vegetable saps and extracts nes	0.02	14
Manufactures of plaiting material, basketwork, etc.	0.01	15
Vegetable plaiting materials, vegetable products nes	0.003	22
Cork and articles of cork	0.003	17
Meat, fish and seafood food preparations nes	0.001	-32

Data Source: Trade Map, Author's Calculations

As for growth, one can clearly observe that the rates are mostly at quite high levels for a good number of chapters, where it is 30% for the overall imports. Among the sectors named above in terms of high import shares, mineral fuels and oils are worthy of attention here too, with a rate of growth of 41%. The rate of annual increase is also quite high for the other top importing sectors, hovering close to 30% .

Taking advantage of these data, the computations in the first stage of the methodology yield the scores for the chapters among which a list of promising sectors should be selected. By ranking the chapters based on the scores under various weight scenarios, 15 sectors above the average in all cases are to be evaluated in the second stage. Table 3 exhibits these sectors with their scores under 3 different weight assignments, along with their standard deviation (SD) intervals around the mean.

Table 3. Sectors with Highest Import Scores: The Promising Sectors in Turkey

Chapter	**R* (Score)**	**SD Interval**	**R** (Score)**	**SD Interval**	**R*** (Score)**	**SD Interval**
Mineral fuels, oils, distillation products, etc	0.162	+7	0.120	+7	0.078	+5
Machinery, nuclear reactors, boilers, etc	0.082	+4	0.061	+4	0.041	+3
Iron and steel	0.062	+3	0.047	+3	0.032	+2
Vehicles other than railway, tramway	0.053	+3	0.041	+3	0.029	+2
Electrical, electronic equipment	0.051	+3	0.038	+2	0.025	+2
Plastics and articles thereof	0.040	+2	0.031	+2	0.023	+2
Pearls, precious stones, metals, coins, etc	0.035	+2	0.039	+2	0.042	+3
Organic chemicals	0.019	+1	0.016	+1	0.013	+1
Cereals	0.015	+1	0.019	+1	0.024	+2
Copper and articles thereof	0.015	+1	0.013	+1	0.012	+1
Rubber and articles thereof	0.015	+1	0.015	+1	0.016	+1
Aircraft, spacecraft, and parts thereof	0.014	+1	0.013	+1	0.011	+1
Optical, photo, technical, medical, etc apparatus	0.014	+1	0.012	+1	0.010	+1
Aluminium and articles thereof	0.013	+1	0.012	+1	0.012	+1
Articles of iron or steel	0.010	+1	0.010	+1	0.010	+1

* denotes the case when W_A=0,7
** denotes the case when W_A=0,5
*** denotes the case when W_A=0,3

According to the table, mineral fuels & oils and machinery turn out to be the top two sectors with significantly large scores and SD intervals in all scenarios. Iron & steel as well as motor vehicles also take place among the noteworthy chapters with their considerably high scores in the rankings, closely followed by electrical/electronic equipment, pearls and precious stones and plastics. The remaining sectors fall within the +1 SD interval around the mean, with scores of mostly between 0,01 and 0,02. It should be pointed out that the other weight combinations evaluated in the calculations, but not listed in the table, bring about similar outcomes, as well.

The whole list of sectors identified at the end of this analysis and labeled as S* is then subjected to a further examination in the second phase of the methodology. At this stage, in order to assess the value-addedness of each sector, unit prices based on product clusters provided by the dataset are utilized. In this regard, the weighted averages of the prices of the clusters are computed to find the average unit prices of the sectors. The unit prices calculated are then used for the evaluation of the level of value-addedness.

Computation results show that the importing chapter with the highest unit price in Turkey is found to be pearls and precious stones with a value of approximately USD44.000 per kg. The next highest-valued chapters turn out to be aircraft &spacecraft and optical, photo, technical, medical apparatus, with 3-digit prices. The rest of the list includes sectors with much lower unit prices, mostly with single-digit values, where the mineral fuels and oils sector bottoms out with a figure below 1 USD. Statistics on the unit prices of the promising sectors can be seen in Table 4.

An issue to be underlined at this point is that the extreme nature of the pearls and precious stones sectors may still be a problem after the logarithmic transformation, as it has an exceptionally high unit price. So, although the data on unit prices are utilized as the best proxy available for value-addedness, this part of the methodology can be tackled in future studies to find a better measure.

Furthermore, the vector of technological intensity level to be used in the second stage is formed based on the index developed by OECD, as explained in the previous chapter of this study. According to this index, among the chapters filtered through the first stage:aircraft &spacecraft, optical, photo, technical & medical apparatus and electrical/electronic equipment appear to constitute the top technological sectors, followed by machinery, motor vehicles, and organic chemicals which are considered

sectors with medium-high technological intensity as Table 4 indicates. The remaining sectors in the portfolio take place within the category of medium-low technological concentration, with an exception of cereals which is considered a low technology area.

Table 4. Unit Prices and Technological Intensity Levels of the Promising Sectors in Turkey

Sector	Average Unit Price (per kg, $)	Technological Intensity Level (0-3)
Pearls, precious stones, metals, coins, etc	43,988	1
Aircraft, spacecraft, and parts thereof	816	3
Optical, photo, technical, medical, etc apparatus	138.3	3
Electrical, electronic equipment	69	3
Organic chemicals	30	2
Machinery, nuclear reactors, boilers, etc	26.3	2
Vehicles other than railway, tramway	11.3	2
Copper and articles thereof	9.3	1
Rubber and articles thereof	4.69	1
Articles of iron and steel	4.25	1
Aluminium and articles thereof	3.76	1
Plastics and articles thereof	2.84	1
Mineral fuels, oils, distillation products, etc	0.91	1
Iron and steel	0.46	1
Cereals	0.35	0

Data Source: Trade Map, OECD, Author's Calculations

The results of the index calculations are presented in Table 5. Findings clearly indicate that regardless of the weight assignments to the criteria, including the ones not presented in the table, three sectors appear to be differentiated from the others as listed below:

Aircraft & spacecraft
Optical, photo, technical & medical apparatus
Electric/electronic equipment

Hence, these three sectors can be classified as the most strategic areas for R&D in Turkey, followed by *organic chemicals* and *machinery*, both of which exhibit quite good performance through the ranking. In addition to that, *vehicles* hold a place in the list right after these strategic sectors, with a score just around the mean.

Table 5. Final Scores and Ranking of Sectors

	W_A=0,7		W_A=0,5		W_A=0,3
Aircraft, spacecraft, and parts thereof	0.14	Pearls, precious stones, metals, coins, etc	0.15	Pearls, precious stones, metals, coins, etc	0.19
Optical, photo, technical, medical, etc apparatus	0.13	Aircraft, spacecraft, and parts thereof	0.15	Aircraft, spacecraft, and parts thereof	0.15
Electrical, electronic equipment	0.12	Optical, photo, technical, medical, etc apparatus	0.12	Optical, photo, technical, medical, etc apparatus	0.12
Pearls, precious stones, metals, coins, etc	0.11	Electrical, electronic equipment	0.12	Electrical, electronic equipment	0.11
Organic chemicals	0.09	Organic chemicals	0.08	Organic chemicals	0.08
Machinery, nuclear reactors, boilers, etc	0.08	Machinery, nuclear reactors, boilers, etc	0.08	Machinery, nuclear reactors, boilers, etc	0.08
Vehicles other than railway, tramway	0.08	Vehicles other than railway, tramway	0.07	Vehicles other than railway, tramway	0.07
Copper and articles thereof	0.05	Copper and articles thereof	0.05	Copper and articles thereof	0.05
Rubber and articles thereof	0.04	Rubber and articles thereof	0.04	Rubber and articles thereof	0.04
Articles of iron and steel	0.04	Articles of iron and steel	0.04	Articles of iron and steel	0.04
Aluminium and articles thereof	0.04	Aluminium and articles thereof	0.04	Aluminium and articles thereof	0.04
Plastics and articles thereof	0.04	Plastics and articles thereof	0.03	Plastics and articles thereof	0.03
Mineral fuels, oils, distillation products, etc	0.03	Mineral fuels, oils, distillation products, etc	0.02	Mineral fuels, oils, distillation products, etc	0.01
Iron and steel	0.02	Iron and steel	0.01	Iron and steel	0.00
Cereals	-0.01	Cereals	-0.01	Cereals	-0.02

Pearls and precious stones turns out to be one of the top sectors too but it looks like that it jumps up to this level mainly due to its extremely high unit price. So, considering the limitations in the trade data for a perfect measure for value-addedness, this specific outcome should be re-evaluated upon future improvements to this measurement.

The remaining chapters at the bottom of the table score well below the mean, making it hard to describe them as strategically important as the ones listed above, at least in terms of technological intensity and value-addedness, which are the criteria shaping the borders of this study.

Conclusions

In today's competitive world, it is widely believed that any nation that endeavors to sustain considerable economic growth has to invest more in R&D activities which should be appropriately designed in alignment with the needs as well as the prospects of the country. Concerning this fundamental issue, a few different perspectives can be utilized, among which exports, national resources and imports can be mentioned. This paper attempted to benefit from the imports approach to suggest a methodology that generated an index for focus and then analyzed the case for Turkey through it.

The analysis has revealed that the most strategic manufacturing sectors for R&D in Turkey are aircraft & spacecraft, optical, photo, technical& medical apparatus and electric/electronic equipment. In addition, organic chemicals and machinery compose the next significant category of strategic sectors. Pearls & precious stones can be mentioned as a potentially important category, too, although the sector owes its high score to its high unit price. Focusing the research and development activities on these areas would serve two purposes: producing high technology and high value-added products for sustainable growth while reducing imports and trade deficits. That is why, from an import-based perspective, which significantly represents the fundamental needs of the country, it is apparent that these R&D areas should be taken into consideration by the planners in Turkey for the design of strategic road maps.

To summarize, the index formed in this study based on as a decision-making model has tried to answer a vital national question via a straightforward methodology, and more importantly using figures. Among the sectors indicated, the more advantageous ones, especially in terms of resources, can naturally be considered as those to be given priority to. Plus, it should be mentioned that the method designed can also be employed to specifically determine the critical "products" (within those sectors) that R & D activities need to concentrate on, and which can be examined as a topic of further research. Moreover, it would be a good idea to utilize a group decision-making model in future studies, in order to be able to assign ideal weights to the criteria in the analysis and arrive at more explicit results. Such an approach would also help frame the practical applications of the model for groups of decision makers in the countries concerned.

References

Cohen, W.M., and D.A. Levinthal. (1989). "Innovation and learning: The two faces of R&D." *Economic Journal*, vol. 99, no. 397, pp.569-596.

Frantzen D. (2000). "Innovation, international technological diffusion and changing influence of R&D on productivity." *Cambridge Journal of Economics*, vol. 24, no. 2, pp.193-210.

Grossman, G. M., and E. Helpman. (1991). *Innovation and growth in the global economy*. Cambridge, MA: MIT Press.

Halpern, L., M. Koren, and A. Szeidl. (2009). "Imported inputs and productivity." Center for Firms in the Global Economy (*CeFiG) Working Papers* no. 8.

IMF (2001)."Global trade and liberalization."*IMF Issues Briefs*.

Jones, C.I. (2008). "Intermediate goods and weak links: A theory of economic development." NBER Working Papers no. 13834.

Kasahara, H., and J. Rodrigue. (2008). "Does the use of imported intermediates increase productivity? Plant-level evidence." *Journal of Development Economics,* vol. 87, no. 1, pp.106-118.

Kekic, L. (2007). "Innovation: transforming the way business creates." Economist Intelligence Unit Background Document.

Lawrence, R. Z., and D.E. Weinstein. (1999). "Trade and growth: Import-led or export-led? Evidence from Japan and Korea." NBER Working Papers no. 7264

Meade, L.M., and A. Presley (2002). "R&D project selection using the analytic network process". *IEEE Transactions on Engineering Management*, vol. 49, no. 1, pp.59-66.

Muendler, M.A. (2004). "Trade, technology and productivity: A study Of Brazilian manufacturers, 1986-1998", CESifo Working Paper Series no. 1148.

Nair-Reichert, U. (2001). "R&D investment and import competition in unionized industries." *Applied Economic Letters*, vol. 8, no. 10, pp.669-74.

OECD (2005).*Handbook on Economic Globalization Indicators*. *OECD.*

OECD (2012). "Trade in value-added: Concepts, methodologies and challenges." Joint OECD-WTO Note. OECD.

Saaty, T.L. (2008). "Decision making with the analytic hierarchy process", *International Journal of Services Sciences*, vol. 1, no. 1, pp.83–98.

Sharma C. (2011). "Imported intermediary inputs, R&D and firm's productivity: Evidence from Indian manufacturing". *Proceedings of the German Development Economics Conference*, 74.

Solow, R.M. (1957). "Technical progress and the aggregate production function". *Review of Economics and Statistics*, vol. 39, no. 3, pp.312–320.

Trade Map (2012). *International Trade Center*. Available at: www.trademap.org.

Triantaphyllou E., B. Shu, S. Nieto Sanchez, and T. Ray. (1998). "Multi-criteria decision making: An operations research approach." *Encyclopedia of Electrical and Electronics Engineering*, vol. 15, pp.175-186.

Ulku, H. (2004)."R&D, innovation and economic growth: An empirical analysis". IMF Working Papers no. 04/185.

UNECE (2004). "The competitiveness of nations: Economic growth in the ECE region". *Economic Survey of Europe* 2004 no.2.

Van Biesebroeck, J. (2003). "Revisiting some productivity debates." NBER Working Papers no. 10065.

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Education and Consumption Differentials: Evidence from an Emerging Country

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Abstract

This paper investigates the effects of education level on consumption in an emerging country by using the 2004 Turkish Household Budget Survey. Education level is very important in determining consumption quintiles. There is no person with a graduate degree found in the poorest twenty percent and only 0.18 percent of poorest quintile consists of people with a bachelor degree. Regression analysis shows that one extra year of schooling increases consumption by 10.2 percent on average and people with a graduate degree consume about 201.6 percent more than illiterate people in Turkey.

Keywords: *Education level, Consumption, Turkish Household Budget Survey.*

The views expressed in this paper are those of the author and do not necessarily represent the official views of the Central Bank of the Republic of Turkey.

Introduction

It is well documented that education plays an important role in economic growth and development. Disparity in education constitutes the main reason for the income and consumption inequality among people as discussed in Card (1999), Cohn and Addison (1998) and Psacharopoulos (1985, 1994). It is an investment for lifetime accumulation wealth. In

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average, people with a graduate degree earn more than people with an undergraduate degree and college graduates earn more than high school graduates and so on. Consumption inequality is lower than income inequality normally and education is still a key factor in consumption inequality as discussed by Cutler and Katz (1992), Deaton and Paxson (1994), Krueger and Perri (2003) and Mayer and Jencks (1993).

In this paper, I investigate the effects of education level on consumption distribution using the 2004 Turkish Household Budget Survey (HBS). This survey was conducted by the Turkish Statistical Institute (Turkstat) at household and individual levels.

This paper examines the general features of education level of people as regard consumption using the household budget survey. Regression analysis results indicate that one extra year of schooling increases consumption by 10.2 percent on average and people with a graduate degree consume about 201.6 percent more than illiterate people in Turkey. The remainder of the paper is organized as follows. The next section gives details about the Turkish education system. Section 3 is concerned with data. Section 4 presents the regression results. Section 5 concludes the paper.

