THE IMPACT OF VALUE ADDED TAX ON THE NORTH CYPRUS ECONOMY: A SHORT TERM ASSESSMENT

KATMA DEĞER VERGİSİNİN KUZEY KIBRIS EKONOMİSİ ÜZERİNE ETKİSİ : KISA DÖNEM DEĞERLENDİRMESİ

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ABSTRACT: Value added tax was introduced in North Cyprus in 1996 to increase public revenue as well as to harmonize with Turkey and EU member countries. It is however evident that the budget deficit has rather increased after the introduction of VAT. The literature argues that VAT not only has potential to generate enough revenue to reduce the budget deficit but also encourages savings and investments. The question is why could North Cyprus not achieve these objectives? The present study was designed to answer this question. It evaluates the impact of VAT on the North Cyprus economy by using several macroeconomic variables such as total consumption, total domestic savings, public, private and total investments, government purchases, exports and imports. The impact of VAT has been studied through simple regression techniques with dummy variable for policy change.

Keywords: VAT, impact of economy, North Cyprus, short-term assessment.

ÖZET: *Gerek kamu gelirlerinin artırılması, gerekse Türkiye ile AB'ye üye ülkeler ile uyumun sağlanması amacıyla, 1996 yılında Kuzey Kıbrıs'ta KDV uygulaması başlatılmıştır. Ancak, bu uygulama sonrasında, diğer bir deyişle KDV uygulamasından sonra dahi, bütçe açığında artış gözlenmiştir. Literatür araştırmalarından da ortaya konduğu üzere, KDV yalnızca bütçe açığını azaltacak düzeyde bir gelir artışı sağlamakla kalmayıp, aynı zamanda gerek tasarrufu gerekse yatırımları teşvik etmektedir. Bu konuda akla gelen soru ise, Kuzey Kıbrıs'ta neden bu hedeflere ulaşılamadığıdır. Mevcut çalışma ise, bu soruya bir yanıt almak üzere tasarlanmıştır. Yine bu bağlamda, anılan çalışma toplam tüketim, toplam tasarruflar, kamu, özel ve toplam yatırımlar, kamu alımları, ihracat ve ithalat gibi çeşitli makro ekonomik değişkenleri kullanarak KDV'nin Kuzey Kıbrıs ekonomisi üzerindeki etkilerini değerlendirmektedir. Böylece, KDV'nin etkisi politika değişimi için dummy değişken içeren basit regresyon tekniği ile incelenmiştir.*

Anahtar kelimeler: *KDV, ekonomik etki, Kuzey Kıbrıs, kısa-vadeli değerlendirme.*

1. Introduction
The advantages and disadvantages of value added tax (VAT) remain controversial issues in the literature since its first introduction in France in 1954[1]. VAT supporters argue that it helps businesses to compete internationally since it does not affect export prices and encourages saving that could lead to capital formation in the long run. They further argue that since VAT has great potential to generate a tremendous amount of revenue with very low rate, it could help in addressing the budget deficit

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[1] For a detailed discussion on the advantages and disadvantages of VAT see Andrikopoulos, et.al., 1993; Brookes, 1989; Boskin, 1996; Georgakopoulos, 1990; Glaser and Sartor, 1993; Militzer and Ontscherenki, 1990; Price and Porcano, 1992; and Spain, 1993.

and balance of payments problems. Many of them are even more optimistic and consider VAT as a tool for reducing the amount of unregistered economy in a country. On the other hand, opponents regard VAT as a money making machine that could lead to increase public spending and consequently a large public sector. They argue that since VAT is a hidden tax, its rate could be raised more easily than other taxes, which would raise consumer prices immediately, and consequently there would be high inflation. The inflationary impact of VAT would appear in the form of slow economic growth or even a recession and a lower real value of existing savings. It is also argued that since low-income persons consume a higher proportion of their income than high-income persons, VAT should be regarded as regressive. Although VAT supporters suggest income-tax credit to solve this problem, it is unlikely that a poor person would be eligible to pay tax. Therefore, tax credit will not provide any relief to these poor people. VAT supporters further suggest exempting certain basic needs items such as food, medical care, books, electricity, water etc. and applying a high tax rate on luxury items such as automobiles, televisions, VCRs, jewellery etc. to improve the income distribution situation. In this way, the VAT tax system will not only become more complex but will also create a discriminating environment among various industries.

