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ABSTRACT

THE EFFECTS OF ISOLATION ON THE TURKISH REPUBLIC OF NORTHERN CYPRUS

GÖRGÜLÜ, M. EMRE[†]

The economic development of the Turkish Republic of Northern Cyprus remains to be volatile mainly due to the isolation of the de facto Turkish Cypriot state. While on one hand, high costs of energy in the Turkish Republic of Northern Cyprus associated with the isolation, remains as a huge obstacle for the increment in Turkish Cypriot production, embargo placed upon her, including closure of ports and airports, on the other, restrains international trade for Turkish Cypriots, thus making the Turkish Cypriot economy a challenged one.

Therefore, after indicating the burdensome effects of isolation on the economy of Turkish Republic of Northern Cyprus, this paper proposes how the Turkish Cypriot economy needs to overcome her self-reliance issues and suggests alternative solutions to the Turkish Cypriot economy. For this purpose, by using time-series analysis this paper provides a double-model approach in which the economic growth of the Turkish Republic of Northern Cyprus is mainly dependent on aid transfers from Turkish government and is suffering from isolation in the first, and is determined by the free-trade and free-movement of international capital brought by becoming a transition economy and therefore easing the contractions on the economy, on the hypothetical second model. While the results of the analysis employed in this paper confirms that main problems of Turkish Cypriot economy are associated with the isolation, it also indicates that Turkish Cypriot economy would be better off in an isolation-free environment. Thus, this paper aims to assert the importance of self-determination rights for the Turkish Cypriots.

Keywords: Economic Development, Cyprus Dispute, Economy of the Turkish Republic of Northern Cyprus as a Transition Economy.

Jel Codes: F41, F43, F51, O10, P45, P48

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ÖZ

İZOLASYONUN KUZHEY KIBRIS TÜRK CUMHURİYETİ ÜZERİNE ETKİLERİ

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Kuzey Kıbrıs Türk Cumhuriyeti'nin ekonomik kalkınması başlıca de facto Kıbrıs Türk devletine uygulanan izolasyondan ötürü istikrarsız olarak kalmaktadır. Bir tarafta, izolasyon ile alakalı yüksek enerji masrafları Kıbrıs Türkleri'nin üretiminin artmasının önünde büyük bir engel olarak kalırken, diğer tarafta liman ve havaalanlarının kapanmasını da içeren uygulanmakta olan ambargo, Kıbrıs Türkleri için uluslararası ticareti sınırlandırmakta, böylelikle Kıbrıs Türk ekonomisini özürü bir hale getirmektedir.

Bu doğrultuda, izolasyonun Kuzey Kıbrıs Türk Cumhuriyeti'nin ekonomisi üzerindeki külfetli etkilerini belirttikten sonra, bu makale, Kıbrıs Türk ekonomisinin kendi kendine yeterliliğe karşılaştığı sorunları nasıl aşması gerektiğine değinmekte ve Kıbrıs Türk ekonomisine alternatif çözüm önerilerinde bulunmaktadır. Bu amaç doğrultusunda, bu makale zaman serileri analizine dayalı çift-modelli bir yaklaşım ortaya koymaktadır. Bu yaklaşıma göre, Kuzey Kıbrıs Türk Cumhuriyeti'nin ekonomik büyümesi, ilk modelde başlıca Türkiye hükümeti tarafından gönderilen yardımlara bağlanmışken, izolasyonun etkilerinden gördüğü zararlar belirtilmiş, varsayımsal ikinci modelde ise bir geçiş ekonomisi olmanın sağlayacağı serbest ticaret ve uluslararası sermayenin serbest dolaşımının faydalarından yaralanılarak ekonomi üzerindeki daralmanın hafifleyebileceği vurgulanmıştır. Bu makalede kullanılan analizin sonuçları Kıbrıs Türk ekonomisinin ana problemlerinin izolasyon ile ilişkili olduğu sonucunu doğrularken, ayrıca Kıbrıs Türk ekonomisinin izolasyonun olmadığı bir ortamda çok daha iyi bir performans sergileyebileceğini belirtmektedir. Böylelikle, bu makale Kıbrıs Türkleri'nin kendi kaderlerini tayin etme haklarının önemini bir kez daha vurgulamayı hedeflemektedir.