Data

The data used in this paper is the micro-data of the 2004 Turkish Household Budget Survey (HBS). The HBS was conducted involving 8544 sample households for a year from January to December in 2004. Around 720 sample households were surveyed each month and monthly consumption and income data were obtained in the survey month. Over the next month, 720 different sample households were investigated and their consumption and income data were collected for that month. This monthly data was indexed to the end of year, December 2004, in order to enable the drawing of comparisons among sets of different monthly data.

As seen from the Table 1, education level is very important in determining consumption quintiles. 18.8 percent of the poorest household heads are illiterate and this rate is much higher than the percentage of the illiterate people to overall population, 7.7 percent. Illiterate people consist of only 2.4 percent of the richest quintile. There is no person with a graduate degree in the poorest twenty percent and only 0.18 percent of poorest quintile consists of people with a bachelor degree. As expected, people with more education consume more in average.

Table 1. Education Level of Household Head

	Poorest 20 %	2nd Quintile	3rd Quintile	4th Quintile	Richest 20 %	Overall Population
Illiterate	18.78	7.14	5.85	4.35	2.36	7.70
Below Primary	8.66	4.92	4.80	4.29	2.66	5.07
Primary	58.81	59.04	52.84	46.75	30.54	49.63
Secondary	7.26	11.12	11.94	11.60	9.98	10.38
High School	6.09	15.62	18.90	22.16	25.87	17.72
Associate	0.23	0.82	1.99	3.60	5.55	2.43
Bachelor	0.18	1.35	3.63	6.96	21.44	6.68
Graduate	0.00	0.00	0.06	0.29	1.59	0.39

Source: Author's calculation from HBS, 2004

The educational level of the population is not at a level comparable to EU countries. In Turkey, 62 percent of household heads have less than a secondary school education. The Turkish government passed a law that extended the compulsory education at the end of secondary school in 1997 in order to increase the level of education. Moreover, only 9.5 percent of household heads have more than high school degrees and this percentage is much lower than the percentages in many developed countries.

Table 2. Education Level of Spouse

	Poorest 20 %	2nd Quintile	3rd Quintile	4th Quintile	Richest 20 %	Overall Population
Illiterate	43.39	18.85	15.89	12.41	4.97	19.39
Below Primary	8.13	7.37	6.93	5.03	3.44	6.24
Primary	44.11	62.10	57.82	57.28	37.53	52.07
Secondary	1.79	5.48	6.67	6.64	8.92	5.97
High School	1.92	6.07	11.97	16.30	24.58	11.89
Associate	0.00	0.07	0.46	1.14	5.63	1.37
Bachelor	0.00	0.07	0.26	1.21	13.90	2.87
Graduate	0.00	0.00	0.00	0.00	1.02	0.19

Source: Author's calculation from HBS, 2004

Table 2 shows that 96.3 percent of the poorest household spouses have less than a secondary school education. There is no household in the poorest quintile in which the spouse has more than a high school education. Only 5.0 percent of the richest quintile consists of illiterate spouses, lower than the overall percentage of illiterate spouses, 19.4 percent. The spouses with a bachelor degree compose 13.9 percent of the richest quintile and this percentage in the overall population stands at 2.9 percent. It is remarkable that all of the spouses with a graduate degree are in the richest quintile.

It can be said that the education level of household spouses is also very significant factor in affecting consumption levels.

19.4 percent of the overall population consists of illiterate household spouses and this percentage is very high compared to the education level of household heads. Moreover, only 4.6 percent of household spouses hold more than a high school degree. The percentage of people holding more than high school degree is 7.7 among household heads. It can be noticed that there is an education gap in genders since household heads are usually male.

The Results

The standard model for measuring the relation between education and permanent income or consumption is the Mincerian equation (1974), namely:

$$\text{Log}\,(c_i) = \alpha + \beta_1 s_i + \beta_2\,(\text{age}\text{-}s_i\text{-}6) + \beta_3\,(\text{age}\text{-}\,s_i\text{-}6)^2 + \varepsilon_i \qquad (1)$$

In this equation, c_i is the consumption of the person, s_i is the years of schooling, and (age-s_i-6) is potential experience. The coefficient β_1 is returns to schooling and shows the percentage increase in consumption associated with one extra year of schooling. The coefficient β_2 represents the percentage increase in consumption for one extra year of potential experience. The reason for putting the square of potential experience into the equation is to capture a concave relation between potential experience and consumption that would be the situation if people's human capital investment after school declines by their age.

Table 3. Regression Results of Consumption

		Coefficients
	Years of Schooling	.10167** (.00321)
	Years of experience	.06288** (.00571)
	Years of experience squared	-.00100** (.00009)
	Constant	20.63185** (.09497)
Adj. R^2		0.2625
No. of Obser.		3508

Note: Standard errors are reported under the coefficients, ** indicate the level of significance at the 1% level.

As seen in Table 3, one extra year of schooling increases consumption by 10.2 percent on average after controlling for experience. This is lower than the calculation of Duygan and Guner (2006) where they calculated that one extra year of schooling increases earnings by 12.5 percent on average using the 2002 HBS. Thus, it supports the assertation based on the information that consumption inequality is lower than income inequality according to Turkish data. In the dataset, only the education levels of people are given instead of years of schooling. Therefore, years of schooling are calculated using this conversion table.

Table 4: Conversion Table of Years of Schooling

	Years of Schooling
Illiterate	0
Below Primary	2
Primary	5
Secondary	8
High School	11
Associate	13
Bachelor	15
Graduate	17

This conversion table might underestimate the years of schooling for high school dropouts. Moreover, there may be people with a Ph.D degree that take more than two years to obtain after a bachelor degree. The annual consumptions are used as consumption, c_i of household heads in the Mincer equation. Returns with regard to one extra year of experience is 6.3 percent as shown in the Table 3. If education levels are used as categorical variables using dummy variables instead of years of schooling in the Mincer regression, the regression results in the Table 5. The illiterate group is the omitted category in the regression.

As shown in Table 5, people with some primary education consume about 30.8 percent more than illiterate people. Primary school graduates consume about 52.6 percent more than illiterate people and about 21.8 percent more than some primary education holders. The spending difference between secondary and primary school graduates is about 25.8 percent. Bachelor degree holders consume about 18.0 percent more than people with an associate degree. The average spending difference is 45.5 percent between bachelor and graduate degree holders and this is the highest difference between subsequent education levels. Therefore, it can

be said that having a graduate degree increases consumption greatly. This is because only 0.39 percent of household heads have graduate degree. Moreover, people with graduate degree consume 201.6 percent more than illiterate people.

Table 5: Regression Results of Consumption by Education Levels

		Coefficients
	Below Primary	.30813** (.10261)
	Primary	.52633** (.07457)
	Secondary	.78432** (.08111)
	High School	1.09396** (.07767)
	Associate	1.38078** (.09377)
	Bachelor	1.56100** (.08222)
	Graduate	2.01651** (.17664)
	Years of experience	.06339** (.00579)
	Years of experience squared	-.00101** (.00009)
	Constant	20.62254** (.11124)
Adj. R^2		0.2633
No. of Obser.		3508

Note: Standard errors are reported under the coefficients, ** indicate the level of significance at the 1% level..

Summary and Concluding Remarks

This paper explores the effect of education level on consumption distribution and consumption behavior of people using 2004 Turkish Household Budget Survey. The HBS presents information about the education level of individuals, incomes and consumption of people. As a result of regression analysis, one extra year of schooling increases consumption by 10.2 percent on average. People with an elementary school degree consume about 52.6 percent more than illiterate people. This difference constitutes 201.6 percent for people with a graduate degree. Moreover, the difference is 45.5 percent between bachelor and graduate degree holders and this is the highest difference between subsequent education levels.

References

Card D. (1999) "The casual effect of education on earnings." In: *Handbook of Labour Economics*, O.Ashenfelter and D.Card (eds.), Amsterdam: North Holland

Cohn, E., and J.T. Addison. (1998), "The economic returns to lifelong learning." *Education Economics,* vol. 6, no. 3, pp. 253–308.

Cutler, D., and L. Katz. (1992). "Rising inequality? Changes in the distribution of income and consumption in the 1980's." *American Economic Review*, vol. 82, no. 2, pp. 546–551.

Deaton, A. and C. Paxson. (1994). "Intertemporal choice and inequality." *Journal of Political Economy*, vol. 102, no. 3, pp. 437–467.

Duygan, B. and N. Guner. (2006) "Income and consumption inequality in Turkey: What role does education play?" In: *The Turkish Economy: The Real Economy, Corporate Governance and Reform and Stabilization Policy*. S. Altuğ and A. Filiztekin (eds.), Chapter 2, Oxon, OX: Routledge Curzon Studies in Middle Eastern Economies.

Krueger, D., and F. Perri. (2002). "Does income inequality lead to consumption inequality." NBER Working Paper no. 9202.

Mayer, S. and C. Jencks. (1993). "Recent trends in economic inequality in the United States: Income versus expenditures versus well-being." In: *Poverty and Prosperity in the USA in the Late Twentieth Century*, Papadimitriou, D and E. Wol. (eds.), Chapter 27, New York, NY: St. Martin's Press.

Mincer, J. (1974). "Schooling, experience, and earnings", New York, NY: National Bureau of Economic Research.

Psacharopoulos, G. (1985). "Returns to education: A further international update and implications", *Journal of Human Resources*, vol. 20, no.4, pp. 583-604.

Psacharopoulos, G. (1994). "Returns to investment in education: A global update", *World Development,* vol. 22, no.9, pp. 1325–1343.

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Iran's Changed Perception Concerning its Role in Afghanistan Following Soviet Disintegration

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Abstract

Afghanistan is situated in a geopolitically sensitive region. Following Soviet disintegration, Afghanistan became a gateway to the resource-rich independent states of Central Asia. The Taliban was propped up in Afghanistan by Pakistan to allow it to gain access to the natural resources of Central Asia. Iran's concerns in Afghanistan also witnessed changes. During the Taliban's rise to power, there was more to the strategic thinking in Iran's foreign policy making than merely the immediate concerns regarding the issues of the spread of drugs and the need to deter ethnic cleansing by the Taliban in Afghanistan. Iran's opposition to the Taliban and Pakistan's role in Afghanistan also constituted an indirect opposition to the greater American role in the region. While up to the Soviet withdrawal from Afghanistan, Iran's interest was confined to the Gulf and was restricted to enhancing its influence in Afghanistan where large number of Shia Muslims lived, Iran took advantage of the disintegration of the Soviet Union to expand its interests and widened its role considerably to incorporate a growing interest in Central Asia and expressed its intention of using Afghanistan as a corridor to Central Asia. Iran also demonstrated a growing interest in South Asia as it emerged as a new market for Central Asian resources. Iran's changed perception about its interests and role shaped its foreign policy after 9/11.

Key words: *Geopolitics, Containment, Hegemony, Regional power, Strategy, Natural resources*

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Introduction

Afghanistan's geostrategic location has attracted regional and extra-regional powers alike. For many powers, it not only serves as a bridge to Central Asia, but also links the Eurasian landmass with the Indian Ocean and thereby contributes to multi-dimensional strategies-both naval and continental. Iran's interests and its role in Afghanistan changed with the change of the geopolitical scenario in the aftermath of Soviet disintegration. Iran wanted greater connectivity between the West Asian and Central Asian regions and aspired to be a strong regional power following the decline of Iraq's position of power. However, Iran's endeavor in this regard has been curtailed by the American hegemonic ambition in the region which not only aims at undercutting Iranian influence but also seeks to promote its own influence vigorously. I have argued in this paper that Iran's interest in Afghanistan is a reflection of its larger interest in the entire region spanning West Asia, Central Asia and Afghanistan. Secondly, the competing geopolitical roles played by the US and Iran in the wider region finds similar reflections in Afghanistan given its geostrategic location.

Iran's aspiration to play a major role in the regions of West Asia, Central Asia, as well as in Afghanistan was more of a geopolitical necessity than anything else. Iran's interests were, to a large extent, shaped by the military and economic opportunities that the region provided to other major powers. The US, as an extra-regional power wanted to exert control over the region's resources and their supply for geopolitical reasons rather than satisfy its own consumption needs. The importance of energy resources lies in operating the military for more expansionist purposes, sustaining the alliance system by providing natural resources to the allies. For example, the US always wanted to secure the supply of energy to its West European allies and Japan and direct the foreign policies of different states by denying such energy resources by exercising control over their production and supply (Mercille, 2009). It is argued that in the first Gulf War, the US did not intervene to secure an oil supply from Middle East for its own consumption. The US imports little of it. It intervened to keep this supply in friendly hands and maintain its strategy of "divide and conquer" by dividing the control of the Gulf's oil among several rulers to prevent the emergence of strong regional powers in the region. The US depends on geographically closer and more reliable sources located in the traditional American "backyard" and imports almost fifty per cent of oil from Canada and Latin American countries (Mercille, 2009).

Similarly, Iran is a resource-rich country. Its interest in providing pipelines for the supply of Central Asian energy resources has the long-term objective of enabling it to become a regional power rather than merely profiting from the transit fees. According to Oystein Noreng, besides transit fees, by facilitating oil and gas transit, Iran would be in a better position to develop trade with the Central Asian region. Central Asia could eventually become an important market for Iranian manufactured goods. In turn, the combination of oil and gas transit and trade could establish Iran as regional power in Central Asia. With oil transiting from Central Asia to Iranian Gulf ports, Iran would strengthen its position in the Gulf, essentially in relation to Saudi-Arabia, but potentially also in relation to Iraq (Noreng, 2009). Thus increase of Iran's influence in Central Asia would also reinforce its strengthened position in relation to its Gulf neighbours.

Geopolitics and Iran

The disintegration of the USSR and emergence of the independent Central Asian Republics brought forth long term considerations for the major powers to chalk out plans to lay down trade routes and pipelines to transfer energy resources from these states and outbid other contending powers. The fact that the three countries which share the majority of the region's energy and resources, namely Kazakhstan, Azerbaijan and Turkmenistan, are landlocked makes them depend on their immediate neighbours for access to Western markets. In the aftermath of the collapse of communism, the ex-Soviet republics of Central Asia, in particular Azerbaijan and Kazakhstan, have been trying to exploit their natural resources as they consider oil to be the prime means of securing their economic and political independence. According to the estimates of geologists, the oil deposits of the Caspian Sea may not be quantitatively comparable to the deposits of the Persian Gulf, but they are still considered of excellent quality and able to provide a significant alternative source of energy in the 21st century. In particular, it is estimated that the entire Caspian Sea is a basin full of oil and natural gas, starting from Azerbaijan and continuing to the opposite shore on the territory of Kazakhstan and Turkmenistan. These deposits carry enormous importance because of the expected exhaustion of the deposits of Alaska and the North Sea by the year 2015. According to a Congressional Research Service report "in the Caspian region, the prospective increase in proven natural gas reserves

appears to be much smaller in relative terms than for oil, but still very large. It is estimated that there are nearly 300tcf in additional natural gas reserves in the region. Should this be the case, the proven reserves of the total Caspian region in the near future would put the region's proven gas reserve total at more than twice its present level and far exceed present Saudi Arabian natural gas reserves" (Gelb, 2006).