Despite considerable theoretical discussion on the positive and negative impact of VAT, the literature does not provide enough empirical evidence to support either side. For example, Militizer and Ontscherenki (1990) studied the impact of VAT on saving in USA. They found that personal saving rates declined in the years following VAT. Price and Porcano (1992) argue that a 5% VAT would yield additional revenue of $ 125 billion in USA. This revenue-raising potential of VAT could be a cause of public sector expansion at the later stage. In various studies by Dalamagas (1978) and Georgakopoulos (1990, 1991), it is noted that VAT has changed both the structure and the level of consumer prices in the case of Greece. They conclude that VAT has slightly improved the allocation of the tax burden by income classes but has had no major effect on the trade balance and other macroeconomic variables of the country. Later Andrikopoulos, et al. (1993) assessed the impact of VAT on consumption pattern, and concluded that VAT had increased the consumer price index by 4.7% above the rate expected to prevail without VAT.

These results do not provide enough evidence to favor either side of the argument. Furthermore, it is difficult to reach at a general conclusion about the impact of VAT since its effects will vary from country to country depending upon the size and the structure of the economy. Therefore, the aims of the present study are two-fold.
• To contribute to the literature by providing empirical evidence from a developing country.
• To help policy makers in the process of improving the efficiency and effectiveness of the VAT system in North Cyprus.

Keeping these objectives in mind, the present study was designed to evaluate the impact of VAT on the North Cyprus economy. Within this context the following section provides a brief history of the introduction of VAT in North Cyprus. The paper then discusses some methodological issues and presents the methodology used in this study in section 3. Results are presented in section 4 and the diagnostic analysis of empirical evidence and theoretical underpinning has been made in section 5. Section 6 suggests some alternative policy options for North Cyprus and

the final section concludes with a discussion on the impact of VAT on the North Cyprus economy.

2. Introduction of VAT in North Cyprus: A Brief History

Despite the fact that North Cyprus is characterized as a small economy, it has had a significantly large public sector since Turkish intervention in 1974. This large size of the public sector may be justified in the early period of its establishment on the grounds of the urgent rehabilitation of refugees and the development of an administrative infrastructure. However, the size of the public sector was expected to decline on completion of the settlement operation and the development of the administrative structure. The data in Figure 1 reveals that although public expenditure as a percentage of GNP has declined from 31% to 24% during 1977 to1980 respectively, this trend reversed afterward, and it has increased gradually over time and reached a level of 50% in 2000.
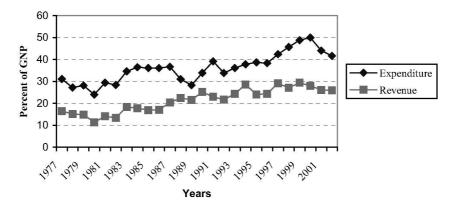

**Figure 1. Public expenditure and revenue as a percentage of GNP
in North Cyprus during 1977-2001.**
(Source: State Planning Organization, 2001)

Public revenue followed the same pattern of public expenditure up to 1990. It then decreased and could not cope with the growing demand of the public sector. This situation widened the gap between public expenditure and public revenue and consequently the North Cyprus economy faced an even larger budget deficit. Since, government was following the revenue expansionary policies, policy makers tried to find the ways of increasing public revenue. In those days, VAT was viewed as a source of public revenue and a cure for the budget deficit. Further, since at the same time VAT was being implemented in Turkey as well as in many EU member countries, policy-makers thought that implementing the VAT system would not only raise public revenue of North Cyprus but the country would also be in harmony with the EU and Turkey. Therefore, the VAT law was approved by the parliament on 31st July 1992. It was, however, not implemented because of lack of trained manpower and other necessary legislation regarding taxation. Its implementation only took place on 1st July 1996 four years later[2].