Anahtar Kelimeler: Ekonomik Kalkınma, Kıbrıs Sorunu, Bir Geçiş Ekonomisi Olarak Kuzey Kıbrıs Türk Cumhuriyeti

Jel Kodları: F41, F43, F51, O10, P45, P48

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1. INTRODUCTION

The first half of the first decade of the new millennium saw an impressive growth performance for the Turkish Republic of Northern Cyprus¹ (TRNC) (TRNC State Planning Organization, 2012). These impressive growth numbers were attributed to the strength of Turkish Lira and the development of construction, tourism and education sectors in TRNC. However, this rapid growth performance was misleading. The facts that Turkish Cypriot economy is vulnerable to economic developments in Turkey and lacks a developed financial system are keys to understand this misconception (CIA, 2014). Hence, the economic performance in the majority of second half of the decade was far from indicating a stabilized economy. Given the effects of global crisis and her unique situation, economic growth of TRNC was less than a stellar in between 2007-2010² (TRNC State Planning Organization, 2012). The economic development of the TRNC remains to be volatile mainly due to the isolation of the de facto Turkish Cypriot state. While on one hand, high costs of energy in the TRNC associated with the isolation, remains as a huge obstacle for the increment in Turkish Cypriot production, embargo placed upon her, including closure of ports and airports, on the other, restrains international trade for Turkish Cypriots, thus making the Turkish Cypriot economy a challenged one.

In this direction claiming that TRNC has a unique political position in today's globalized world would not be wrong. On one hand she is an open-market economy by definition, but she lacks the self-determination rights and suffers from a worldwide embargo which turns TRNC into a semi-closed - as she is still operational through Turkey or through internationally recognized Cypriot ports for local products sourced in Cyprus - economy in effect. On the other hand, she can be considered as a possible candidate to become a transition economy or as a transition economy with an elusiveness on the completion of the transition period in the foreseeable future, given her semi-closed market conditions. Thus, even if, it is uncertain for how long Turkish Cypriot economy will remain as a challenged economy, the urge to be prepared for the day she will be able to use her self-determination rights on her economy and becoming a potential transition economy increases. Till that day comes Turkish Cypriot economy needs to secure her self-reliance on the long road of self-determination and when that day comes Turkish Cypriot economy needs to be well-prepared for the merits of

¹ GDP growth rates in TRNC was -5.4% in 2001, 6.2% in 2002, 10.6% in 2003, 14.2% in 2004, 13.8% in 2005 and 12.7% in 2006 and GNP growth rates in TRNC was -5.4% in 2001, 6.9% in 2002, 11.4% in 2003, 15.4% in 2004, 13.5% in 2005 and 13.2% in 2006 (TRNC State Planning Organization, 2012).

² GDP growth rates in TRNC was 2.8% in 2007, -2.9% in 2008, -5.5% in 2009 and 3.7% in 2010 and GNP growth rates in TRNC was 1.5% in 2007, -3.4% in 2008, -5.7% in 2009 and 3.6% in 2010 (TRNC State Planning Organization, 2012).

becoming a transition economy. So, Turkish Cypriots on one hand, as the efforts for the solution of the Cyprus Dispute proceeds, need to find alternative ways to overcome the challenges of her economy, and need to assure self-reliance on the other.

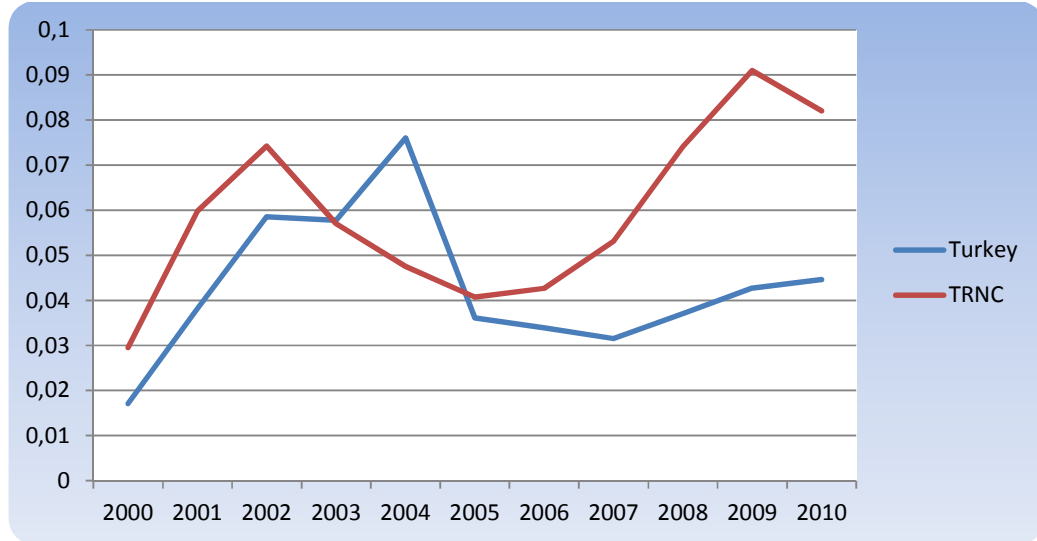
Therefore, the next section reports the burdensome effects of isolation on the economy of TRNC. In the following analysis section, by using time-series analysis this paper provides a double-model approach in which the economic growth of the TRNC is mainly dependent on aid transfers from Turkish government and is suffering from isolation in the first, and is determined by the free-trade and free-movement of international capital brought by becoming a transition economy and therefore easing the contractions on the economy, on the hypothetical second model. In the final section, this paper proposes how Turkish Cypriot economy needs to overcome her self-reliance issues and suggests alternative solutions to the Turkish Cypriot economy and concludes with some policy implications.