Iran, apart from the export of its own oil, strives to provide routes for the transfer Central Asian energy resources. The concern for the investors, oil-producing countries and oil-consuming countries is finding out the shortest, cheapest and safest exit routes for the transfer of energy resources from the landlocked Central Asian Republics. But these are the principles of the market economy. Powerful states also play a geopolitical role by excluding certain other states from the leverage of providing supply routes though routes that are thought to be the most convenient ones on the basis of market principles.

Russia controls most of the pipeline system built during the Soviet Union so as to supply the Central Asian energy resources to the European market (Gelb, 2006). The Central Asian states are in the look out for their independent identities do not appreciate the Russian monopoly over the supply routes and therefore want to diversify their supplies to various markets through numerous supply routes. According to most independent energy experts as well as the Western oil companies, Iran provides the shortest and cheapest route to the Gulf and to the South Asian markets. From a purely practical point of view this is the most sensible option as within the shortest distance possible, the Central Asian states are able to 'plug into' the already existing Iranian pipeline system. Therefore, the countries of the Caspian Sea region turned their attention towards Iran as a future exit route. However, from a geopolitical perspective, the US role in the Central Asian states has been to limit the influence of Russia in the north and Iran in the south by providing an alternative pipeline system. The US granted official invitations to the presidents of Azerbaijan, Kazakhstan and Turkmenistan. And all visited Washington so as to hear about US preferred route: the Baku-Tbilisi-Ceyhan route in Turkey and the other from Turkmenistan to Pakistan through Afghanistan. Both routes were planned to bypass Iran and Russia. The US administration had exerted pressure on oil companies to accept the project. The pipeline using the Baku- Tbilisi-Ceyhan route was estimated to cost nearly four billion dollars. The financial companies objected to the costs and would not have shouldered the burden had the US and Turkish government not paid part of it (Tarock, 1999).

Similarly, though the US, Pakistan and Saudi Arabia apparently shared a common economic objective in the construction of the pipeline joining Turkmenistan and Pakistan through Afghanistan with the US oil company Unocol and Saudi Arabian company Delta Oil as the main financers of the project, this was deemed a commercially non-viable project. This project involved the risk of insecurity as the pipeline was to pass through an unstable Afghanistan and Pakistan . Unocol Vice President, Marty Miller declared that the project at that moment was not financeable. Despite the commercial non-viability of the pipeline projects such as the TAP and the pipeline through Turkey, they were given utmost importance by the governments of the US and Saudi Arabia in the case of the TAP and the US and Turkey in case of Baku-Tbilisi-Ceyhan. Williams and others argue that the US went to the extent of invading and destroying Iraqi oil resources to shoot up the price of oil to give effect to its financially nonviable projects. According to Paul A. Williams and others (2008: 383) "the prolonged damage to Iraq's oil infrastructure under the occupation and the effects of disrepair and sabotage helped to cause the price of oil to skyrocket and make the projects viable. The projects aimed at the containment of Iran more than breaking Russian control over the Caucasus transport corridor".

They argue that "these accomplishments seem remarkable in light of the fact that the seminal BTC pipeline was nearly shelved after the price collapse in 1998 and the downgrading of Azerbaijan's offshore oil-reserve estimates. Initial US support for BTC was primarily political rather than financial. Despite favorable rhetoric from members of the Clinton Administration, the American government remained largely noncommittal towards funding the BTC, even as a means of breaking Russian control over the Caucasus transport corridor. Rather, Washington did more to back the project by maintaining its ban on the building of new pipelines from and through Iran. The occupation of Iraq inadvertently imparted a new momentum to Caspian projects like the BTC and BTE by helping to ratchet up world energy prices. The aforementioned conditions also elicited Turkey's interest in completing these projects" (Williams, Tekin, Ali, 2008). The plan for the TAP pipeline project was, however, shelved after the Taliban turned away from the US orbit of influence.

Iran not only wants to transit the Central Asian energy resources to the Gulf, it also harbours plans to reach out to the South Asian market. The TAP project, unlike other pipeline projects, can be seen as a strategy of

the US to deny Iran the South Asian market. If the TAP pipeline system is successfully laid down, it will deprive Iran of transit fees from the supply of energy resources to the South Asian market and Iran will lose the South Asian markets for the sale of its own energy resources. Iran is also an exporter of oil and gas, and finally will be bereft of potential political and trade influence in South Asia. Iran has shown interest in the idea of Asian Common Market and thus developed healthy relationships with China. China in turn treats Iran as a regional power and as a counterweight to Russian's control over the energy resources in Central Asia. Iran's increased interests in forging new links with China can be interpreted as its attempt to break the US's containment policy in the region. The US has experienced divergences with Iran from the nuclear issue to allow the latter to play a dominant role in the region. The US's pipeline project of laying down the western - Baku-Tbilisi-Ceyhan route and the south eastern – Turkmenistan-Afghanistan-Pakistan route as an alternative to the southern route provided by Iran is a move to deprive Iran of playing the role of a regional power. Iran views the policy of the US in the region as one of encirclement using allies such as Turkey, Saudi Arabia, Israel and Pakistan. Some analysts argue that Tehran's support of Afghan renegade warlord, Ismail Khan in Herat is part of its plan to prevent the Afghan pipeline project and protect Iran's influence in the global oil market (Kemp, 2002). Iran's opposition to the Taliban can be viewed from this angle.

Since the Taliban started its military campaign in 1994, the US had provided indications of positive support to the campaign. The US officials on different occasions had expressed that "they saw nothing objectionable about the version of Islamic law the Taliban have imposed in the areas under their control. The Taliban should be 'acknowledged' as an 'indigenous' movement which has 'demonstrated staying power', and that when 'you get to know them you find they really have a great sense of humour'" (Tarock, 1999).

Before Taliban captured Herat, Islamabad welcomed Iran's participation in a pipeline project. In order to accommodate the Iranian interest in Afghanistan, Pakistan declared that it would facilitate the Iranian pipeline to pass through its territory to India. Taliban's capture of Herat prompted Unocol and Delta oil to finalise a deal with Turkmenistan for a pipeline to Pakistan through Afghanistan. Tehran's limited influence in Afghanistan through Herat ended with the Taliban's capture of that area. Herat is situated at the crossroad of competing Turkic and Persian

empires. It is the cradle of Afghanistan's history and civilization and has enjoyed historic ties to Persia and the Silk Road trade routes. Iran shares a 400-mile border with Western Afghanistan and it has always felt a sense of possession towards Herat. The project for an alternative route through Afghanistan to Pakistan could be seen as a strategy developed by the US, Saudi Arabia and Pakistan to deprive Iran of playing the role of a regional power after the latter lost its influence in western Afghanistan.

Apart from the oil politics, the US-Iran relationship and their respective roles in the region was also shaped by pure strategic considerations. The Rimland countries like Afghanistan, Iran, Iraq and Pakistan etc. provide opportunities to develop multidimensional military strategies to states to become powerful and establish hegemony in the region. These are the regions which link the Eurasian Heartland with the Indian Ocean. Controlling these regions would mean development of both continental and maritime strategies at the same time. Davutoglu (1998: 9) argues "therefore the undeclared cooperation of the US and the USSR against Iran during the Iran-Iraq war and the declared coalition against Iraq in the Gulf War is not surprising. Both the super powers militarily supported Iraq to prevent Iran from consolidating the Rimland through a wave of revolutions. Then they co-operatively destroyed Iraqi military capacity which had provided Iraq with a superior strategic position from the geopolitical perspective at the core of the Rimland".

Iran and Afghanistan after 9/11

Before 9/11, there was occasional cooperation between Iran and the US during the Afghan Civil War. Iran, along with the United States, Russia, and the countries bordering Afghanistan, attended U.N.-sponsored meetings in New York (the Six Plus Two group) to try to end the internal conflict in Afghanistan. Iran and the United States also participated in a U.N.-sponsored group in Geneva, which included Italy and Germany (Katzman, 2003).

Post-9/11 period also witnessed a short term cooperative relationship between the US and Iran in addressing the problem of Afghanistan. As per the Iranian diplomatic sources, members of the Iranian Revolutionary Guard Corps cooperated with the CIA and the US Special Operations Forces in supplying and funding the commanders of the Northern Alliance. The Cyprus Group favored by the Iranian government participated in the

negotiations in Bonn, Germany, to initiate a peace process in the war-torn country (Rubin and Batmanglich, 2008).

Since the United States partly depended on Tehran's good will for stabilizing and establishing a new order in Afghanistan, both sides entered into a tacit agreement on limited cooperation, first and foremost because of similar interests. Both Washington and Tehran had an interest in peace and stability after decades of war in Afghanistan, though motivated by different factors. It is argued that while for the US, the major priority was quick success in the war against terrorism; the Iranian government was driven by the prospect of pursuing its plans for regional cooperation facilitated by increased stability on its eastern border and a new Afghan government favorably disposed to Iran.

In Afghanistan, US and Iranian interests converged on the issue of stemming the trade in narcotics. Afghanistan is one of the world's largest producers of illegal drugs, including over 90% of the world's opium, 80% of which will flow either through Iran or Pakistan. According to the State Department's Bureau for International Narcotics and Law Enforcement Affairs 2006 Strategy Report, "There is overwhelming evidence of Iran's strong commitment to keep drugs leaving Afghanistan from reaching its citizens." (The CNA corporation, 2006). Reportedly, thousands of Iran's law enforcement personnel were killed policing the Afghan border in an attempt to stem the flow of narcotics from that country. According to Robert Finn, the US ambassador to Afghanistan, this problem common to both the countries provided the basis for long-term cooperation between the US and Iran (The CNA corporation, 2006).

The terrorist attack on the twin towers in the US suspended American containment policy towards Iran for a while. The US and Iran jointly insisted that the Bonn agreement contain a timetable for national elections and require the Afghan administration to cooperate in the fight against terrorism and drugs (The CNA corporation, 2006).

In addition to an increase in Iranian common interests, and US, a change of regime in Iran also played an important role in moderating the stance of both the powers. In 1997, Mohammed Khatami came to power with his reform program. He granted freedom to the press, eased social restrictions, and brought limited degree of accountability to government. Khatami announced in a 1998 interview on CNN that he wanted to start breaking down "the wall of mistrust" that separated Iran from the United States. In response to this declaration, the US policy makers began to moderate their views towards the Islamic Republic (Talwar, 2001).

Iran's influence was instrumental in the establishment of the Karzai government. The Northern Alliance, dominated by Tajik commanders with close ties to Iran, was reluctant to share power with Hamid Karzai, a prominent Pashtun tribal leader. Iranian political pressure on Northern Alliance leaders during negotiations in Bonn, persuaded them to reach a compromise and agree to the formation of the new government. Iran also played an active role in Afghanistan's reconstruction as from 2001. Iran initially pledged $570 million in 2002. At the Conference on Afghan Reconstruction held in February 2006, Iran pledged an additional $100 million in aid, making it one of the largest donor states since 2001.

The cooperation between the US and Iran initially seen after 9/11 could not be sustained any longer. This sabotaged peace and political developments in Afghanistan. The basis of the growing divergence of interests between Iran and the US has to be found in geopolitics.

The US policy of containment and Iran's bid for regional supremacy

Neither 9/11 nor regime change, however, completely changed the US policy towards Iran and Iran's perspective on the American role in its neighbourhood. Mutual suspicions were deep in terms of their pursuit of geopolitical interests in the region. While Iran always aspired to become a regional power, the US wanted to establish its hegemony in the region to serve its long term geopolitical interests. Even the moderate political leader Khatami of Iran had "always taken extreme care to portray his reforms as consistent with the ideals of the revolution and Iran's constitutional order" (Talwar, 2001). Geoffrey Kemp (2002) observes that while prior to 9/11 Iran was extremely concerned over the political situation in Afghanistan and drug smuggling from Afghanistan to Iran, in the post-9/11 era, its priorities have changed. Iran now grapples with the issues of how to deal with US operations in Afghanistan and the changing geopolitical dynamics throughout Eurasia.

Before the 9/11, Iran was worried about the American geopolitical objectives in Central Asia that the US was pursuing through the Taliban. 9/11, however, brought America to its doorstep. In the aftermath of 9/11, the US has entered the Eurasian Heartland by establishing military bases in Central Asian states including Uzbekistan, Kyrgyzstan and Tajikistan. It is not only vital to develop continental strategies but it is also situated on the border of Iran. The US military bases in Rimland states such as

Pakistan and Afghanistan and in the Heartland led to an Iranian fear of encirclement as the former could operate both from the sea and from the Eurasian continent. Iran feared the US troop presence near its borders when a 300-hectare airbase was being built by the US in the desert area of Holang in Ghorian district of Herat province, situated only 45 kilometres away from the Iranian frontier. According to the US military and Afghan government, the base was built for the Afghan National Army. However, some experts argue that the base would put Iran's entire air space under American domination. Moreover, since 2004, the Shindand airbase in the same Herat province was renovated and tripled in size to become the second largest military airbase in Afghanistan next to that of Bagram. Iran wants to play an important role in the region by controlling the economically and militarily sensitive areas while the role of the US in the Middle East, Central Asia and Southwest Asia and that of Russia in the Central Asian region in the aftermath of the disintegration of the USSR has been to deny such a role to Iran.

To contain Iran, the American President George Bush included Iran in the "Axis of Evil" in his January 2002 State of the Union speech (Katzman, 2010). He also named Pakistan as the US's closest non-NATO ally. This occurred at the same time as Iran was cooperating with the US in the aftermath of 9/11. Later, President Barack Obama declared that "his Administration shares the goals of previous Administrations to contain Iran's strategic capabilities and regional influence. The Administration has not changed the previous Administration's characterization of Iran as a "profound threat to U.S. national security interests," a perception generated not only by Iran's nuclear program but also by its military assistance to armed groups in Iraq and Afghanistan, to the Palestinian group Hamas, and to Lebanese Hezbollah" (Katzman, 2010).

The Atlantic Council of the US report titled 'Needed: A comprehensive US Policy Towards Pakistan' released in February 2009 recommended to the Obama administration to include Saudi Arabia in its fight against terrorism within Pakistan (Goswami, 2009). While Saudi Arabia has the dubious record of funding the most radical *madrassas* in Pakistan, the engagement of Iran, given its geographical proximity with both Pakistan and Afghanistan, would have been a better choice. Later, the blueprint of Af-Pak strategy included Iran with its emphasis on regional cooperation but at the London Conference, regional approach was discarded in favour of a coalition approach involving Islamic nations. This coalition included Pakistan, Saudi Arabia, Iran, Turkey and a handful of Central Asian

Republics bordering Afghanistan. Inclusion of Saudi Arabia seems to be intended to minimise the influence of Iran in seeking a solution to the Afghan problem. Furthermore, the plan to include the moderate Taliban in the governance process is yet another attempt to contain Iran in the region. The US seeks to isolate Iran by increasing sanctions against Iran on the nuclear issue and providing support for regime change as part of wider democratisation initiatives. Instead of promoting and strengthening current democratic trends within Iran, the U.S. favours enforcement strategies that offer support to the opposition to the regime. In the US budget 2010, $67 million was appropriated for the promotion of democracy in Iran ($19.6 million through DRL and $48.6 million through the Bureau of Near Eastern Affairs/USAID) (Congressional Research Service, 2010). The US currently lends support to the democratic movements in the Arabic states under the rubric of "Arab Spring" to promote its geopolitical interests which threaten Iran's national interests. For example, it is argued that the US would welcome any movement claiming to be democratic to topple the Assad regime in Syria to break the Iran-Syria alliance even if the end result might be a fundamentalist Muslim Brotherhood government (Gharekhan, 2011).