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[2] The preliminary work on VAT planning was started in 1986, which later was approved by the parliament in 1992 and its implementation took place in 1996.

It was expected that the introduction of VAT would not only solve the problem of the budget deficit but would also improve the balance of payments. However, it is evident from the data[3] that the budget deficit has actually deteriorated since the introduction of VAT. The question is why has North Cyprus not achieved these objectives? The present study is an attempt to answer this question by analyzing the impact of VAT on the North Cyprus economy.

3. Methodological Issues

The impact of VAT on a country's economy can easily be assessed by establishing a simple relationship between VAT and other selective macroeconomic variables (Militzer and Ontscherenki, 1990). Regression analysis is one of the most popular tools commonly used to find out the relationship between two or more variables. All we need is some information about VAT and other selective variables over time and then to run a regression analysis by using the following equation.

$$VAT_t = c + \alpha(X_i)_t + e_t$$

where 'c' is an intercept, X_i is a selective macroeconomic variable such as total consumption, total domestic saving, public and private investments etc. and 'e' is an error term.

Establishing such a relationship is not that simple in the case of North Cyprus because VAT was only enacted in 1996 and thus the data on VAT is available only for six years, which is not enough for a regression analysis. Alternatively, the selective macroeconomic variables can be regressed against the time trend that would provide the information about the general trend of the variable. Now if a dummy variable for policy change is also included in the regression equation along with the time trend, the impact of the change of policy on the subject variable can be assessed. This model can be represented in the following equation[4].

$$(X_i)_t = c + T + D + (e_i)_t$$

where 'c' is a constant, 'T' is a time trend, 'D' is a policy dummy where zero represents the period before VAT application and '1' represents the period after VAT application and 'e' is an error term.

Several macroeconomic indicators such as total consumption, total domestic savings, public investments, private investments, total investments, government purchases, exports and imports have used to assess the impact of VAT on the North

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[3] The data was collected from the published material of the State Planning Organization, Economics and Social Indicators, North Cyprus. A figure relative to the extent of budget deficit is presented in section 6 (Figure 3).

[4] Some researchers prefer to use the logarithmic form of this equation, which they call the semi-log model. Since the intention in this study is not to determine the amount of positive and negative effect of VAT policy on the North Cyprus economy, all variables are in the form of per capita as a percentage of GNP. The author however has tried the semi-log model as well but has found similar results.

Cyprus economy[5]. One can argue that the change in these variables may be due to change in population or change in personal income rather than the change in policy. Thus, it is necessary to take away the effects of increase in population and income. For this purpose, all variables were divided by total population to calculate the per capita figures; these per capita figures were then changed into a percentage of GNP. Thus every variable is in the form of per capita as a percentage of GNP which is free from income and population effects. All data has been collected from the published data booklets of the State Planning Organization.

4. Empirical Results

It is likely that the time series variable may be nonstationary. In this case the standard OLS procedure for estimation will not be valid and a differentiated data is used for the estimation of the coefficients. Since current series are already in the form of per capita as a percentage of GNP, stationary problem is unlikely. However, augmented Dickey-Fuller (1979, 1981) test[6] has used to test for the existence of unit roots in all series. Results reject the null hypothesis of a unit root in favor of the stationary alternative. It implies that all series under consideration are stationary and OLS procedure can be used without any fear of spurious regression.