By employing a two-model approach, the dual-purpose of this paper is both to expose the harmful effects of isolation and to get a clearer picture - approximately and hypothetically - of what would be the economic situation in TRNC if she were able to use her self-determination rights in an isolation-free environment, namely in an open economy in practice.

2. THE EFFECTS OF ISOLATION

Most devastating effects of the isolation has been felt on the energy sector in TRNC, as it provides a stimulative role on the economic growth. Moreover, due to the isolation and isolation related lack of competition conditions, the cost of electricity in TRNC is one of the most expensive ones in the world (Kıb-tek, 2014; Statista, 2014). However this high costs of electricity do not originate from the regular kwh costs. Because particularly lately the regular kwh electricity costs in TRNC - both in household and industrial - are close enough to those of EU average (Kıb-tek, 2014; Eurostat, 2014). It is more of an issue about the principal-agent problem inflicted from lack of competition. Therefore, high costs of energy in the TRNC associated with the isolation, remains as a huge obstacle for the increment in Turkish Cypriot production, thus making Turkish Cypriot economy a semi-closed one. Even though there is some level of production in TRNC, this production remains ineffective through high costs of electricity. To better understand the burden of high electricity costs in TRNC, one can compare per capita electricity consumption between Turkey and TRNC, instead of the regular kwh costs since, as indicated the problem is not a kwh cost issue. In fact, this comparison can give us an insight about the effectiveness of electricity in total production. Following this reasoning, below Table 1 shows us that even though the per capita electricity consumption is relatively higher in TRNC, her total per capita production efficiency levels do not reflect this consumption (TRNC State Planning Organization, 2012), so indicating an ineffective use of electricity in TRNC on average. To measure this efficiency level, first cost of per kwh was calculated through an weighted average between household and industrial tariffs both in Turkey (Tedaş, 2014) and TRNC (Kıb-tek, 2014). Then, the calculated average cost of per kwh was multiplied by per capita electric consumption in each country (TRNC State Planning Organization, 2012; The World Bank, 2013) in order to get the per capita electricity consumption cost. Finally, the calculated per capita electricity cost is divided by per capita GNP in each country (TRNC State Planning Organization, 2012; The World Bank, 2013) for the years between 2000 and 2010, so that we could see its share in per capita GNP. Here's how it looks like:

Figure 1 - Per capita electricity consumption share in per capita GNP (2000-2010)

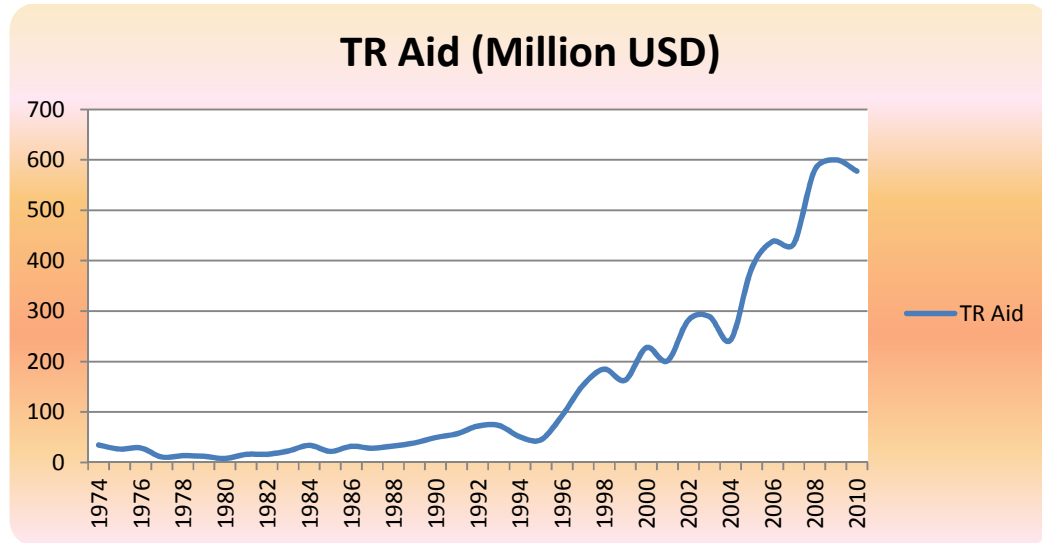


(Sources: K1b-tek, 2014; Tedaş, 2014; TRNC State Planning Organization, 2012; The World Bank, 2013)

As seen from Table 1 only in years 2003 and 2004 the efficiency in electricity use in TRNC exceeds that of Turkey's (K1b-tek, 2014; Tedaş, 2014; TRNC State Planning Organization, 2012; The World Bank, 2013). So, therefore on overall this picture tells us that, in TRNC effectiveness of electricity in total production is in question.