Moreover, arms sales to Gulf States such as Bahrain, Kuwait, the UAE, and Saudi Arabia, within the framework of the Gulf Security Dialogue, are part of the containment strategy of the US (Katzman, 2010: 46). For example, under President Obama, the Department of Defense has announced arms sales to these states totaling more than $4 billion (Knapp, 2010). Though Obama sought pragmatic engagement with Iran on regional issues like Iraq and Afghanistan, the policies of containment contradict such initiatives.

At the 46th Munich Security Conference in the month of February 2010, "both the US National Security Adviser and the NATO Secretary-General advocated for the extension of NATO's field of action. The integration of members of the Gulf Cooperation Council in the Istanbul Cooperation Initiative and arms sales by the US to the Gulf states within the framework of Gulf Security Dialogue on the West and the Afghanistan-Pakistan conflict in the East place NATO in a position to encircle Iran" (Rozoff, 2010). There is an intensification of military contacts, visits and joint activities between NATO and the six members of the Gulf Cooperation Council (GCC), which parallel the intensification of the U.S. buildup in the region and is conducted within the framework of the

Istanbul Cooperation Initiative (ICI) launched in 2004.

The US policy of containing Iran in the Gulf region in the west and relying more on Pakistan in the east define their respective roles in Afghanistan. So far the US continues with its policy of containment towards Iran by limiting their cooperation in Afghanistan. The differences on a host of areas encompassing nuclear issues and regional issues including Iraq, Lebanon and Palestine revolve around the core issue of Iran's aspiration to be a regional power and the US's search for hegemony in the region.

The US-Iranian bilateral relationship with regard to Afghanistan has not witnessed any improvements in recent years. In May 2010, Gen Stanley A. McChrystal, then the NATO commander in Afghanistan, warned that Iran was training Afghan fighters inside Iran. In March 2011, Adm Mullen told Congress that these sizable weapons shipments from Iran had been intercepted. Tehran has refuted these charges. On 28 July 2011, David S. Cohen, the Treasury Under-Secretary for Terrorism and Financial Intelligence, announced that Iran had entered a secret deal with an al-Qaeda offshoot that provided money and recruits for attacks in Afghanistan and Pakistan (D' Souza, 2011). Senior NATO commanders have warned repeatedly that Iran is supplying the insurgency with weapons, money and even providing training at camps on the Iranian side of the border.

The Iranian government, on the other hand, charges the US with aiding the Balochi Sunni insurgent group Jundullah, which has been responsible for killing several senior Islamic Revolutionary Guards Corps officers. Iran has tried to substantiate its accusations with statements from the Jundullah leaders. In 2010, Iranian state television broadcast a statement by a captured Jundullah leader, Abdolmalek Rigi, in which he said that he received support from the US. Although the US denies any such support and claims such statements to have been extracted under duress, the continuation of the Balochi insurgency with an impact on Iran's territorial integrity will most likely result in furthering Iranian actions that undermine US goals in Afghanistan. Iran's aid to Afghan insurgents can be viewed as countering the perceived U.S. support of Jundullah, and increasing evidence of Iran's support to various Afghan insurgent groups that could be directly tied to the ongoing insurgency in Iran's Baluchistan territory. Indeed, heightened Iranian concern over the Baluchi insurgency could result in even more-sophisticated Iranian aid being delivered to Afghan insurgent groups fighting U.S. forces. This aid could materialize in spite of Iran's traditional enmity with the Taliban. It is argued that potential

U.S. or Israeli military actions against Iran's nuclear facilities could result in more-significant Iranian aid to the Taliban (Nader and Laha, 2011).

The New York Times reported that, in August 2010, Iran's ambassador to Afghanistan, Feda Hussein Maliki, handed over a bag filled with euros to Karzai's chief of staff, Umar Daudzai, on Karzai's personal aircraft. The payment reportedly was intended to promote Iran's interests and to counter US and other western influence in Afghanistan (McQuillen and Mattingly, 2010). It is argued that in the 2010 parliamentary elections, Iran apparently provided monetary support to the Hazaras who have gained considerable prominence and clout on the Afghan political scene. Of the 249 seats in the lower house, 50 went to the Hazaras. They won disproportionately far more seats in relation to their population. As many as 11 Hazara candidates swept the elections in Ghazni and won all the seats in the Pashtun majority province. All these occurences have made the US more suspicious of Iran's role in Afghanistan. To add to American suspicions, Iran did not spend much time in tightening its relationship with the Afghan regime as differences grew between Afghan President Hamid Karzai and the US.

Iran's Strategies as a Regional Power

Iran developed close ties with Russia, India and China to promote its interests in the militarily and economically sensitive region spanning Afghanistan, West Asia and Central Asia. The Iranian project of Iran-Pakistan-India pipeline does not hamper the Russian interests of maintaining its monopoly over the northern routes to supply energy resources from Central Asia to the West European markets. Moreover, the collusion in the interests of both the countries to deny opportunities to the US to establish hegemony over the region and to open the North-South Corridor aimed at connecting Russian and Indian ports via Iran, have brought them closer (Afrasiabi and Maleki, 2003). Cooperating at the military and strategic level, Russia planned to transfer the S-300 missile defence system to Iran and used Belarus as a conduit for selling the SA-20 missile system to it (Bhadrakumar, 2011). Iran and India cooperated on some important issues. They cooperated in laying down an alternative route to Central Asia through Afghanistan. There were also increased instances of consultations between India and Iran on the issue of Taliban reconciliation. However, India's opposition to Iran's nuclear programme at the UN and its inability

to push the IPI pipeline project under pressure from the US has hampered the Iran-India bilateral relationship. The bilateral relationship also depends on India's role in the western- sponsored democratic movements in the Middle East. China's dependence on Iran for energy resources and its interest in not allowing the US military presence in its neighbourhood in the Central Asian region has brought Iran and China closer. They also shared views regarding the proposal of inclusion of the moderate Taliban in the governance structure of Afghanistan at the London conference, January 2010. They maintain that such a distinction would not decrease the menace of the Taliban rather than to institutionalize it. Apart from for religious reasons,Iran fears that the US might revive its plan for the TAP pipeline project by reconciling with the Taliban.

However, Iran has also its independent strategies to contain the influence of major powers in Afghanistan and the Central Asian region. While Russia, in the post-Cold War era, wants to see the European Economic Community (EEC) and the Collective Security Treaty Organisation (CSTO) as the basis of regional order, China looks at the Sanghai Regional Cooperation Organisation (SCO) as the basis of regional order and Iran is interested in seeing alternative forms of regional groupings to lessen the roles of China and Russia in Central Asia. The treaty of the Persian Speaking Union between Iran, Afghanistan and Tajikistan exemplifies Iranian interests to play the role of a major regional power by linking itself and Central Asia with the alternative regional groupings.

Iran, despite severe international sanctions and the US attempts to contain it, aspires to be a major player in the region and develop different strategies to fulfill its aspirations. This geopolitical battle is fought in Afghanistan in view of its geographical proximity to the Central Asian states to its north and Iran to its west, on account of its potential to provide a pipeline route to link South Asian states and offers justification for the long-term military presence of the US in and around it.

To prevent a strong US military presence in Afghanistan, Iran has urged the UN to take a prominent role in shaping the country's political system. But the US, so as to make Iran's attempts to win support for its proposals less effective, has accused Iran of sabotaging the peace process by supplying sophisticated arms to the Taliban in western Afghanistan and shepherding fleeing members of the defeated Taliban and Al-Qaeda out of Afghanistan through Iran. There are arguments that though some evidence of Iranian weapons in Afghanistan has been discovered, it is unclear as to whether the Iranian government is formally involved or the weapons have

been smuggled in by third parties and rogue elements within Iran. Some analysts put forth the argument that Iran pursues a policy of "managed instability" in Afghanistan to bog down the US forces there although it does not wish the Taliban to capture power once again. According to Michael Rubin (2007: 13) "for Iran, influence in Afghanistan appears to be a zero-sum game. While the Iranian government welcomed the Taliban's fall, they were less than sanguine about the actions of Washington in precipitating it. While Iranian and American diplomats cooperated to form a post-Taliban political order, many Iranian actions run counter to their own commitments and declarations of cooperation. Iranian security services did not adhere to the promises of Iranian diplomats to engage their Western counterparts".

It is argued that Iran supports its proxies like Hezbollah, a militant organisation, in Afghanistan while seeking to monopolise the net of social services. For example, after the fall of the Taliban, Iran dispatched Hasan Kazemi Qomi, a Revolutionary Guard commander who served as the Iranian regime's chief liaison to Hezbollah in Lebanon, as its chief diplomat to Herat. Barnet argues that "while the Iranian government contributed personnel to the construction effort, they used the dispatch of such volunteers to provide cover for Revolutionary Guardsmen and intelligence operatives. On March 8, 2002, Afghan commanders intercepted 12 Iranian agents and proxies who were organizing armed resistance among Afghan commanders" (Rubin, 2007).

Iran's aspiration to become a regional power is reflected in its attempt to become a nuclear power despite international sanctions, in its massive support for non-state militant groups like Hamas and Hezbollah in terms of finance and arms, its seeking of support from Islamic countries against the occupation of Palestine by Israel and in its continued role in strengthening Shiite groups in the neighbouring countries where they form a minority. Supporting Sunni groups like Hamas has compensated for its policy of promoting the interests of only Shiite groups. In Lebanon, the Sunni group of Hamas was granted shelter and protection by the Shiites of Hezbollah in accordance with the Muslim code of milmastia (hospitality). The exiled Sunnis responded to this gesture of goodwill by assisting the efforts of their Shiite hosts to gain a foothold within Israel. It was something that Hezbollah had been unable to achieve, since the Islamic population of Israel remained almost entirely Sunni and remained actively antagonistic to the presence of a Shiite party within the waaf ("the land of Palestine") (Williams, 2009).

Although initially, after the Islamic revolution in 1979, the zeal to export Shiite ideology shaped Iran's foreign policy, geopolitical considerations played a prominent role in the formulation of foreign policies later. Unlike during the early phase of the revolution, Iran's support for its coethnics in the near abroad is not based on emotions rather on geopolitical considerations. For example, Iran's relations with hard-line Shiite factions, such as al Sadr faction are occasional, tactical and short term and aimed at undermining the unilateral US policy of excluding Iran from Iraqi politics (Berzegar, 2010). Iran was quite aware of the fact that any long term support for the Shiite factions in Iraq would disturb power equations there and not serve its own interests in the long run by generating greater regional instability. Similarly, to prevent the US from preventing its influence in Afghanistan, Iran always played a role in the direction of making Herat a buffer zone between the US occupying forces and itself. Its multiple demonstrations of support for different non-Pushtun groups in their challenge to the Taliban during the latter's rise to power and alleged support for the Taliban to bog down the US forces point to the fact that coethnic groups did not remain the permanent constituency for Iranian support (Berzegar, 2010).

Iranian governing elites perceive their country's security resting in the security of the complete region comprising the Middle East, Central Asia and Southwest Asia. Iran acknowledges the interests and role of the US in maintaining security in the region by becoming involved in talks with the latter so as to develop various international mechanisms to ensure peace and security in Afghanistan and Iraq but it is against the overwhelming and long-term presence of US military force in the region. Iran perceives a greater US role in future in the region, given its geopolitical importance that would affect Iranian interests in the long-term. Iran is vociferous in stating opposition to any arrangement that would allow the US to position itself firmly in Afghanistan which shares a 936-kilometre-long border with the Islamic republic. Iranian Interior Minister Mostafa Mohammad-Najjar was categorical in stating that a strategic treaty between the US and Afghanistan would pose a threat to the interests of Iran and other regional countries (D' Souza, 2011). To counter the US role in the region, Iran has focused on a strategy of "offensive defence" . This strategy is a way to ensure defence through active military engagement. But the problem lies in the exaggeration of the perception of an Iranian threat which might place Iran in an irreconcilable position vis a vis the US in terms of their respective

geopolitical interests. Barzeger (2010: 182) notes "experience has shown that the more Iran feels threatened, the more likely it remains to expand its regional presence. Though in the short term, Iran's greater regional presence will promote its power of deterrent to engage with potential security threats, in the long term it will bring unnecessary tension and strategic discord to Iran's relations with the region's key players such as Saudi Arabia and the United States" (Berzegar, 2010).

Iran can destabilize the situation in Afghanistan if the US continues with its strategy of containment. For example, after the fall of the Taliban in late 2001, President Bush warned Iran against meddling in Afghanistan. Partly to respond to the US's censure, in February 2002 Iran expelled Karzai opponent Gulbuddin Hikmatyar, but did not arrest him. At other times, Afghanistan and Iran have had disputes over Iran's efforts to expel Afghan refugees. About 1.2 million remain, mostly integrated into Iranian society, and a crisis erupted in May 2007 when Iran expelled about 50,000 into Afghanistan (Rahmani, 2009). The motive for expelling the Afghans follows the reasoning that while coalition forces announced the interception of Iranian-made weapons in southern Afghanistan and condemned the Iranians' attempt to make contact with the Taliban, Iran had pushed for the mass expulsion of refugees in an effort to show that it could indirectly put pressure on the United States. Iran knew that with the return of Afghan refugees to Afghanistan, the economic crisis there would increase; the side effects of this would affect the Afghan government and consequently the role of the US would also be affected. In September 2007, there were reports of Iran's indirect role in channeling Chinese weapons to militants in Afghanistan to fight the US forces there. Alex Vetanka, (Synovitz, 2010) the Washington-based Iranian analyst for Jane's Information Group, argues that the presence of Chinese weapons so close to the Iranian border was the strongest evidence of Iran's indirect role in the supply of weapons. The disclosure of secret American defense documents by Wikileaks also points to Iranian involvement in assisting the Taliban (Nelson, 2010). Iran also tried to destabilize the Afghan situation by reducing fuel supplies to Afghanistan during the cold months of 2010 on the grounds that Kabul had siphoned petrol and diesel to NATO forces. This move sparked an outcry in Kabul.

Iran has mounted criticisms regarding the US role in Afghanistan. The chairman of the Iranian Expediency Council, Akbar Hashemi Rafsanjani, at a meeting with the visiting former UN secretary General Kofi

Annan, said that the "occupiers" who created "insecurity" in Afghanistan and Pakistan were now "unable to rein it in" (Bhadrakumar, 2010). In October 2008, Tehran invited former Afghan president Burhanuddin Rabbani, who led the anti-Taliban coalition (Northern Alliance) in the 1990s, to official talks in Iran (?). Bhadrakumar argues that the scheduling of Rabbani's visit was intended to signal that Iran still had reserves of influence with the Northern Alliance groups, despite the US estimation that these anti-Taliban groups have been scattered or bought over by Western intelligence (Bhadrakumar, 2010). Rabbani said that the solution to Afghan crisis lay in the national reconciliation among all tribes without any allowance for ethnic, tribal and religious prejudice. By saying this he reiterated the Iranian perspective on the solution to the Afghan problem. Iran condemned the Bush administration's efforts to include Saudi Arabia to broker talks between the Taliban and the Afghan government (Bruno, 2009). Obama in his AfPak strategy recognized Saudi Arabia's role as part of the regional solution to the Afghan problem. Iran criticized the US for only providing lip-service to regional cooperation while in reality it wanted to play a unilateral role in Afghanistan.