The estimates of the models are shown in Table 1. Generally, the model has performed fairly well. Among the 8 equations, 5 have shown R^2 above 50%, which indicates that there is a strong relationship between dependent and independent variables in these cases. It is however interesting to note that a group of variables which has shown a weaker relationship with the time trend as well as with the policy dummy belongs to the investment category (public investment, private investments, total investment and government purchase). Although in some cases the policy dummy has shown non-significant results, it was as expected because of an insufficient period for the realization of the impact of a policy. However, since the intention in this study is not to measure the level of positive and negative effect of VAT policy on the North Cyprus economy, the signs are equally important for our studies which help us in explaining the positive and negative impact of such a policy change on the economy.

Table 1. Coefficient for time trend and policy dummy relative to various macroeconomic variables for North Cyprus during 1977-2001

Variables	Time Trend	Policy Dummy	R^2
Total Consumption	-0.5596 (-4.05)**	2.3535 (3.92)**	0.51
Total Domestic Savings	0.5576 (4.15)**	-2.3536 (-2.52)*	0.52
Public Investment	0.0064	1.3056	0.29

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[5] Inflation is not included in this list of selected macroeconomic variables because the high inflation rate in North Cyprus may be due to several reasons other than VAT.

[6] The following general equation is used to test the unit root properties of the series X_t.

$$\Delta X_t = \alpha X_{t-1} + \sum_{i=1}^{p} \gamma_j \Delta X_{t-j} + \varepsilon_t$$

Where Δ is the first-difference operator and ε_t is assumed to be Gaussian white noise. The number of lags 'p' in the dependent variable is chosen by the Akaike Information Criteria (AIC) to ensure that the errors are white noise.

Variables	Time Trend	Policy Dummy	R^2
	$(0.96)^{NS}$	$(3.45)^{**}$	
Private Investment	-0.0310 $(-0.44)^{NS}$	0.32263 $(0.25)^{NS}$	0.33
Total Investments	-0.0245 $(-0.24)^{NS}$	1.6282 $(2.85)^{**}$	0.24
Government Purchases	0.1225 $(2.46)^*$	-0.3017 $(-0.32)^{NS}$	0.30
Exports	-0.0476 $(-0.97)^{NS}$	-0.0569 $(-0.64)^{NS}$	0.54
Imports	0.1775 $(9.17)^{**}$	1.0202 $(2.85)^{**}$	0.83

Figures in parenthesis are t values.
** Represents that the coefficients are significant at 1% level.
* Represents that the coefficients are significant at 5% level.

It can be seen from Table 1 that there is a significant relationship between total consumption and time trend and policy dummy. It is also noted that the sign of the coefficient for time trend is negative in the case of total consumption. This indicates that total consumption is declining significantly over time. It is however interesting to note that the sign for policy dummy is positive in this case, which indicates that the policy change has had a positive impact on total consumption. In other words, total consumption has followed the upward trend after the application of VAT.

Similar results have been found in the case of total domestic saving. The results in Table 1 indicate that there is a strong relationship between total domestic saving and the time trend and the policy dummy. It is however interesting to note that the sign for the coefficient of total domestic saving is positive. It reveals that there is an increasing trend in total domestic saving over time. Since, the sign for the policy dummy is negative in this case, it means that the application of VAT has had a negative impact on the saving behavior of households. Therefore, the total domestic saving is not increasing at the same pace after VAT application as it was before.

Although weaker relationships have found between public, private and total investments and the time trend and policy dummy, the positive sign of the coefficient for public investment indicates that the trend in public investment is upward, which is a clear indication of an even larger size of the public sector in future. On the other hand, the signs of the coefficient for the private and total investments are negative. It indicates that the private and total investments have been going down overtime, which is an indication of a very weak private sector in the economy. It is, however, interesting that the signs for policy dummies in all these cases are positive, which indicates that the application of VAT has a positive impact on public, private and total investments on the North Cyprus economy. It is also interesting to note that, despite a significant reduction in total domestic saving, private and total investments are showing an up-ward trend. There might be several reasons for this outcome, which will be discussed in the following section.