Moreover, heavy public sector burden and the reliance on the aid transfers from Turkish Government, make TRNC economy much more vulnerable than it would be in an open economy case. As of 2010, Turkish aid transfers nearly consist of a third of the TRNC budget (TRNC Department of Finance, 2014a) and additionally using a considerable portion of these aid transfers from Turkey to finance the budget deficit even makes these aid transfers inefficient (Republic of Turkey, Embassy of Lefkosa, 2014). Below Table 2 shows the historical development of Turkish aid transfers to TRNC since 1974.

Figure 2 - Turkish Aid Transfers to TRNC between 1974-2010 (Million USD)



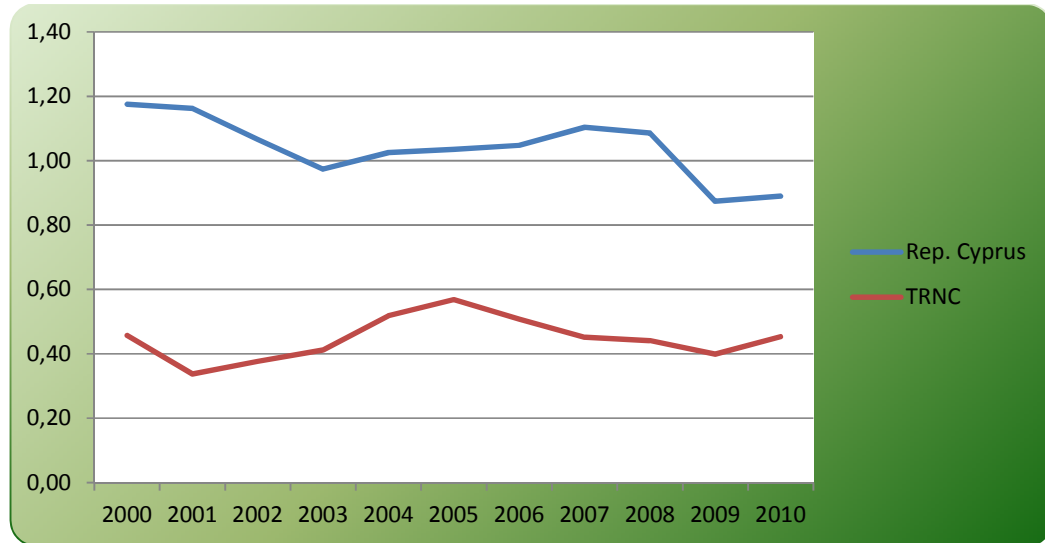
(Source: Republic of Turkey, Embassy of Lefkosa, 2011)

The high dependency on Turkish aid can be observed in Table 2. Though given the conditions of isolation, dependency on Turkish aid is understandable as a compensation for the semi-closed economy situation. However, in the long-run this dependency should be reduced as the isolation - hopefully one day - slackens off.

More importantly, being a semi-closed economy due to the isolation is basically the main problem of Turkish Cypriots. The worldwide embargo placed upon her cripples the Turkish Cypriot economy in a major scale due to her disability in foreign trade. The only way that TRNC can operate internationally is through Turkey or internationally recognized Cypriot ports for local products sourced in Cyprus. Thus, this indirectness of foreign trade of TRNC causes an ineffectiveness in all aspects of Turkish Cypriot economy in considerable size. To better understand the scale of the ineffectiveness, Table 3 compares the openness to trade³ in both parts of the island between 2000 and 2010.

³ Generally openness to trade is measured by the sum of exports and imports of a country as a percentage of GDP of that country (OECD, 2014). However, in this paper, openness to trade is measured by adding imports and exports for a country and dividing this sum by the GNP of that country.

Figure 3 - Openness to Trade: Republic of Cyprus vs. TRNC (2000-2010)



(Sources: The World Bank, 2013; TRNC State Planning Organization, 2012)

The difference between the figures in openness to trade for both countries confirms the inefficiency in foreign trade in the north part of the island. Therefore, if TRNC would have a fully operational open economy, then without a doubt, her foreign trade would become efficient and thus her foreign trade numbers would be much more satisfying.

Additionally, due to the isolation, foreign direct investment (FDI) flows in and out of the TRNC are very limited, which creates another obstacle standing in the long way of economic development of TRNC.

Overall, it is a clear assessment that, the effects of the isolation basically cripples the Turkish Cypriot economy in every respect. Not having full control of her self-determination rights makes TRNC a defective economy. Consequently, TRNC should find ways to eliminate the ill effects of the isolation either by slacken the isolation itself through following a solution path to the Cyprus Dispute or enhance self-reliance capacity - through effective use of resources and employing alternative means for development - given an inconclusive outcome to the Dispute.