Finally, it can be inferred from the above analysis that Iran and the US can collaborate in Afghanistan only if both of them accommodate each other's interests in the region. The US has to abandon its policy of containment towards Iran and recognize Iran's influence in the region. There are a host of issues of common concerns like spread of drugs, the rise of extremism and the stability of Afghanistan which can form a basis for future cooperation. However, these issues will be relegated to the background unless geopolitical concerns are addressed by both of them.

Conclusion

After the disintegration of the USSR and emergence of the Central Asian states, Iran's conception of the region expanded. It saw its interests as beıng limited not only to the Persian Gulf or the Shia populated states; it also harbored an increasing interest in Central Asia and using Afghanistan as a corridor to Central Asia. South Asia also emerged as one of the biggest markets for Central Asian resources and therefore an important destination for Iran's commercial interests. So to allow itself a chance to play a major role in the wider region, Iran shed its support for exclusively Shiite factions and enlarged its support to incorporate other groups in Afghanistan. Iran became more wary of the American role in the region.

Though Iran provides the shortest and cheapest routes for the transfer of the energy resources of Central Asia and therefore aspires to play a major role in oil politics, containment of Iran was so important for the US that the pipeline projects like the TAP and the pipeline through Turkey were given utmost importance despite their commercial non-viability.

So as to enable itself to play a major role in the region, Iran has striven to develop nuclear power. Secondly, it has developed a close friendship with Syria and support for militant factions like Hamas and Hezbollah as a means to support the Palestinian cause in it search to increase its influence among the Muslim nations. Instead of placating the US, it asserts its role emphatically. Iran's closure of nuclear facilities according to the wishes of the US could have allowed it nice economic returns in the region but at the cost of its aspirations to play the role of an independent regional power. Thus, the US containment strategy and Iran's role in the region have to be understood in the context of their geopolitical interests. To contain Iran and to meet its geopolitical interests, the US is driven more towards Pakistan; this consequently limits US-Iranian cooperation in Afghanistan.

In Afghanistan, the US shares more overlapping interests with Iran than it does with its allies Pakistan and Saudi Arabia. They have common interest in the stability and economic reconstruction of Afghanistan. However, geopolitics has ordained different, yet simultaneously confrontational, roles are to be played by the US and Iran in Afghanistan. Iran's endeavours to counter the US role and military presence in Afghanistan has led to its provision of assistance to Ismail Khan of Herat and allegedly to the Taliban in terms of finance and arms. It has even deployed members of the Hezbollah militant group to take up intelligence and insurgence activities. Iran has argued for the role of the UN to install a broad-based government in Afghanistan although the US has taken up a major role to sideline the participation of Iran in the resolution of the Afghan problem. Iran in order promote its long-term interests has sought political and economic integration with Central Asia. To that end, it has taken up reconstruction activities in Afghanistan and made Herat a bridge to Central Asia.

Iran's long-term interests in Afghanistan rest on its aspirations to become a major regional power in the Middle East and Central Asian region. Iran's aspiration to develop nuclear energy, to act as a bridge between Central Asia and the Persian Gulf on the one hand and Central Asia and South Asia on the other for the energy supplies and its desire for a leadership role in the Middle East and Central Asian regions are some of

the long term objectives that have been factored into Iran's foreign policy making. Iran's role in Afghanistan, therefore, needs to be viewed from the perspective of its long-term interest in its immediate neighborhood.

References

Afrasiabi, K., and A. Maleki. (2003). "Iran's foreign policy after 11 september", *The Brown Journal of World Affairs*, vol. 9, no. 2, pp.255-265.

A Project Iran workshop (2006). "Iranian objectives in Afghanistan: Any basis for collaboration with the US?" This project was organised by Centre for Strategic Studies, The CNA corporation, November 29.

Berzegar, K. (2010). "Iran's foreign policy strategy after Saddam", *The Washington Quarterly*, vol. 33, no. 1, pp.178-182.

Bhadrakumar, M.K. (2010). "US, Russia, NATO and the future of Afghanistan: Taliban resurgence and geopolitics of oil." Available at: http://www.japanfocus.org/-M_K-Bhadrakumar/2924. (retrieved on 20 June 2010).

Bhadrakumar, M.K. (2010). "A mad scramble over Afghanistan." *Asia Times*, 28 October 2008, http://e-ariana.com/ariana/eariana.nsf/allDocs/f1ad00a5c75ddc29872574f000513ee6!OpenDocument&Click. (retrieved on 13 April 2010).

Bhadrakumar, M.K. (2011). "All roads lead out of Afghanistan." *Asia Times*, 20 December 2008, Available at: http://www.atimes.com/atimes/South_Asia/JL20Df01.html. (retrieved on 10 February 2011).

Bruno, G. (2008)." Saudi Arabia and the future of Afghanistan." *Council on Foreign Relations*, http://www.cfr.org/publication/17964/saudi_arabia_and_the_future_of_afghanistan.html. Retrieved on 21 August 2009.

Congressional Research Service (2010). "Obama has hung the Iranian democracy protesters out to dry in the 2010 budget." Available at: http://www.iranian.com/main/news/2009/09/20/obama-has-hung-iranian-democracy-protesters-out-dry-2010-budget. (retrieved on 15 February 2010).

Davutoglu, A. (1998). "The clash of interests: An explanation of the world (dis)order." *Perceptions: Journal of International Affairs*, vol.2, no.4, December 1997-February 1998.

D' Souza, S.M. (2011). "Iran, US and Afghan conundrum." *ISAS Insights*, no. 132, September, pp.1-4.

Gelb, B.A. (2006). "Caspian oil and gas: Production and prospects." *CRS Report for Congress*, 3-4.

Gharekhan, C.R. (2011). "Is Arab Spring wishful thinking?" *The Hindu,* 22 June 2011.

Goswami, N. (2009). "The Obama administration's Afghanistan-Pakistan policy: In need of an urgent rethink", *Strategic Analysis*, vol. 33, no. 4, pp.465-469.

Katzman, K. (2003). "Iran: current developments and US policy", *CRS Issue Brief for Congress*, June 26, 7.

Katzman, K. (2010). "Iran: U.S. concerns and policy responses", *CRS Report for Congress*, January 6, 1.

Kemp, G. (2002). "Afghanistan and regional geopolitical dynamics after 11 September." National Intelligence, Council Conference Proceedings, 18-19 April 2002.

Knapp, P. (2010). "The Gulf states in the shadow of Iran. Part II." Available at: http://israelagainstterror.blogspot.com/2010/01/gulf-states-in-shadow-of-iran-part-ii_27.html. (retrieved on 15 February 2010).

McQuillen, W., and P. Mattingly. (2010). "Iran must not meddle in Afghanistan, U.S. says after bag of cash reported." Available at: http://www.bloomberg.com/news/2010-10-24/iran-must-not. (retrieved on 23 September 2010).
Mercille, J. (2009). "The radical geopolitics of US foreign policy: the 2003 Iraq War." *GeoJournal*, vol. 75, no. 4, pp.327-337.
Nader, A., and J. Laha. (2011). "Iran's balancing act in Afghanistan", *Occasional Paper*, RAND National Defence Research Institute, 12.
Nelson, D. (2010). "Wikileaks Afghanistan: Iran accused of supporting Taliban attacks." *The Telegraph*, 27 July 2010.
Noreng, O. (2009). "Oil in the Caspian Region and Central Asia - the political risk of the great game continued." Available at: http://www.caucasus.dk/publication8.htm. (retrieved on 25 December 2009).
Rahmani, W. (2009). "Iran's decision to expell refugees may destabilise Western Afghanistan." Available at: http://www.jamestown.org/single/?no_cache=1&tx_ttnews[tt_news]=4141. (retrieved on 15 January 2009).
Rozoff, R. (2010). "NATO's role in the military encirclement of Iran." Available at: http://www.globalresearch.ca/index.php?context=va&aid=17555. (retrieved on 15 February 2010).
Rubin, B.R., and S. Batmanglich. (2008). "The US and Iran in Afghanistan: Policy gone awry." *Audit of the Conventional Wisdom*, MIT, Available at: http://web.mit.edu/cis/editorspick_rubin08_audit.html. (retrieved on 9 January 2011).
Rubin, M. (2007). "Understanding Iranian strategy in Afghanistan," In: *Afghanistan: State and Society, Great Power Politics, and the Way Ahead*, *Findings from an International Conference*, Copenhagen: Denmark, RAND Corporation, Center for Middle East Public Policy, 13.
Synovitz, R.. (2010). "Afghanistan: US worried Iran sending Chinese weapons to Taliban." Available at: http://www.rferl.org/content/article/1078675.html. (retrieved on 10 February 2010).
Talwar, P. (2001). "Iran in the balance." *Foreign Affairs*, vol. 80, no. 4, pp.61-64.
Tarock, A. (1999). "The Politics of the pipeline: The Iran and Afghanistan conflict." *Third World Quarterly*, vol. 20, no. 4, pp.815-816.
Williams, P.A., and A. Tekin. (2008). "The Iraq War, Turkey, and renewed caspian energy prospects", *Middle East Journal*, vol. 62, no. 3, pp.383-397.
Willaims, P.L. (2009). "Hamas and Hezbollah unite to crush Iranian dissisents." Available at: http://www.canadafreepress.com/index.php/article/12109. (retrieved on 25 December 20099.

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Ethnic Incorporation Policies and Peripheral Reactions: How Turkey's Kurds are Treated by the State and How They Perceive Their Treatment

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Abstract

This paper examines the policies adopted by the consecutive Justice and Development Party governments toward the Kurdish population in Turkey since 2002. These policies are called ethnic incorporation policies in the paper and take inclusive or exclusive forms. The paper distinguishes between the ethnic incorporation policies adopted and implemented by the political center and their perception in the Kurdish periphery. The paper investigates these policies in four overlapping and intersecting, but conceptually distinct domains: security, socio-culture, economy, and politics. It concludes that while ethnic incorporation policies take increasingly inclusive forms in the socio-cultural and economic domains, the increasing exclusiveness in the security domain infringes the political domain and invalidates the moves toward further inclusion in this domain which have been gained as a result of a slow and painstaking process.

Key words: *Ethnic conflict, ethnic incorporation, ethnic politics, Kurds, Turkey*

Introduction

The Kurdish question is often referred to as the most important social and political issue in Turkey. The state, or the ruling governments to be accurate, has long been well aware of the severity of the problem at hand. Nevertheless, the approaches to the solution of this problem have varied over time according to the attitudes of different governments, at times, even under the rule of the same government. This study analyzes the policies

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whereby the AKP (Justice and Development Party/*Adalet ve Kalkınma Partisi*) government(s) approached the Kurdish question. In other words, the study analyzes the ethnic incorporation[1] policies in Turkey toward the Kurdish population and their perception in the peripheral Kurdish circles.

The study makes a conceptual distinction regarding central and peripheral Kurdish politics in Turkey. While 'central Kurdish politics' is the sphere in which certain policies are adopted and put into force via state-administered 'tools', 'peripheral Kurdish politics' is the sphere in which certain political rights are claimed and demands are made.[2] While the government constitutes the main actor of Kurdish politics when scrutinized from the center, the peripheral Kurdish political sphere encompasses a variety of actors, both legal and illegal. While civil society organizations and political parties such as the BDP (Peace and Democracy Party/*Barı*ş ve Demokrasi Partisi), KADEP (Participatory Democracy Party/*Katılımcı Demokrasi Partisi*), and Hak-Par (Rights and Liberties Party/*Hak ve Özgürlükler Partisi*) are considered the main legal actors,[3] the PKK/KCK[4] represents the main illegal actor of this sphere. The PKK is not only an actor in peripheral Kurdish politics, but also occupies an important role at the heart of the wider Kurdish issue. After all, the Kurdish question in Turkey has two dimensions both of which are directly related to the PKK: firstly, secession as a political aim and secondly, ethnic violence as a method of ethnic mobilization. While the PKK announced that it had dropped its aim of achieving independent Kurdish statehood in 1999, ongoing fears of secessionism are still worrying Turkish policy makers. A more immediate problem within the wider framework of the Kurdish question is long-sustained violence. The PKK uses violence as its primary method of struggle against the Turkish state. Hence, even though the emergence of the Kurdish question precedes the PKK, the solution of the problem is directly tied to the future of the PKK.

Ethnic incorporation policies are adopted and implemented by central political actors who have direct access to and control over state power. An equally, if not more important, aspect of ethnic incorporation is its perception and interpretation by the target community in the peripheral Kurdish political sphere where actors have no direct control over state power. The study presents an overview of how ethnic incorporation policies are seen by opinion makers, civil society activists, and politicians in the Kurdish periphery. The findings from 35 semi-structured interviews (conducted in Batman, Diyarbakir, and Ankara from September 2011 to February 2012) with Kurdish politicians and opinion makers are discussed in this study to present an overview of the perception of ethnic incorporation policies toward Kurds by the target community.

Ethnic incorporation can be seen as a latent concept with various dimensions. We might see different degrees of inclusion or exclusion in each of these dimensions. These dimensions are listed as security, socio-cultural, political, and economic domains and discussed respectively in this paper with a focus on security and socio-cultural domains. These domains are derived from Mann's (1986) four sources of social power: the state, culture, economy, and military. While deciding to follow Mann's four-fold distinction, I do not take his analyses at face-value to the extent of rejecting the totality of the society. In contrast to Mann's approach, I also replace the term 'state' with that of 'political domain', and examine the state's influence in the following four domains: political (representation), socio-cultural, economic, and security. These four domains, according to Mann, are "overlapping and intersecting." Different and even conflicting ethnic incorporation policies could be adopted in different domains. In short, this paper examines the ethnic incorporation policies of the center and their perception by the peripheral Kurdish actors in four societal domains.

Ethnic incorporation policies toward Kurds in Turkey

A predominant idea in the literature focused on Turkey's treatment of Kurds up to the 1990's arrives at agreement on two fundamental points. Accordingly, it was repeatedly declared by political elites that Kurds do not exist as a separate ethnic group; and the state acted in accordance with a principle that Kurds should not exist as a separate ethnic group. While the state adopted the former ideological viewpoint in its discourse,[5] it acted in allegiance with the latter attitude in its tangible execution of policies for long decades. Furthermore, a discourse based on the former statement was used to justify policies pertaining to the latter. This twofold policy is often described as the politics of denial and destruction (*inkar ve imha siyaseti*)[6] within peripheral Kurdish circles. There is widespread agreement, if not consensus, in academic works on Turkey's policies toward Kurds in the pre-1990s with respect to the ideological viewpoints and policies outlined above. Accordingly, these policies could be labeled 'assimilationist'. For Smith (2009, p.5), "newly independent Turkey embarked on an ethnically homogenizing state project". Karpat (1988) also underlines the early efforts to transmute a homogeneous Turkish nation. Yuksel (1998) calls this process 'cultural assimilation'. Imset (1996) claims that the Kurds were seen as a 'high-risk group' and were considered to be an agent 'resisting' Turkish assimilation. McDowall (2004) also gives numerous historical examples of the assimilationist policies of Turkey vis a vis the Kurds, particularly, in the early decades of the republic during the construction

phase of the new Turkish nation state. As Yayman lists, numerous official reports proposed assimilation for the solution of the Kurdish question during the period of single party rule (CHP, Republican People's Party/ *Cumhuriyet Halk Partisi*). Two of these reports (Özmen and Kaya reports) even employed the term 'assimilation' (Yayman, 2011, 14). It is quite clear that the set of policies that banned cultural expressions of identity such as speaking, printing, and performing songs in Kurdish were applied in expectation that the Kurdish language and accompanying ethnic identity would simply fade away. Nevertheless, the situation has become more complicated in recent times as Turkey proceeded in its accession process to the European Union and the AKP consolidated its rule in the country. In the meantime, changing domestic and international parameters have created certain changes in ethnic incorporation policies toward Kurds.