Although the relationship between government purchases, the time trend and the dummy variables is also not very strong, a lower R^2 in this case may be justified on the grounds that government purchases do not represent the whole of public expenditure which is why it does not show a stronger relationship. The sign for the

coefficient of government purchases is positive, which means that government purchases have an upward trend over time. Since the sign for the policy dummy is negative, it can be said that government purchases are not increasing at the same pace since the introduction of VAT as it was before.

Exports have also shown a strong relationship with the time trend and policy dummy variables. The coefficients for both the time trend and the policy dummy are non-significant. It is however clear from the results that the trend in exports is declining over time since the coefficient for the time trend shows a negative sign. It is further noted that the coefficient for the policy dummy also has a negative sign which indicates that by the application of VAT exports have further declined. It means that the application of VAT has had an adverse impact on exports in North Cyprus.

The results show a significant relationship between imports and the time trend and dummy variable. The coefficients for both the time trend and policy dummy are also significant at the 1% level. The positive sign for the time trend in the case of imports is an indication of an upward trend in imports over time. The sign for the policy dummy is also positive, which indicates that, despite the application of VAT, imports have increased significantly.

5. Diagnostic Analysis of Empirical Evidence and Theoretical Underpinning

As mentioned in the introduction, VAT affects various macroeconomic variables differently depending on the size and structure of the economy. This section establishes a relationship between the empirical evidence and theoretical arguments and makes a diagnostic analysis in order to understand the logic of present outcome in North Cyprus.

5.1 Impact on Consumption

Since VAT is a tax on consumption, it is thought that the total consumption would reduce in the long run, keeping all other variables constant. Further, while it alters the structure of commodity prices, it could lead to a change in the consumption pattern of a household even in the short run. The change in the consumption pattern is beyond the objective of our study. It is however clear from our empirical results that the application of VAT has had a positive impact on consumption in the case of North Cyprus. There might be several reasons of this outcome. First, most of the residents are involved in dual employments. They work for the government and they also run their own businesses. Thus, their income level is much higher than the government expectation. A slight increase in price due to VAT cannot reduce their consumption. Second, people's preferences do not change in the short run and thus consumption expenses are likely to remain the same. Third, since the inflation rate in North Cyprus is very high, it is hard to distinguish between the increase in prices due to inflation or due to VAT. Thus, people continue buying the goods and services as before. Fourth, since the demand elasticities of food, cloth, alcoholic beverages, telephone and other commonly used products are very low (or inelastic), it is unlikely to decrease in their consumption because of a slight increase in price. Finally, most of the basic needs are either exempted or have very low rate of VAT, which does not help to reduce total consumption. Thus it can be concluded that, in the case of North Cyprus, the application of VAT does not lower consumption and

therefore, there is no fear of economic recession caused by increasing the rate of value added tax in the future.

5.2 Impact on Total Domestic Saving

VAT supporters argue that income tax discriminate against saving by taxing consumption once but saving more than once, because the income from saving is also taxed (Militzer and Ontscherenki, 1990). So, substituting VAT for income tax should stimulate saving since taxing consumption instead of savings from income would reduce or eliminate that discrimination. The empirical results of our study indicate that VAT does have a negative impact on total domestic saving. It means that the saving somewhat decreased as a result of VAT application. Militzer and Ontscherenki (1990) have also found similar results.

The downward trend in total domestic saving in the case of North Cyprus can be explained on several grounds. For instance, one can argue that since price level is likely to increase as a result of VAT, households have to spend a higher amount of their income on consumption which will certainly lead to a reduction in saving. Thus, total domestic savings would decrease even in the short run. Second, in North Cyprus, VAT is an additional tax not a substitute for income tax. Thus, VAT has put an additional burden on households, which has lowered total domestic saving.