3. THE ANALYSIS

The two-model approach employed in this study, enables us both to better comprehend the detrimental effects of the isolation and to gain a better insight of what a fully operational open economy of TRNC would have looked like. In this direction, this study investigates the answers to the research questions for 2000-2010 time period with a per capita based time-series analysis. In order to avoid misleading results - as growth figures of GNP or GDP of a country in a given period can differ in per capita terms for the same parameters and unlike per capita terms for these parameters, growth of GNP or GDP is not a measure for standard of living - per capita values of variables have been selected for both models. Accordingly Model 1 is as follows:

$$Y_t - Y_{t-1} = \{\alpha + (\theta Y_{t-1} + \beta \text{TRAid}_t + \gamma \text{TUR}_t + \delta \text{BAL}_t) \times [\text{Isolation Penalty}]_t\} + \varepsilon_i, \text{ (Model 1)}$$

So it becomes;

$$Y_t - Y_{t-1} = \alpha + \theta(Y_{t-1} \times [\text{Isolation Penalty}]_t) + \beta(\text{TRAid}_t \times [\text{Isolation Penalty}]_t) + \gamma(\text{TUR}_t \times [\text{Isolation Penalty}]_t) + \delta\{(\text{BAL}_t) \times [\text{Isolation Penalty}]_t\} + \varepsilon_i, \text{ (Model 1)}$$

Model 1 specifies per capita growth of GNP in TRNC (TRNC State Planning Organization, 2012) as the dependent variable. The significance of the difference in per capita GNP values between consecutive years, is to indicate the realised growth in per capita GNP from year to year.

Moreover Model 1 explains the dependent variable by numerous independent variables. According to the Model 1, Y_{t-1} specifies the value of per capita GNP of the previous year in TRNC (TRNC State Planning Organization, 2012), whereas TRAid_t represents the value of per capita foreign aid from Turkey to TRNC (Republic of Turkey, Embassy of Lefkosa, 2014) and TUR_t indicates the value of per capita tourism income in TRNC (TRNC State Planning Organization, 2012) while BAL_t represents per capita external trade balance for TRNC (TRNC State Planning Organization, 2012). As discussed in the previous section, Turkish foreign aid to TRNC is a major factor in the development of TRNC and approximately accounts for a third of her budget each year in 2010, 2011 and 2012 (TRNC Department of Finance, 2014b). On the other hand, choice of tourism income to be represented in the model is relevant in the way that its increasing importance and share in the economy of TRNC (TRNC State Planning Organization, 2012). Additionally, per capita external trade balance in TRNC enables us to find out another dimension of the detrimental effects of the isolation (TRNC State Planning Organization, 2012).

However, the isolation penalty variable is assumed to adversely affect the per capita growth of GNP by default. This effect is reflected in the penalty variable as it serves a deflating multiplier function. The isolation penalty variable consists of two parts. In the first one, this study deals with the per capita difference in per capita electricity consumption share in per capita GNP between Turkey (Tedaş, 2014; The World Bank, 2013) and TRNC (Kıb-tek, 2014; TRNC State Planning Organization, 2012) in order to exhibit the inefficiency related with the isolation in TRNC production. The difference in electricity consumption share has been selected mainly due to its importance in all kinds of production. Using this factor of production in an ineffective way reduces the total effectiveness of the production in TRNC. In this manner, the paper aims to measure and use the per capita difference in electricity consumption share in per capita GNP between Turkey (Tedaş, 2014; The World Bank, 2013) and TRNC (Kıb-tek, 2014; TRNC State Planning Organization, 2012) in the isolation penalty variable as an indicator of inefficiency. Moreover, this ineffectiveness is highly related with the isolation itself. As previously indicated, the total costs of electricity in TRNC for both household and industrial consumption remain in top of the most expensive list mainly owing it to the isolation related problems (Kıb-tek 2014; Statista, 2014). The second part of the isolation penalty is about per capita openness to foreign trade. Generally openness to foreign trade is represented by adding exports and imports for a country and dividing this value to the GDP or GNP of that country in a given period (OECD,2014). However, the unique situation of TRNC requires unique calculations. Therefore, given the fact that TRNC is roughly controls a third of the island and her population is approximately close enough to a third of that of the Republic of Cyprus, the following simplifying assumption has been made: If TRNC would be able to use her self determination rights and if she would operate in a isolation free fully open economy environment, then her foreign trade would increase in the amount of a third of per capita openness to foreign trade variable of the Republic of Cyprus (The World Bank, 2013). Thus we can formulate the isolation penalty variable as follows:

$$[\text{Isolation Penalty}]_t = [(\text{Electricity consumption share in per capita GNP})_{\text{TRNC}} - (\text{Electricity consumption share in per capita GNP})_{\text{TR}}] + \{[(X_t+IM_t)/\text{GNP}_t]_{\text{Rep.Cyprus}} \times 0.33\}$$

The rationale for the isolation penalty variable adversely affecting the per capita growth of GNP by default lies in the fact the desire to unfold a segment of the undesirable and ill effects of the isolation. Therefore these effects have an adverse effect on the growth of TRNC and must be discounted from the growth model equation.