Ethnic Incorporation Policies in Four Societal Domains

As shown in Table 1, the incorporation policies implemented by the AKP government have been quite innovative in many respects. Nevertheless, they seem far from satisfactory in the peripheral Kurdish circles.

Table 1. Ethnic incorporation policies and peripheral demands.

Societal domains	Direction of change	Ethnic incorporation policy	Peripheral demands	Intensity of demands and extent of the support base
Security	Exclusive	Recent shift from negotiation to military encounter, intense intelligence-based operations targeting logistical linkages as well as the PKK's armed forces, pre-emptive arrests	Ending political arrests, military operations, and disproportionate use of force	Widespread agreement
Socio-culture	Inclusive	More effective usage of religion as a cross-cutting social cleavage and transition process toward the recognition of the Kurdish language(s)	Not only de facto, but also de jure recognition of the language; official bilingualism in the region; education in Kurdish in the schools	Preservation of the Kurdish language is the least common denominator whereas demands for specific language policies vary among peripheral actors
Economy	Inclusive	Investments in regional economic development and service-provision, and compensation for prior terror-related losses	Comprehensive compensation for the under-development of the region	Least stressed among the four domains
Politics	Oscillating	Lost impact of slightly inclusive legal changes with the infringement from the security domain	Political autonomy as well as more modest demands such as the removal of 10% electoral threshold	The extent and substance of autonomy is still not agreed upon even among its advocates whereas removing electoral threshold is a clearer demand with a broader support base in the periphery

The security domain: tactical changes in security provision and path-dependent violence

Turkish military forces have been involved in a long-standing military engagement against the PKK since the organization's first attack on state security forces in Eruh, Siirt and Şemdinli, Hakkari on August 15th, 1984. The military conducted operations against the PKK not only in Turkey, but also in Iraq within the process of confrontation with these hostile forces. The first cross-border operation occurred on April 25th 1983, a date that precedes the PKK's attack in Eruh. The most comprehensive military operation, *Balyoz* (sledgehammer) operation, occurred in 1995 and involved the participation of 45.000 soldiers.[7] As the PKK announced its longest ceasefire in 1999 that lasted until 2004, losses from both sides dropped tremendously.[8] Nevertheless, a new wave of PKK attacks since June, 2004 has led the state to reconsider its existing security policies. Even though the PKK has announced three more ceasefires since 2004, none of them endured long enough to provide a satisfactory period of stable peace.

The state has renovated its security policy in the late 2000s. This change can be grouped under two general titles: intense intelligence-reliance before, during, and in the aftermath of military operations, and pre-emptive arrests. A more effective military engagement has been aimed for and put into action with overall strategy transformed by replacing full-scale operations in broad areas with focused operations in smaller areas. For sure, speedy intelligence transfer from remote piloted air vehicles has played a significant role in the increased effectiveness of this new strategy. The Kazan Valley operation in Hakkari in October, 2011 has so far been the most prominent example of such a tactical change.

As these new intelligence-intense operations targeted PKK members, a second policy aimed at disconnecting the PKK from 'would-be members', in other words, by isolating and severing the 'mobilization base'. While the agent of the first strategy mentioned has been largely the military, the police and special authority prosecutors have been the agents of this latter strategy. Police operations against KCK have been focused on breaking the linkages between the PKK and its mobilization base in Turkey. The operations attempt to prevent the PKK from reaching, recruiting, mobilizing, and hence, broadening its potential mass support by arresting key figures that constitute a link between the organization and its mass support at ground level. Another aim of the operations is to stop logistical support to the PKK from Turkey.

While the two tactical (perhaps strategic, but not paradigmatic) changes in the struggle with the PKK seem to undermine the PKK activities as of February 2012, there are reasons to doubt the definite and lasting success of such actions. Such conclusions seem to be widely arrived at in the mainstream Turkish media given the decreasing volume of PKK activities (in terms of attacks against military posts and the decrease in low-profile violent protests in the streets). Given that the Arab Spring was sparkled when a 26 year old man, Muhammed Buazizi, set himself on fire, it might seem quite surprising that a similar act by 15-year old Fırat İzgin was barely heard in the Turkish media.[9] "I am setting my body on fire for my people" wrote Fırat in his letter. Nevertheless, even this act could not set in motion a significant move toward a 'Kurdish Spring' that had been called for by the PKK leadership. Does this relative stillness mean that peripheral Kurdish politics has lost its mobilizing ability? Does it mean that mass mobilization in the form of public protests and violent mobilization in the form of PKK attacks have been terminated permanently? While the answer is 'yes' for the initial question, it is hardly the case for the latter one. It is probably true that many intermediary figures between the PKK and its grassroots support have been arrested during police operations over the last couple of years since the operations started in 2009. It is also true that PKK's logistical support (in terms of money and supplies) has been targeted by state authorities successfully. Nevertheless, the PKK might require much less effort to recruit and mobilize the mass after the change in the security policies of the state. There are three reasons to question the perceived successes achieved in the struggle against the PKK: grievances emanating from disproportionate use of force, extraordinary tension and feeling of insecurity as a result of ongoing conflicts and increasing number of casualties, and the legitimization of the use of violence in response to ever narrowing legal paths.

First, the use of disproportionate force in military and police operations seems to escalate feelings of grievance toward the state and foster an increasing sympathy toward the PKK. Many people in Southeastern Anatolia believe that some form of illegal chemical weapons have been used in military operations such as the one conducted in Kazan Valley in October, 2011. The Diyarbakır Branch of the Human Rights Association (İnsan *Hakları Derneği, IHD)* also reported the use of such chemical weapons in its reports (IHD, 2011a). Many people interviewed for this article from both civil society organizations and the BDP repeated such claims of chemical weapon employment by the military. What matters

here, perhaps, is what is believed to happen rather than what happened for real. It seems that the state could not convince the public, particularly in the Kurdish periphery, that it had not exceeded prescribed legal boundaries in its military endeavors against the PKK. The 'accidental' killing of 34 civilians[10] from Uludere, Şırnak in the border area also has led many people to question the effectiveness of so-called intense intelligence-based military operations. The Uludere event was labeled by peripheral Kurdish activists and politicians as the 'Roboski Massacre' after the name of the village where all the casualties were from.

A second indicator of the use of disproportionate force is the increasing number of civilian casualties involved in the protests. Another IHD (2011b) report published the names and ages of children that were killed by state security forces from 1988 to 2011. The numbers increase significantly after 2005 according to this report. While some of the killings of the older children might well be as a result of conflicts between the PKK and the state security forces, a significant part of the casualties were resulted from children and juveniles' stepping on mines, being shot by the police in protests, or being hit by gas bombs.[11]

Second, the ongoing conflicts and accompanying news and stories about lives lost from both sides have revitalized an old trauma in Turkey. This trauma is felt much greater in the Southeastern Anatolia where the actual conflicts occur and thousands of families are split in terms of loyalty between the military and the PKK.[12] Some families have lost numerous members in the conflicts. Seven members of the *Barış Anneleri* (Mothers for Peace) –a civilian initiative that was formed by mothers whose children either lost their lives in the conflicts or are still massed in PKK camps in Northern Iraq- that the author talked to in Diyarbakır have been deprived of multiple members of their family prior to their children's decision to join the PKK. The ongoing conflicts and increasing number of casualties have created a path-dependent situation.[13] Horowitz (1985, p.684) also makes a similar point in his discussion of 'circularity'. Accordingly, the measures to stop ethnic violence are usually adopted late in the process when they "are more likely to be deflected or ineffective." The outcome in such a case might be a 'locked-in situation' in which violence can be a self-reinforcing process and peace may not be realized even though both parties are exhausted and unwilling to engage in further violence.

Third, the increasing volume of arrests might disconnect the linkage between the PKK and its natural support base in Turkey. Nevertheless, it

is a common perception in peripheral Kurdish circles that the arrests of activists, journalists, and politicians are largely arbitrary in nature and many of the arrested people have no ties with the PKK/KCK. This perception has also spread into broader Turkish society especially after the detentions of academic Büşra Ersanlı and human-rights activist and publisher Ragıp Zarakolu in October, 2011. The perception growing from these arrests is the narrowing of the legal and democratic methods employed in the struggle for the realization of numerous peripheral Kurdish demands.

According to Mehmet Emin Aktar, the president of Diyarbakir Bar, the police operations against the KCK and resulting arrests have narrowed the legal-civilian ground and have opened legitimate space for the advocates of violence in Kurdish circles.[14] Another respondent[15] -who is ethnically Kurdish, voted for the AKP in the 2011 parliamentary elections, and is vehemently critical not only of the PKK, but also the BDP for not criticizing terror- has similar opinions on KCK operations. He stated that KCK operations are hurting his conscience for the fact that he knows some of the arrested people in person and believes in their innocence. Another political activist[16] in Diyarbakır stated that the KCK was involved in a sincere transition process from violent to peaceful methods, therefore, no single bullet has been found in the searches of the homes and workplaces of the arrested suspects. For the same person, this transition process has been unduly interrupted as a consequence of the arrests. Mülkiye Birtane, the Kars Deputy representing the BDP, also notes that Kurds are not left with much opportunity to engage in politics in the plains.[17] In short, the police operations against the KCK ended the process of 'democratic opening' for many activists in peripheral Kurdish circles. A major weakness of Turkey in its policies toward Kurds, as Somer (2005, p.120) rightly notes, is not to create opportunities for the emergence of moderate Kurdish political movements.

The socio-cultural domain: credible embrace of religion and linguistic recognition

Ethnic identity is made up of two composites in the Middle East in general, and in Turkey in particular: religious and linguistic cleavages.[18] In other words, these two factors function as proxy variables to indicate a sense of common descent that takes place at the core of an ethnic identity.[19] Turkey's policies toward Kurds in the socio-cultural domain

could be categorized into these two areas; both of which affect the ethnic consciousness and mobilization of the Kurds.

Religion as a conflict zone

The religious sphere has been a significant zone of control for the state, a tradition that goes back to the Ottoman era. While Mahmut II (1808-1839) established significant control over the religious bureaucracy (Heper, 2006, p.86), the early republican elites implemented a full-scale transformation of the religious sphere. As the religious brotherhoods/ *tariqahs* were banned in 1925 following the abolition of the caliphate in 1924, the Directorate of Religious Affairs –an institution that is tied to the prime ministry- has been the only legitimate and, to a great extent, the only available institution that can teach, preach, and manage the conduct of religion. Weber defines the state as "a human community that (successfully) claims the monopoly of the legitimate use of physical force within a given territory" (Weber, 2004, p.33). In the Turkish context, the state has also claimed the monopoly of the legitimate use of religion within its territory. Religion has been also a significant tool of state policy with regard to the Kurdish question. As the state *imams* had preached the religious integrity of the entire Turkish society (99 percent to be precise, a controversial phrase that is often stated to describe the Muslim dominance of the country's population) for decades, the ongoing discourse has been transformed to emphasize much more the religious ties of brotherhood between the Turks and Kurds of Turkey during the AKP era. Known as a conservative political party, AKP has a greater credibility in its discourse with regard to the religious ties that connect Kurds to the rest of the national population.

The peripheral Kurdish politics as produced and led by the PKK in the illegal sphere and the HEP (People's Labor Party/*Halkın Emek Partisi*) and its successors on a legal foundation set out a clear distance from any reference to Islam. Islam was seen as part of the traditional social structures that had distorted and retarded the development of ethnic consciousness among Kurds. Also, the PKK as a Marxist-Leninist organization had ideological reasons to oppose the established religion. Nevertheless, the PKK's appeal to non-Islamic beliefs such as Zorosastrianism has not hitherto received discernible support among the Kurds.[20] The increasing credibility of the religious discourse under the AKP government soon led to a transformation in the approach to Islam in legal and illegal

Kurdish peripheral circles. Hasip Kaplan's calls for changing the status of the Directorate of Religious Affairs to an autonomous institution and his calling for a Kurdish translation of the Qur'an on October 10th, 2010 could be seen as an attempt to decrease the influence of state control in the religious sphere.[21]

Peripheral Kurdish activists and decision-makers have abandoned the strategy of simply ignoring or actively struggling against Islam and developed a re-interpretation of it. This re-interpretation has aimed at forming a religious sphere that is parallel to and independent from that of the state. Given that the first full-scale Kurdish rebellion,[22] the *Sheik Said rebellion* (1925), in Eastern Anatolia had a mixture of ethno-nationalist and religious motives, this re-positioning of peripheral Kurdish politicians and decision-makers has a potential to construct a tradition of Kurdish nationalism that can consciously embrace the entire republican period. This re-interpretation has invented 'civilian Friday prayers' (*sivil cumalar*) as a new mobilization form and propaganda tool of the peripheral Kurdish politics. A second indicator of this re-positioning is the embrace of religious figures by the peripheral Kurdish political organizations. A prominent Kurdish figure, Altan Tan who is known for his statements against State laicism,[23] ran for the Labor, Democracy, and Freedom Bloc (*Emek, Demokrasi ve Özgürlük Bloku*) in the 2011 parliamentary elections and joined the BDP with the most of other elected Bloc members soon after the elections. Tan demonstrated his individuality in his first speech in the parliament by starting his speech with a religious greeting, '*Esselamu Aleykum*'. Tan notes that parliamentarians have never been greeted in this way after the foundation of the first parliament of 1920.[24]

Another religious event that is customarily organized by the BDP is *mevlids*[25] (mawlid) in 34 cities on the 40th day of remembrance of 34 civilian people's death in a military 'operation accident' on December 28th, 2011. These examples could be multiplied, but the underlying point to be emphasized is that peripheral Kurdish politics in recent years has embraced Islam in a much greater extent than before. It should be noted that BDP's 'religious opening' does not mean that BDP is presenting itself as an option exclusively to religious Muslim Kurds. In fact, the BDP also provided for the representation of Assyrians/*Süryanis* by a *Süryani* representative, Erol Dora, for the first time in the republican period. The BDP also has numerous Alevite –for many, an unorthodox sect of Islam- deputies in the parliament. Rather, BDP's new approach to Islam is intended to deliver

a message to the religious Muslim Kurds and change the well-spread perception of BDP's ignorant, if not hostile, image in its attitude toward Islam.