5.3 Impact on Investments

Although there is very little discussion on the impact of VAT on investment, the literature asserts clearly that VAT could increase the potential for saving and investment (Price and Porcano, 1992). It is however not clear whether the increase in investment would be in the public or the private sector. Since many researchers have considered VAT as an income-generating machine for the government, it is more likely that investment in the public sector would increase after VAT application. Consequently the public sector would be larger than it already is.

It is also well recognized in the literature that larger public sector crowds out private investments. Militizer and Ontscherenki (1990) argue that although VAT is a consumption tax, in practice it is imposed directly on business. It becomes a tax on consumption when businesses are able to shift this tax on to the consumers in the final price of their products. Since businesses are unable to shift VAT fully on to the consumer by including its entire amount in the final price, it is harmful for private businesses. Consequently, many businesses either like to avoid this tax or leave the business. As a result, the private sector will shrink over time.

Since the empirical results do not show any relationship between investment and VAT, it is difficult to comment on this issue very strongly. The positive sign of the policy dummy however indicates that the impact of VAT is positive in the case of North Cyprus. These results can be accepted in the case of the public sector since higher government revenue can lead to high public investment but it is hard to believe the same in the case of the private sector. One may argue that since the country is only in the development phase, the application of VAT may not yet affect private investment. Another possible explanation is that since there is a lot of financial inflow from Turkey directly or indirectly through various projects, the investments have shown an upward trend in the long run. Such statements however require a detailed econometric analysis for a better understanding.

5.4 Impact on Foreign Trade

Since VAT provides rebates on exported goods, it is expected to increase exports of the country. On the other hand it adds to the price of imported goods and consequently reduces the imports of the country. In the case of North Cyprus, exports have been declining over time very sharply. Since the policy dummy in the case of exports is also negative, it can be said that VAT has also had a negative impact on exports. The literature also provides some arguments in favor of our findings. For instance, it is argued that since VAT is an additional tax, it leaves export prices as they are. Therefore, it does not help in improving the competitiveness of exported goods on the world market. Second, since it is an additional tax on all inputs, it is likely to increase the production cost at each level, which would increase the export prices in the long run. Consequently, the more expensive goods would be forced out of the world market gradually and exports would decrease in the long run. It is however important to note that North Cyprus is facing a lot of restrictions on its exports from the European Community. In this situation a strong conclusion on this issue would be biased.

Regarding imports, the results of the present study have shown an increasing trend in imports. Since the policy dummy has also shown a positive sign in this case, the impact of VAT on imports is also positive. Although these results are contradicted by the theoretical explanation, as mentioned above, they may nevertheless be true for North Cyprus for several reasons. For instance, there are very few goods produced in North Cyprus. Most of the goods (even food and beverages) are imported. Therefore, an increase in price due to VAT does not affect the consumption of imported goods. Moreover, most of the citizens of North Cyprus are working abroad; if they are not working themselves, their relatives are working. So they do not like to use domestic products – even food products such as fruit juice, jams and beverages. In this situation, it is hard to control imports with the help of an additional tax like VAT. Therefore, the total imports had even increased further despite the application of VAT.

6. Policy Alternatives

Keeping in mind the limitation of our study due to insufficient data and a very short period under consideration, it can be concluded from the above discussion that those two major advantages that supporters of VAT claim, do not exist in the case of North Cyprus. The empirical evidence of our study shows that VAT neither promotes domestic saving nor boosts private investments. It indicates that the vital linkages between saving, investment and output are missing in the case of North Cyprus. Consequently, economic growth is declining very rapidly. Figure 2 reveals that, although the growth in real GDP has been declining since 1988, the rate of decline has been especially rapid in recent years.
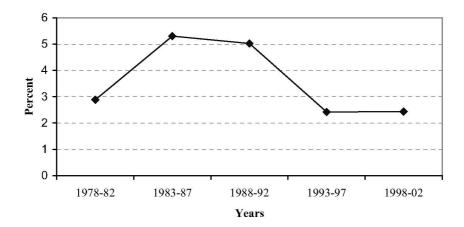
**Figure 2. Percent growth rate of real GDP of North Cyprus
during 1978-2002**
(Source: State Planning Organization, 2001)