The hypothetical estimation model, Model 2, aims to exhibit the would-be economic growth of TRNC under hypothetical fully open economy conditions. Thus, Model 2 forms as follows:

$$[(Y_t - Y_{t-1})_{\text{Rep.Cyprus}} \times 0.33 + (Y_t - Y_{t-1})_{\text{TRNC}}] = \{\alpha + \theta[(Y_{t-1})_{\text{Rep.Cyprus}} \times 0.33 + (Y_{t-1})_{\text{TRNC}}] + \beta[(\text{FDI}_t)_{\text{Rep.Cyprus}} \times 0.33] + \gamma[\text{BAL}_t] \times (\text{TRADE}_t)\} + \varepsilon_i, \text{ (Model 2)}$$

Thus it takes the form;

$$[(Y_t - Y_{t-1})_{\text{Rep.Cyprus}} \times 0.33 + (Y_t - Y_{t-1})_{\text{TRNC}}] = \alpha + \theta\{[(Y_{t-1})_{\text{Rep.Cyprus}} \times 0.33 + (Y_{t-1})_{\text{TRNC}}] \times \text{TRADE}_t\} + \beta\{[(\text{FDI}_t)_{\text{Rep.Cyprus}} \times 0.33 \times (\text{TRADE}_t)] + \gamma\{[\text{BAL}_t] \times (\text{TRADE}_t)\} + \varepsilon_i, \text{ (Model 2)}$$

Using previously stated "a third" assumption, Model 2 specifies the sum of per capita growth of GNP in TRNC (TRNC State Planning Organization, 2012) and a third of per capita growth of GNP in the Republic of Cyprus (The World Bank, 2013) as the dependent variable in order to put forth the would-be potential growth values of TRNC for the subject years.

Model 2 uses, per capita GNP of the previous year in TRNC (TRNC State Planning Organization, 2012) added to the a third of the same value in the south part of the island (The World Bank, 2013), a third of the per capita annual net FDI flows in the Republic of Cyprus (UNCTAD, 2014) and would-be external trade balance variable BAL_t that consists of the absolute difference between a third of the per capita external trade balance of the Republic of Cyprus (The World Bank, 2013) and the actual per capita external trade balance of TRNC to explain the dependent variable. Moreover, all dependent variables are multiplied by the openness to foreign trade in a would-be open TRNC (TRADE_t) calculated through adding 1 - in order to get the effects of the trade boost - to the summation of a third of per capita openness to foreign trade variable of the Republic of Cyprus (The World Bank, 2013) and the actual realised per capita openness to foreign trade variable of TRNC (TRNC State Planning Organization, 2012). It is in the form:

$$(\text{TRADE}_t) = 1 + \{[(X_t + \text{IM}_t)/\text{GNP}_t]_{\text{Rep.Cyprus}} \times 0.33\} + [(X_t + \text{IM}_t)/\text{GNP}_t]_{\text{TRNC}}$$

Using a third of the annual net FDI flows in the Republic of Cyprus is justified based on FDI's leading role on the development of countries. The annual net values in question are calculated by basically taking the difference between the inflow and outflow FDI figures for a given year⁴. The openness to foreign trade in a would-be open TRNC has been used in the

⁴ To represent the trade boost on the model, net FDI variable is multiplied by $1/(\text{TRADE}_t)$ multiplier where net FDI is negative and is multiplied by (TRADE_t) multiplier where net FDI is positive.

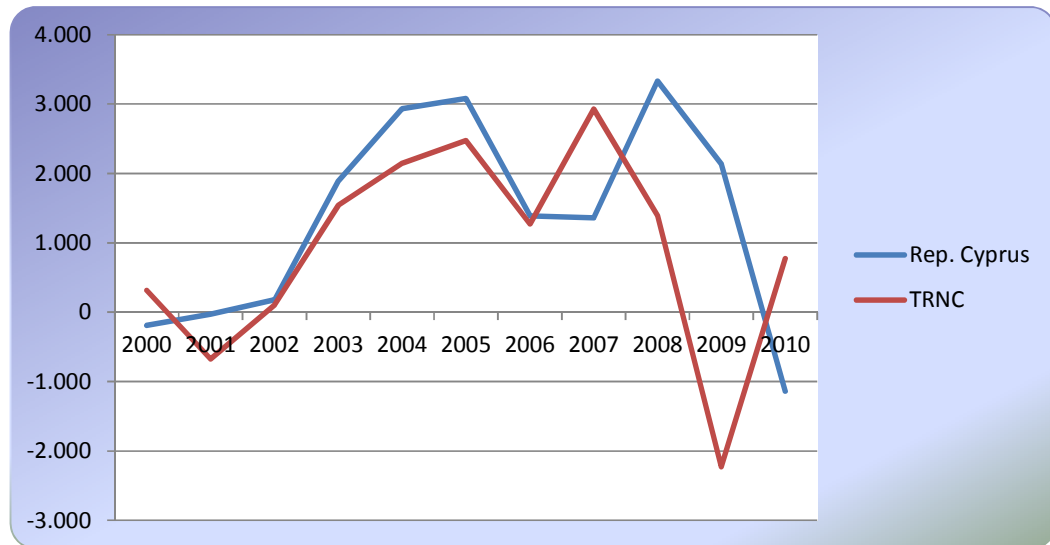
model as multiplier in order to indicate the would-be increase in TRNC foreign trade volume. Additionally, the external trade balance variable through its unique way of calculation provides a glimpse to the would-be free-trade environment in TRNC. The FDI and the external trade balance variables, and the openness to foreign trade multiplier in the model therefore, would act like a bonus for the would-be open economy situation, instead of an isolation penalty, thus, hypothetically enabling self-determination of TRNC.