The AKP government seems to have noticed the 'religious opening' of the BDP. PM Erdoğan and many other AKP members, most likely for this reason, often remind the general public of the earlier emphasis of the PKK on Marxism and Zorosastrianism. In other words, AKP leader cadre who is accused of hypocrisy (or *taqiyya*) by some Kemalists for having a secret Islamist agenda behind their 'democratic' appearance now accuses BDP's religious opening as containing 'hypocrisy' and views it as no more than a tactical maneuver. The AKP government not only developed a negative discourse with regard to the BDP's repositioning itself in terms of religion, but also took steps to prevent the policy leading to a positive rise for the BDP's standing among religious Kurdish circles. Vice-Premier Bekir Bozdağ recently announced the decision for the recruitment of 1000 *meles*[26] (mullahs) by the Directorate of Religious Affairs. In his statement to justify this decision, Bozdağ said that "[W]e analyzed these people. They are the people whose words are followed, who have credibility, and whose words can stop and mobilize people".[27]

It is not possible to know clearly whether both sides (the state and the peripheral Kurdish circles) approach religion in purely instrumental ways, or if they have indeed experienced a genuine ideological transformation. Nevertheless, it could be stated that actors in both the central and peripheral Kurdish political scene have played their cards right in their conflict in the religious zone of discourse. While the state could more effectively utilize religion as a cross-cutting socio-cultural cleavage, peripheral Kurdish politics has realized a chance, perhaps for the first time, to gain access to a broader base support.

From denial to recognition of Kurdish language

The Kurdish language in Turkey was neglected and even banned for long decades. "The imposition of the Turkish language became the most significant instrument of the state for creating a Turkish national identity" (Ucarlar: 2009, p.120). Turgut Özal's decree to allow publications in Kurdish in 1991 was a cornerstone in the recognition of the Kurdish language.[28] The rule of the AKP has brought the most comprehensive

'opening' toward toleration of the Kurdish language throughout the entire republican period. The first stage of this opening was the permission for private enterprises to open Kurdish language institutes. The opening of the first of these, the Özel Urfa Kürtçe Kursu, was permitted in accordance with the decree of the Ministry of National Education, Private Education Directorate on December 4th, 2003.[29] The openings of Kurdish language institutes and departments of Kurdish language and literature in a number of universities followed as the next stage of the process.[30] A third major step was recorded with the opening of TRT Şeş in 2009, a state-sponsored TV channel that broadcasts in Kurdish. Even though TRT had previously started part-time broadcasting in Kurdish (in Kirmanchi and Zaza dialects) as well as in other local languages in 2004, the foundation of TRT Şeş was a turning point in this respect.

Preservation of the Kurdish language seems to be the least common denominator, not only for peripheral Kurdish movements, but also for the Kurds who support the policies developed in the center. When asked about their reasons for supporting the AKP government, the interviewed people who voted for and/or are members of the AKP, all make mention of the AKP's recognition of and positive policies toward the preservation of the Kurdish language in addition to other personal and ideological reasons. Halit Advan, the chairperson of the Diyarbakir branch of the AKP, and Mehmet Ali Dindar, Şırnak deputy from the AKP, both have underlined the shift in the state's policies over Kurdish language by contrasting it with the situation in the 1980's when people could not even speak in Kurdish to their family members in some occasions whereas they were able to speak in Kurdish at public rallies before the 2011 parliamentary elections.[31]

As Necdet İpekyüz, chair of the Diyarbakır Branch of the Turkey Human Rights Foundation (*Türkiye İnsan Hakları Vakfı*) notes, the 'red line' of Kurds is their language.[32] Bayram Bozyel, the leader of Hak-Par also claims that every single Kurd, whether liberal or religious, supports the right of using their mother tongue.[33] Metin Kılavuz, former deputy mayor of Diyarbakir calls the repression of their mother tongue 'white genocide'.[34] While some other peripheral Kurdish demands such as democratic autonomy are controversial and debated even in peripheral Kurdish circles, the preservation and teaching of the Kurdish language seems to be the least common denominator among Turkey's Kurds.

Nevertheless, this transition from denial to recognition seems far from satisfying all peripheral Kurdish demands. Article 42 of the Turkish constitution does not allow education in Kurdish in Turkey.

> No language other than Turkish shall be taught as a mother tongue to Turkish citizens at any institutions of training or education. Foreign languages to be taught in institutions of training and education and the rules to be followed by schools conducting training and education in a foreign language shall be determined by law. The provisions of international treaties are reserved.[35]

The recognition of the Kurdish language is perceived as insincere and insufficient by some in peripheral Kurdish circles. Arif Arslan, the editor in chief of local newspaper Çağdaş, and Raci Bilici, the current (deputy) head of Human Rights Association Diyarbakır Branch, both state that even a simple inclusive step such as allowing private Kurdish language institutes was not unproblematic. Accordingly, some language institutes were closed down for not complying with certain regulations such as a lack of fire exits and failure to satisfy regulations pertaining to proper door and window sizes. According to Arslan and Bilici,[36] even public schools in the region do not satisfy these regulations, but solely Kurdish language institutes are inspected strictly and punished. The respondents claimed that some Kurdish institutes were closed down by owners not because there was not sufficient demand as commonly argued in the mainstream media, but because of systematic bureaucratic pressures. Arslan notes that sixty thousand people met to celebrate the opening of a language institute in Batman, but the institute was closed down within six months following its opening. It would be absurd, for Arslan, to expect this institute to be closed down because of insufficient popular demand and support.

Murat Çiçek, the chair of the Batman Branch of Mazlumder (The Association of Human Rights and Solidarity for Oppressed People/İnsan Hakları Ve Mazlumlar İçin Dayanışma Derneği), claims that it is insincere for the state to broadcast in Kurdish on a state-sponsored TV channel, TRT Şeş, but to label the same language as an 'unknown language' in trials when people defend themselves in Kurdish.[37] Demir Çelik, the BDP Muş Deputy, sees a similar inconsistency regarding central policies toward the Kurdish language. In this respect, the state presents TRT Şeş as proof of its recognition of the Kurdish language, but denies the right of using Kurdish

language in the government offices, even in regions where the majority of the public speaks Kurdish as their mother tongue. Another complaint heard in the interviews is the existence of 'banned words' on TRT Şeş. Accordingly, some interviewees claim that some Kurdish words are banned and not used in TRT Şeş just because they are used in Roj TV, a satellite TV channel stationed in Denmark and accused of being the PKK's media channel by the Turkish government. Some of these words, for Mehmet Emin Aktar, have no affiliation with terror-provocation, but simple phrases such as 'weather forecast' that is coined in a particular way as 'havaname' on TRT Şeş rather than a more generally recognized popular phrase. Overall, as the AKP could perform a credible religious embrace of the Kurdish populace, its progressive steps in the use and learning of Kurdish language are not seen satisfactory in the peripheral Kurdish circles.

Economic incorporation: Regional economic development and service provision

Providing high standards in its service-provision could easily be seen as the key reason for the AKP's success in three consecutive parliamentary elections as well as municipal elections during the same period. The AKP governments have made serious economic investments in the Eastern cities. In addition to these investments, particularly focused on the areas of schooling, transportation, and health; the AKP government also aimed at eradicating the deprivation and underdevelopment of the Eastern and Southeastern regions.

As Icduygu, Romano and Sirkeci (2010, p.1006) note, "Kurds in Turkey are materially much worse off than the rest of the Turkish population". Figures provided by Besikci (1967/1992) regarding the comparison of health services and schooling provision in the Eastern and Western parts of Turkey show that the gap between the region under discussion and the rest of Turkey has remained an enduring socio-economic problem. This situation might easily lead to a sense of relative deprivation. As Gurr (1970; 2000) notes, relative deprivation of an ethnic group can easily be translated into ethnic grievance and can lead to protests and violence. Given that Kurds in Turkey do not only experience relative deprivation (expectation-achievement gap/expecting more than you have), but also absolute deprivation (absolute poverty/having little), the situation

is quite severe. Nimet Ataş's story is particularly important in this context. Ataş, a 17 year old boy from Muş, walked from Muş to Ankara in 40 days to divert the state's attention toward the plight of homeless children living in the Eastern cities. [38]A significant number of children make a living out of collecting garbage in Hakkari or selling tissues on the streets of Diyarbakır.

The AKP governments pursued certain policies to compensate previous deprivations caused by village evacuations and the similar negative effects of the Extraordinary Rule of Law that was announced on July 19th, 1987 and remained in force until being abandoned by the AKP rule. Law 5233 on Compensation for Damage Arising from Terror and the Struggle with Terror was implemented to compensate for losses such as lost animals, lost property, injuries, and deaths. According to the data provided by Halit Advan, the AKP's provincial head in Diyarbakir, 52.000 families applied to receive compensation in Diyarbakir alone. 650 million TL was paid to these families in the period from 2004 to 2011. The total amount of compensation in the same period paid to applicants in Turkey amounts to 2.5 billion TL. While such initiatives were mostly welcomed in the peripheral Kurdish circles, this law is still criticized by some for making an arbitrary assessment of the losses and ignoring those losses that occurred before 1987.

Political incorporation: What is changing, what is the same old story?

At the end of the day, the Kurdish question remains a political problem. As Altan Tan rightly puts it, all unresolved social problems are political problems.[39] Hence, all preceding incorporation domains are also tied to the political domain. What distinguishes the political domain from the other three domains, though, is the question of political representation at its center. As Cornell (2001, 32) notes, it is startling for foreigners to discover that "Kurds' representation in the country's parliament is larger than their proportion of the population". Assuming that this information is correct (because some Kurds disagree with such statements), it still does not stop some peripheral Kurdish figures from claiming that "Kurds could be anyone, but Kurdish". As Muhsin Kızılkaya once wrote, "Kurds could not be just one thing so far: a Kurd. And, when they become a Kurd, they could not be anything else".[40]

The AKP has made serious legal changes in facilitating political activism such as the changes in laws 5253 (Associations Law) and 2911

(The Law on Demonstrations and Meetings). The abolition of the State Security Courts on May7th, 2004 represented happy news for many Kurdish political activists in the periphery. The constitutional changes concerning political parties and deputies (articles 69 and 84) and the judiciary system (articles 144-149, 156-157, and 159) together with policies such as 'zero tolerance' of ill-treatment and torture were thought to broaden the political space against judicial and political constraints. Perhaps due to such changes, some peripheral Kurdish figures joined the ranks of the AKP whereas some prominent figures such as Kemal Burkay and Anter Anter returned to Turkey after long years of exile. Mahmut Şimşek whose name featured on the death lists of supposedly state-backed paramilitary groups in 1990's, states that "Kurds see the AKP as their biggest partner in the struggle for democracy".[41]

Nevertheless, the AKP's insistence on sustaining the 10% electoral threshold for the parliamentary elections hurts its credibility as regards its 'political opening'. The AKP government also has refused the 'democratic autonomy' demands that were announced by the Democratic Society Congress (*Demokratik Toplum Kongresi*) in July, 2011. While democratic autonomy is clearly demanded by the BDP, other peripheral Kurdish parties such as KADEP and Hak-Par also demand political autonomy, whether it is limited local autonomy or an ethnic federation. For Hak-Par leader, Bayram Bozyel, what distinguishes federalism from democratic autonomy is the former's refusal of a superior-subordinate relationship between the center and the periphery. Federation, says Bozyel, should be founded on an equal basis.[42] Nevertheless, peripheral demands for a 'political status' to be granted to Kurds is not embraced by an overall majority of Kurds and not in the repertoire of the AKP's ethnic incorporation of Kurds.

Conclusion

Turkey under the AKP years has passed through a serious transformation process in its ethnic incorporation policies toward Kurds. While changes in the security domain have been limited to tactical changes rather than a paradigm shift, the socio-cultural domain has witnessed a more credible religious embrace of Kurds and a significant liberation for the use of the Kurdish language. The economic domain has seen serious steps taken toward compensating previous terror-related losses and the policies in this domain have aimed at eradicating the sense of relative deprivation

in predominantly Kurdish-populated areas. The AKP's opening in the political domain, particularly with regard to matters related to the political representation of Kurds and their demands, still suffers in perception from the party's reluctance to address the issue of the 10% electoral threshold. The threshold is seen as an indicator of political exclusion, if not repression, of peripheral Kurdish circles. The overall depiction of the ethnic incorporation policies in Turkey could well be described as a transition process from socio-cultural denial to socio-cultural recognition. In other words, Kurds are, to a greater extent, included in the socio-cultural and economic domains whereas the slight improvements in the political domain have been reversed by the changes in policies in the security domain since 2009. In sum, Turkey in 2012 is no longer a hard-core assimilationist[43] state, but neither a liberal multicultural one. Nor is it an oxymoron to observe the opening of the Kurdish literature and language departments as some Kurdish literary figures have been arrested in the context of KCK operations. Turkey, simply, adopts more inclusive policies in certain domains (socio-cultural and economic) whereas it continues exclusive policies in the security domain and oscillates in the political domain.

Endnotes

1 Ethnic incorporation is often used to refer the processes whereby ethnicity becomes increasingly central for group mobilization in anthropological studies (Handelman, 1977; Eriksen, 1993). This paper uses the concept in a different context as the set of policies adopted and implemented by the state toward an ethnic group residing in the country. For a similar use of the concept, see: Kopstein and Wittenberg, 2010.

2 Hence, the center-periphery dichotomy developed in this article does not follow the center-periphery dichotomy developed by the dependency school following the studies of Gunter Frank and Immanuel Wallerstein, nor does it follow identically the classical center-periphery dichotomy that has been developed by Serif Mardin and later by Metin Heper to describe the Turkish political scene. While the former dichotomy posits an imperial relationship between a capitalist center and an 'underdeveloped' periphery, the latter emphasizes autonomy and alienation of the political center with regard to the peripheral societal forces. Both kinds of dichotomies predispose an inherent conflict relationship between the center and the periphery. Although the center-periphery dichotomy developed in this paper borrows the emphasis on 'power imbalance' from these two center-periphery dichotomies, it does not make any reference to alienation or an imperial relationship between the center and the periphery, nor to an inherent conflict relationship between the two spheres

3 It should also be noted that, the Kurdish electorate in Turkey is also split between central and peripheral political actors. According to the 2011 electoral results, the

AKP seems to receive more electoral support in terms of votes received from the Kurdish electorate than independent candidates of the Bloc that is supported and led by the BDP. The AKP's electoral superiority could be seen both in the Southeastern and Eastern geographical regions of Turkey. Although some cities in these regions include significant portions of (ethnically) Turkish residents and BDP-backed Bloc did not nominate candidates in three cities out of 23 in these two regions, the great majority of both regions is claimed to be Kurdish in the peripheral Kurdish circles. The independent candidates running for the Bloc received 34% and 26% of all the valid votes in the Southeastern and Eastern regions respectively in the elections if each city is weighted equally. When each city is weighted based on the number of their electorate, these numbers go down to 29% and 23% respectively. The great majority of the rest of the electorate voted for the AKP in both regions. Nevertheless, the regions are quite heterogeneous in respect to electoral choices. For instance, the AKP received 10 times more votes than the Bloc in Adıyaman (67.4% vs. 6.5%), a Southeastern city with a significant Kurdish populace (the 1965 census was the most recent census that asked about people's mother tongues. If mother tongue is taken as a proxy for ethnicity, Turks slightly outnumbered Kurds in Adıyaman (53.5% vs. 43.9%) in 1965, but these official results were seen as biased to underestimate the Kurdish population by the Kurdish peripheral figures). On the other hand, the Bloc candidates received about 5 times more votes than the AKP votes in another Eastern city, Hakkari (79.8% vs. 16.5%). According to BDP Hakkari deputy Adil Kurt, if the officers coming from the West are excluded, almost the entire city voted for the BDP (interview with Adil Kurt on 14.2.2012). (The election data are calculated based on the election results at <http://www.hurriyet.com.tr/secim2011/default.html>, last access on 12.2.2012).