Further, empirical results and the discussion in the previous section have also concluded that the implementation of VAT has not helped in reducing imports. However, it may have contributed in reducing the country's exports. A composite effect of high imports and low exports results in a large trade deficit that leads to a high budget deficit. Figure 3 reveals that the overall trend in the budget deficit has been upward since 1979. It is however important to note that despite the application of VAT in 1996, the highest budget deficit was recorded during the period of 1997-2001. It means that VAT has failed to reduce the budget deficit in the case of North Cyprus as it is implemented. A diagnostic analysis of the VAT system in North Cyprus is carried out in the following paragraphs to explain this outcome.
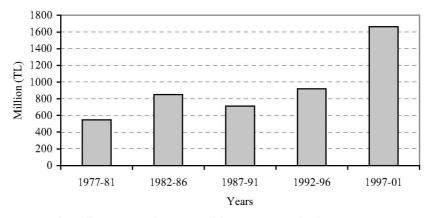

**Figure 3. The level of budget deficit at constant price in North
Cyprus during 1977-2001.**
(Source: State Planning Organization, 2001)

Since low-income persons consume a higher proportion of their income than high-income persons, VAT is considered as a regressive tax. Like many other countries with a VAT, North Cyprus has attempted to offset its regressivity by exempting certain products and by using different rates for different products[7]. This practice not only discriminates among various industries but also increases the administrative cost of the businesses as well as the government. Therefore, in many cases business managers try to avoid the complex system of VAT by negotiating with their customers that if they will not demand an invoice, they do not have to pay VAT. In this way, businessmen will be happy to save their time as well as a substantial part of their income from income tax and the customer will also be happy to save money by not paying VAT. The end product of such practices is however a loss in government revenue and a large budget deficit.

Further, since VAT is considered as a revenue-generating machine, it was believed that it would generate a substantial amount of revenue even at a lower rate, which would help to reduce the budget deficit. There is no doubt that VAT has generated a substantial amount of revenue during the last four years. For instance, the share of VAT was 20% of total tax revenue in 1996, which increased to 29% and 30% in 1997 and 1998 respectively. It is however interesting that the share of VAT was reduced to 27% in 1999 (Figure 4).

This behavior of VAT revenue indicates that VAT has already achieved its peak in the case of North Cyprus. A downward trend in the share of VAT in total tax since 1999 reveals that the people are used to VAT and have invented many ways to avoid it. Thus, there is no chance of a further increase in total revenue under the existing structure of VAT.
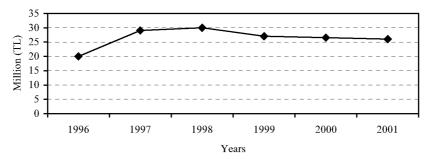

Figure 4. Percent share of VAT in total tax revenue since its application in 1996.

(Source: Data collected from State Planning Organization)

The discussion concludes that North Cyprus has to think about its existing budgetary policy more seriously. If the government wishes to continue revenue expansionary policies, the policy makers have to levy another tax to increase its revenue. Alternatively, they could increase the existing tax rates for more revenue. Both

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[7] Five different rates of VAT are being used for different products in TRNC such as 0% rate for ordinary bread and milk, 2% for raw materials and inputs for production, animal foods and essential food items, 6% for all other food items, 10% on all general consumption goods except the previous categories and 20% for all alcoholic drinks, tobacco, etc.