Even though conducting the analyses for the paper can give us some insight of the Northern Cyprus economy, one must also consider the limitations of this study. Given specific status of TRNC, obtaining healthy and concurrent data could be one of the limits of this paper. This is one of the reasons why the study covers only a ten year period. Moreover, one can also attribute the growth of a country to many other factors than those have been used in this paper. For the growth of TRNC one could also consider the real estate, banking or education industries. However, attaining healthy data for those variables is sometimes harder than one would expect and therefore, it is safe to say that those other factors would be out of the scope of this study.

4. CONCLUSION

The rationale for these analyses lies in the facts that first, TRNC suffers from isolation in a substantial scale and this is reflected in her growth performance and second, Republic of Cyprus performs better than TRNC simply because she has her own self-determination rights. In fact, as clearly seen from Table 4 below for the time period of 2000-2010 per capita GNP growth figures of Republic of Cyprus mostly dominate⁵ that of TRNC (The World Bank, 2013; TRNC State Planning Organization, 2012).

Figure 4 – Growth in per capita GNP: Republic of Cyprus vs. TRNC (2000-2010)



(Sources: The World Bank, 2013; TRNC State Planning Organization, 2012)

According to the results of the analyses employed in this paper; when we compare the results of both models, it is evident that Model 1 significantly suffers from the isolation penalty, whereas Model 2 exhibits higher growth figures, as Model 2 demonstrates a would-be open economy case for TRNC. Moreover in Model 1, external trade balance of TRNC adversely affects the economic growth in TRNC. However, dependency on Turkish aid as one would expect to stand out as an important factor contributing to the economic growth of TRNC, and the tourism income remain inconclusive. This inconclusiveness is probably highly related with the fact that isolation itself and isolation related lack of institutional quality and stability in TRNC. Therefore, it is safe to say that Model 1 exhibits the challenging effects of isolation in one way or another. That being the case, Model 2 indicates efficiency in production reflected in the growth of the economy, and also remarks the benefits of openness

⁵ Except for the years 2000, 2007 and 2010 (The World Bank, 2013; TRNC State Planning Organization, 2012)

to foreign trade and foreign investments. Additionally, we can clearly observe that since there would be no isolation in the hypothetical Model 2, there are no ill effects related with it such as ineffective electricity consumption nor indirect foreign trade which are reflected in the positive contribution of the external trade balance variable.

Given that TRNC can conduct her foreign trade through indirect therefore ineffective ways mainly via Turkey due to the embargo placed upon her, she should find alternative ways to overcome the ill effects of the isolation regardless of whatever the outcome of the Cyprus Dispute would be. Given elusiveness of the Cyprus Dispute, these alternatives in fact should include solutions leading to sustainable development in order to achieve a self-reliant environment regardless of whether TRNC would become a transition economy or not. To assure sustainable development objective, Turkish Cypriots should in fact look for alternative energy solutions ranging from the effective use of windmills to the establishment of offshore platforms.

In this direction since 2011 Türkiye Petrolleri Anonim Ortaklığı (TPAO) has been conducting the oil exploration works in the de-facto territorial waters of TRNC (TRNC, Ministry of Foreign Affairs, 2014). Despite the criticism for these efforts from the south side of the island, these exploration efforts are legit. The legitimacy of oil exploration works conducted by the Turkish side based on London-Zurich Agreements dated 1959. According to the aforementioned agreement Turkish side has rights on the natural resources of the entire island, and thus Turkey stands as a guarantor and impedes Greek Cypriots to exploit natural resources of the island by themselves only (London-Zurich Agreements, 1959).

On the other side, TRNC should not only attempt to increase her fossil-based energy resource acquisition but also she should invest more in clean energy resources as well. Northern Cyprus Water Supply project stands out as a great step taken in this direction (DSİ, 2014). Moreover, given the geographical facts of the island, TRNC should also enhance the widespread use of windmills and solar power generators to generate clean energy.

Therefore energy solutions within a sustainable development perspective in the long run could be the only way to attain effectiveness in production. Once effectiveness in production increases through increased effectiveness in energy sector, regardless of the outcome of the Dispute, it should enhance the growth capacity of TRNC.