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5 For an insightful discussion of the evolution of the state discourse on Kurds, see Yegen (2007).

6 Among the interviewees, Ahmet Türk, Altan Tan, Adil Kurt, Bayram Bozyel, Demir Celik, Mehmet Doymaz, Metin Kilavuz, Mülkiye Birtane, Özcan Erdem, and Zübeyde Zümrüt who are current or former peripheral politicians as well as Arif Arslan, Faruk Balıkçı, Murat Cicek, Necdet İpekyüz, Raci Bilici, and Şahismail Bedirhanoğlu from civil society organizations stressed the denial policies that continued for decades during the republican period. For some interviewees, these policies still continue.

7 The operation started with 35.000 soldiers and 10.000 more were added during the operation.

8 According to the General Command of Gendarmerie data, 87 military personnel lost their lives as a result of terror activities in the 4 year-period from 2000 to 2003 whereas the number reached 236 in 1999 and rose even higher in the preceding years (source: <http://www.aktifhaber.com/iste-yillara-gore-verilen-sehit-sayilari-482627h.htm>, last access on 11.2.2012).

9 Cevdet Aşkın's column in daily Radikal on December 14th, 2011 is an exception in the mainstream Turkish media in this respect (available at: <http://www.radikal.com.tr/Radikal.aspx?aType=RadikalYazar&ArticleID=1072404&Yazar=CEVDET%20A%DEKIN&Date=14.12.2011&CategoryID=98>, last access on 11.2.2012).

10 34 people from Roboski Village were confused with PKK militia and died in an airstrike on December 28th, 2011 when they were returning with smuggled products from across the Iraqi border. Smuggling products such as tea, tobacco, and fuel oil is a common source of income in the region, and is called 'cross-border trade' by many local residents.

11 According to the report, 117 children lost their lives in 1992, the highest number of casualties in a year in this respect. The numbers significantly dropped after 1995 and started to increase in 2006. 18 children were killed in 2006, 3 in 2007, 1 in 2008, 12 in 2009, 13 in 2010, and 11 until September, 2011 (the 2011 numbers do not include the losses from the Roboski Village in December). The report claims that the list is not exhaustive and is updated regularly. The list also includes the names of children killed by Iranian security forces. 3 children were killed by the Iranian security forces in 2011 according to the report.

12 The Güngen family is one of the many examples. Heybet Güngen joined the PKK at the age of 13 and died at the age of 15 in a conflict with the state security forces in 2011. Heybet's brother Salih was serving in the Turkish army when he heard of his sister's death (source: <http://urfastar.com/Yasam-kizi-dagda,-oglu-askerde-1245.html> last access on 12.2.2012).

13 Pierson (2000, p.252) defines path-dependency as a situation "in which preceding steps in a particular direction induce further movement in the same direction" with a particular reference to historical institutionalism.

14 Author's interview in Diyarbakır on 21.12.2011
15 The respondent names are kept confidential in cases when it is asked for by the respondent.
16 The respondent requested his name to be kept confidential. Given that the respondent has not made any statement that could be criminalized, even this request is an evidence of fears in peripheral Kurdish circles.
17 Author's interview in Ankara on 8.2.2012. Doing 'politics on plains' rather than going up to the (Kandil) Mountain was a phrase first used by Mehmet Ağar, former Minister of Interior Affairs and former leader of True Path Party.
18 Alesina et.al. (2003) see religious, linguistic, and ethnic groups as the three principal sub-groups of ethnicity. This paper focuses on the first two categories. While the term 'ethnic group' as a separate category from the first two categories seems to be vague, some other factors such as race (in terms of morphological features), socio-economic class/caste are not primary indicators of ethnic identity in the region.
19 Chandra (2006, p.398) defines ethnic identities as "a subset of identity categories in which eligibility for membership is determined by attributes associated with, or believed to be associated with, descent", or simply as 'descent-based attributes'. This definition seems to capture the idea of ethnicity better than purely objectivist or subjectivist definitions of the term.
20 The KCK leader, Karayılan states in his book, The Anatomy of a War, that "Islam has been a cause of segmentation, fragmentation, dependence on others, and weakening for the Kurdistan society while it has been a source of enlightenment, progress, and empowerment for other peoples" (Author's translation from the original text). PM Erdoğan is well aware of this early tendency in PKK lines and uses this tendency in his statements against peripheral Kurdish circles. Erdoğan, in a recent statement, questioned the sincerity of BDP Istanbul Deputy Sırrı Süreyya Önder's draft law proposal to allow scarf-wearing in the parliament. In his response to the proposal, "They do not care about this" said Erdoğan and continued: "Can anyone who is a Zoroastrian care about this subject [headscarf]?" (Translated from the original statement that is available at <http://siyaset.milliyet.com.tr/-dini-zerdustluk-olanin-boyle-bir-derdi-olabilir-mi-/siyaset/siyasetdetay/15.10.2011/1451167/default.htm>, last access on 12.2.2012).
21 <http://hurarsiv.hurriyet.com.tr/goster/ShowNew.aspx?id=16264251> (last access on 11.2.2012).
22 The term 'Kurdish rebellion' does not imply that the rebellion was welcomed by the entire Kurdish community in Turkey. In fact, none of the uprisings and rebellions could have collected the approval of the entire, and probably even the majority of, Kurdish community up to this day. Nevertheless, Sheikh Said rebellion was initiated and implemented with references to Kurdish nationalism. As Uçarlar (2009, p.113) notes, the leaders of the rebellion were accused of striving for the establishment of Kurdistan in the trials following the repression of the rebellion. While the Sheikh Said rebellion was not the first rebellion with an ethnic character during the republican period, it was the first full-scale uprising in terms of its spread and effect.
23 Tan distinguishes 'laicism' as "a strict implementation of French Jacobinism" from secularism (author's interview in Ankara on 7.2.2012).
24 Author's interview in Ankara on 7.2.2012.
25 It is a well-spread tradition in Turkey to read mevlids (the word means birth in Arabic and refers to the birth of the prophet) on the 40th day after someone's death.

The mevlid that is most commonly read in Turkey is written by Suleyman Celebi in 1409 to celebrate the birth of the prophet Muhammed.

26 Meles are opinion leaders in terms of religious affairs particularly in Southeastern Turkey. They play an important role in the teaching of Islamic principles and practices even though they have no formal training in Islam. They are rather trained by older Meles in unofficial institutions such as madrasas. Meles have played a very significant role in the religious training of Kurdish children who cannot speak Turkish

27 Translated by the author from the original statement in Turkish. For the original statement, see: <http://www.hurriyet.com.tr/gundem/19443417.asp> (accessed on 11.2.2012). It should also be noted that the President of the Directorate of Religious Affairs, Mehmet Görmez, rejected the claims that present 'mele opening' is a political and security project (for Görmez's statement, see: <http://www.stargazete.com/politika/-mele-acilimi-bir-diyanet-projesi-haber-407067.htm>, accessed on 11.2.2012).

28 Özal probably was the first reformist political leader in respect to the Kurdish question. He launched a new approach to the Kurdish question. As Brown (1995, p.120) lists, in the context of this new rapprochement, Özal "presented the language bill permitting Kurdish to be used in everyday conversation and folklore music recordings; met with representatives of the Iraqi Kurds; and granted an amnesty that applied to many Turkish Kurds, such as the former mayor of Diyarbakir, Mehdi Zana."

29 Source: <http://www.radikal.com.tr/haber.php?haberno=98204>, last access on 12.2.2012.

30 The examples include Kurdish language institutes and Kurdish language and literature departments that are opened or approved to be opened at universities such as Mardin Artuklu University, Muş Alparslan University, Bingöl University, and Tunceli University. Many other universities in the Eastern and Southeastern Turkey applied for permission to open departments respectively and are waiting for approval.

31 Author's interviews, respectively, in Diyarbakır on 21.12.2011 and in Ankara on 2.12.2012.

32 Author's interview in Diyarbakır on 19.12.2011.

33 Author's interview in Diyarbakır on 19.12.2011.

34 Author's interview in Diyarbakır on 20.12.2011.

35 The full text of the constitution is available at (last access on 12.2.2012): <http://www.anayasa.gov.tr/images/loaded/pdf_dosyalari/THE_CONSTITUTION_OF_THE_REPUBLIC_OF_TURKEY.pdf>

36 Author's interviews in Batman and Diyarbakir, respectively, on 15.12.2011 and 22.12.2011.

37 Author's interview in Batman on 14.12.2011.

38 Author's interview in Ankara on 9.2.2012.

39 Author's interview in Ankara on 7.2.2012.

40 Author's translation from the original text. The full text is available in Turkish at <http://www.stargazete.com/acikgorus/bir-tek-kurt-olamadilar-haber-210343.htm>, last access on 2.12.2012.

41 Author's interview in Diyarbakır on 16.12.2011.

42 Author's interview in Diyarbakır on 19.12.2011.

43 For discussions of assimilationism as an 'ethnic incorporation model' or 'ethnicity regime', see Alptekin, 2010 and 2011; and Akturk, 2011.

References

Akturk, S. (2011). "Regimes of ethnicity: Comparative analysis of Germany, the Soviet Union/post-Soviet Russia, and Turkey." *World Politics*, vol. 63, no.1, pp. 115-164.

Alesina, A., A. Devleeschauwer, W. Easterly, S. Kurlat, and R. Wacziarg. (2003). "Fractionalization." *Journal of Economic Growth,* vol. 8, no. 2, pp.155-194.

Alptekin, H. (2010). "Millet system is alive: Path-dependency in Turkish and Cypriot minority incorporation patterns." *APSA 2010 Annual Meeting Paper*, Available at SSRN: <http://ssrn.com/abstract=1644664> [retrieved on 13 February 2012].

Alptekin, H. (2011). "Why and how do ethnic groups mobilize? Institutional causes of ethnic mobilization patterns in comparative perspective." *APSA 2011 Annual Meeting Paper*, Available at SSRN: <http://ssrn.com/abstract=1899963> [retrieved on 13 February 2012].

Besikci, I. (1967/1992). *Doğu Mitingleri'nin analizi (1967)* (The analysis of the Eastern meeting (1967)). Ankara: Yurt.

Chandra, K. (2006). What is ethnic identity and does it matter? *Annual Review of Political Science,* vol. 9, no. 1, pp.397-424.

Cornell, S. (2001). "The Kurdish question in Turkish politics." *Orbis*, vol. 45, no. 1, pp.31-46.

Eriksen, T.H. (1993). *Ethnicity and nationalism: Anthropological perspectives*. London: Pluto Press.

Esman, M.J., and I. Rabinovich (eds.) (1988). *Ethnicity, pluralism, and the Middle East*. Ithaca:

Cornell University Press.

Gunduz, A. (2001). "Human rights and Turkey's future in Europe." *Orbis*, vol. 45, no. 1, pp.15-30.

Gurr, T. R. (1970). *Why men rebel*. Princeton: Princeton University Press.

----. 2000. *Peoples versus states: minorities at risk in the new century*. Washington D.C.: USIP Press.

Handelman, D. (1977)." The organization of ethnicity." *Ethnic Groups*, vol. 1, June, pp. 187-200.

Heper, M. (2006). *Türkiye'de devlet geleneği* (The state tradition in Turkey). Ankara: Doğu-Batı.

Horowitz, D.L. (1985). *Ethnic groups in conflict*. Berkeley: University of California Press.

Icduygu, A., D. Romano, and I. Sirkeci. (2010). "The ethnic question in an environment of insecurity: the Kurds in Turkey." *Ethnic and Racial Studies*, vol. 22, no. 6, pp.991-1010.

IHD (Human Rights Association) Diyarbakir Branch (2011a). "Türkiye'de yaşanan çatışmalı süreçte kimyasal ve biyolojik silah kullanımı iddialarına dair rapor (Report on claims regarding the use of chemical and biological weapons in the conflict process in Turkey)."

IHD (Human Rights Association) Diyarbakir Branch (2011b). "1988-2011 yılları arası güvenlik güçleri tarafından öldürülen çocuklar (Children who were killed by security forces between the years 1988-2011)."

Imset, I. (1996). "*The PKK: Terrorists or Freedom Fighters?*" *International Journal of Kurdish Studies*, vol. 10, no. 1/2, pp. 45-100.

Karayılan, M. (2011). *Bir savaşın anatomisi* (The anatomy of a war). Germany: Mezopotamya Yayınları.

Karpat, K. (1988). "The Ottoman ethnic and confessional legacy in the Middle East." In M. J. Esman and I. Rabinovich (eds.), *Ethnicity, pluralism, and the Middle East*. Ithaca: Cornell University Press. Ch.3.

Kopstein, J., and J. Wittenberg. (2010). "Beyond dictatorship and democracy: Rethinking national minority inclusion and regime type in interwar Eastern Europe." *Comparative Political Studies*, vol. 43, no. 8, pp. 1089-1118.

Mann, M. (1986). *The sources of social power. Volume 1: A history of power from the beginning to A.D. 1760*. New York: Cambridge University Press.

Mardin, S. (1973). "Center periphery relation: a key to Turkish politics?" *Daedalus,* vol. 102, no. 1, pp. 169-190.

McDowall, D. (2000). *A modern history of the Kurds*. London: I.B. Tauris.

Pierson P. (2000). "Increasing returns, path dependence, and the study of politics." *American Political Science Review*, vol. 94, no. 2, pp.251-267.

Romano, D. (2006). *The Kurdish nationalist movement: opportunity, mobilization, and identity.* New York: Cambridge University Press.

Somer, M. (2005). "Failures of the discourse of ethnicity: Turkey, Kurds, and the emerging Iraq." *Security Dialogue*, vol. 36, no. 1, pp.109-128.

Smith, B. (2009). Land and rebellion: Kurdish separatism in comparative perspective." Available at: <http://government.arts.cornell.edu/assets/psac/sp09/Smith_Kurdish_Separatism_Feb09_PSAC.pdf> [retrieved on 13 February 2012].

Ucarlar, N. (2009). *Between majority power and minority resistance: Kurdish linguistic rights in Turkey.* Lund: Lund University.

Weber, M. (2004). Politics as a vocation. In D.S. Owen, and T.B. Strong (eds.), *The vocation lectures: 'science as vocation'; 'politics as vocation'*. Indianapolis: Hackett Publishing Company, Inc., pp.32-94.

Yayman, H. (2011). Şark meselesinden demokratik açılıma Türkiye'nin Kürt sorunu hafızası (Turkey's memory of the Kurdish problem from the Eastern question to democratic opening). Ankara: Seta Yayınları.

Yegen, M. (2007). "Turkish nationalism and the Kurdish question. Ethnic and racial Studies*,* vol. 30, no. 1, pp.119-151.

Yuksel, E. (1998). "Yes, I am a Kurd." *Journal of International Law & Practice,* vol. 7, no. 3, pp.359-393.