options may not be feasible on political grounds since the government could lose its popularity by levying more taxes or by increasing existing tax rates[8]. Since the government has already levied all possible taxes and the revenue has reached its saturation point[9], very little potential is left to increase tax revenue through revenue expansionary policies. It is however worth trying to divide VAT into two broader categories, domestic goods and imported goods with only two different rates. Of course a lower rate should be set for domestic goods and a higher rate for imported goods. Since, the present study concludes that total consumption does not change with VAT, this new arrangement can generate some additional revenue. The argument behind this outcome is that the people who are used to buying imported goods are wealthier than others; so they can pay a slightly higher price for their choices. Further, these arrangements will also reduce the administration costs of government and also make the VAT system easier for businessmen and their customers. Simplicity of the VAT system will encourage people to obey the tax rules that will help to reduce the level of the unregistered economy as well. These improvements will certainly help to increase the tax revenue. Furthermore, the market for domestic goods would be encouraged which will attract more private investments and as a result the economy will grow at a higher rate. Above all, any improvement at implementation level would lead to reduce the leakages of tax revenue through tax evasion, which certainly would contribute in increasing tax revenue without any change in tax policy.

Alternatively, government has to choose expenditure reduction policies in order to reduce its budget deficit. It is a little difficult and painful but not impossible. Government should encourage private investors to come forward and invest in various productive activities such as food and beverage production, milk production, electricity, etc. that are controlled by the public administration in the existing economic structure. This change would not only lower the burden on the government's budget but would also bring revenue for the government through more taxes from private businesses. These arrangements would further help the government to concentrate on human resource development programs which would not only increase the productivity of existing factors but would also lead to a sustainable economic development in the future.

7. Conclusions

Value added tax was introduced in North Cyprus in 1996 in order to increase public revenue as well as to harmonize with Turkey and EU member countries. It is however evident that the budget deficit has rather increased after the introduction of VAT. The literature argues that VAT not only has potential to generate enough revenue to reduce the budget deficit but also to encourage savings and investments. The question is why has North Cyprus not achieved these objectives? The present study was designed to evaluate the impact of VAT on North Cyprus economy by using several macroeconomic variables such as total consumption, total domestic savings, public, private and total investments, government purchases, exports and

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[8] Since the government had already committed to reduce the other taxes in favor of VAT.

[9] The data on tax revenue indicates that total tax revenue was increased during 1996 and 1997 with the application of VAT but it started declining again in 1998. This indicates that tax revenue has already reached its saturation point. Now, if policy makers wish to raise the tax revenue in the future, they have to think about levying another tax.

imports. The impact of VAT was evaluated through a simple regression technique with a dummy variable for policy change for the period of 1977-98.

According to the period under consideration, implementation of VAT is only seven years old which is not enough to draw strong conclusions. Keeping in mind the limitations of the study, the results conclude that after the introduction of VAT, total consumption and imports have increased while total domestic savings and exports have declined. The results remain inconclusive in the case of public, private and total investments because these variables have shown a very weak relationship with the policy dummy. Since there is a declining trend in private and total investments and a rising trend in public investment, it can be concluded that the public sector is soaking up the scarce economic resources of the country and crowding out private investments. Further, the rising trend in imports and the declining trend in exports, even after VAT application, have left North Cyprus with a large budget deficit. The accumulative effect of low private investment and a high budget deficit has resulted in a sharp decline in economic growth.

An analysis of the impact of VAT on various macroeconomic variables suggests that North Cyprus has to design its future budgetary policy very carefully. Although a rising trend in total consumption supports the idea of either increasing existing rates of taxes or levying a new tax, it may not be feasible on political grounds. Further, since the government has already levied all possible taxes, very little potential is left to increase tax revenue through revenue expansionary policies. Alternatively, the government could choose expenditure reduction policies. Such policies would help to save scarce economic resources and would also encourage the private sector to come forward and invest in various economic activities. This road would lead to the development of a healthier and more active private sector in the economy, which is a vital force for the economic development of a country. Further, the government could use existing resources for human resource development programs which would not only increase the productivity of existing factors but would also lead to sustainable economic development in the future.

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