While the results of the analyses employed in this paper confirms that main problems of Turkish Cypriot economy are associated with the isolation, it also indicates that Turkish Cypriot economy would be better off in an isolation-free environment. Thus, this paper aims to assert the importance of self-determination rights for the Turkish Cypriots. However, it should not be forgotten that self-reliance in energy sector can also ease the pains of becoming

a transition economy, as it will provide much more stronger structure for potentially substantial increase in production. Thus, this paper also aims to assert the significance of self-reliance in energy sector both in closed economy and potential transition economy periods for Turkish Cypriots.

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APPENDIX

Table 1 - MODEL 1 Summary of the Results of the Analysis

Dependent Variable: GROWTH
 Method: Least Squares
 Date: 05/16/14 Time: 00:04
 Sample: 2000 2010
 Included observations: 11

Variable	Coefficient	Std. Error	t-Statistic	Prob.
C	1275.560	1748.471	0.729529	0.4932
GNP_1	-1.179680	0.428587	-2.752487	0.0332
AID	-2.107464	4.579103	-0.460235	0.6616
TUR	-1.565734	5.308744	-0.294935	0.7780
BAL	-3.949282	1.253965	-3.149435	0.0198
R-squared	0.833973	Mean dependent var	912.4545	
Adjusted R-squared	0.723289	S.D. dependent var	1489.350	
S.E. of regression	783.4481	Akaike info criterion	16.46824	
Sum squared resid	3682746.	Schwarz criterion	16.64910	
Log likelihood	-85.57533	Hannan-Quinn criter.	16.35423	
F-statistic	7.534691	Durbin-Watson stat	2.003015	
Prob(F-statistic)	0.016027			

Figure 5 - MODEL 1 Actual, Fitted, Residual Data

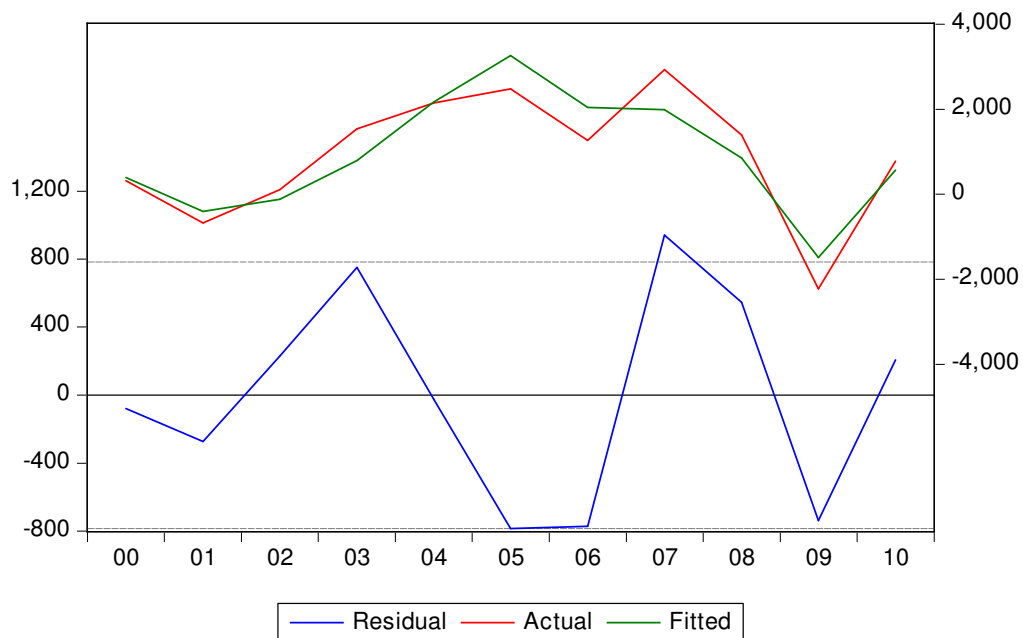


Table 2 - MODEL 2 Summary of the Results of the Analysis

Dependent Variable: H_GROWTH
 Method: Least Squares
 Date: 05/16/14 Time: 01:11
 Sample: 2000 2010
 Included observations: 11

Variable	Coefficient	Std. Error	t-Statistic	Prob.
C	1116.653	726.9246	1.536133	0.1684
H_GNP_1	-0.169556	0.039261	-4.318623	0.0035
FDI	1.689411	0.665676	2.537886	0.0388
BAL	1.534098	0.294411	5.210727	0.0012

R-squared	0.832569	Mean dependent var	1360.636
Adjusted R-squared	0.760813	S.D. dependent var	1726.596
S.E. of regression	844.4223	Akaike info criterion	16.59047
Sum squared resid	4991343.	Schwarz criterion	16.73516
Log likelihood	-87.24759	Hannan-Quinn criter.	16.49926
F-statistic	11.60275	Durbin-Watson stat	1.885418
Prob(F-statistic)	0.004170		

Figure 6 - MODEL 2 Actual, Fitted, Residual Data

