# SUSTAINABILITY PLANNING POLICY COLLECTING THE REVENUES OF THE TAX ADMINISTRATION

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### I. Introduction

The tax administration is considered а subordinate structure General Direction of Public Finances (GDPF) Satu Mare and in the period under review (2007-2010) obtained the worst results in terms of the main performance indicator "degree achievement of budgetary revenue collection" to the plan imposed bv management, new way regarded as incorrect based.

In our opinion, this method returns the subordinate structures planning NAFA and then G.D.P.F. - County sites do not provide a proper allocation, planning more revenue arrears to take account of the conditions under which the arrears is provided a separate indicator. Also taking into account current obligations as stated in the county and territorial units, which primarily are not

reliable data, but only a promise of payment which is not usually paid in full, and secondly it is known that degree of voluntary compliance in paying the county is considered below the national average 71.14%, which is 78.5 in the first half of 2010.

As a result of this planning is that some administrations are subordinate tax-advantaged at the expense of others. thus creating a gap for the intervention of political factors.

### II. The analysis of revenue collection in the county budget and administration analyzed

In our approach we started by analyzing the evolution of budget revenues during 2007-2010 from AFP Compared with earnings Negresti Oas Satu Mare on the basis of the Annex 1:

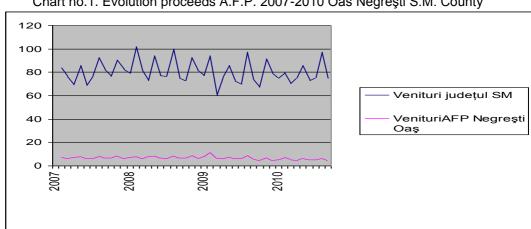


Chart no.1. Evolution proceeds A.F.P. 2007-2010 Oas Negresti S.M. County

Analyzing the evolution proceeds from the chart no. 6 we see that revenue from A.F.P. Oas Negreşti are constantly evolving without large fluctuations that affect the indicator "degree of realization of revenues" in our opinion, as I said, just too much of the revenue allocated by the

management plan GDPF negative influences this indicator.

Next, we analyze the evolution of earnings required to plan, the proposed plan and the annual average earnings AFP Oas Negreşti:

Chart no. 2. Evolution proceeds required to plan, the proposed plan and actual receipts

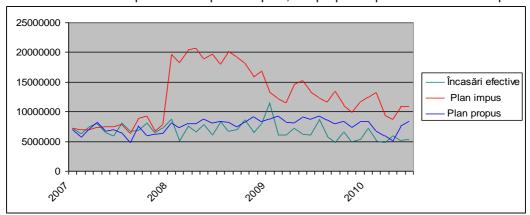


Chart no. 2 that the plan would be required to be a non-stationary series and series of revenue receipts and any proposed plan to be a stationary series. But these observations should be confirmed by tests of stationarity (Appendix 1).

a)Theoretical stationarity planning on budgetary revenue

Conditions to be satisfied for stationary time series are to:

- Average time to be constant or in other words, the observations should fluctuate around the average;
  - Series variance is constant.

From an economic perspective, a series is stationary if the series is a temporary shock (is absorbed over time) and not permanent. It can recall examples of stationary series such as real GDP growth rate, inflation rate (excluding periods of hyperinflation), as are non-stationary series as the nominal exchange rate, consumer price index, real GDP.

If the series is not stationary, through differentiation, we obtain a

stationary series. Thus the order of integration of the series is the number of successive differentiations required to achieve a stationary series (or the number of unit roots of the series). In economics, the most common non-stationary series are integrated of order one (that requires only one difference, have a unit root).

Stationarity analysis of data sets revealed that media does not depend on the time variable, and the dispersion is constant throughout the period. If the data series is stationary, then it is considered that the time is a random movement and dispersion increases with time variable. Also, for a no stationary can not make anticipations series evolution (forecasting) on the considerable variability in subsequent periods.

As a conclusion we can say that stationarity analysis plan required receipts, the actual revenue receipts and the proposed plan, may reveal whether they have a random motion that can not be predicted or whether, over the period

analyzed, the deviation from medium is constant in time. A planning proceeds for which there is no stationarity, relevant, practical planning policies promote unsustainable earnings.

b) stationarity tests - the most used are the ADF (Augmented Dikey-Fuller) and PP (Phillips-Perron), using the Eviuws 7.1.

Available options are:

- Test type: type unit root test (Augmented Dikey-Fuller and Phillips-PP Perron):
- unit root test in: level level series, 1st Diference first difference of series, 2<sup>nd</sup> Diference Second difference series.
  - Include in the test equation:
- Intercept if the test includes a constant term:
- Trend and intercept where the series shows a trend;
- None if the series fluctuates around 0.

The first part of the test provides information on the type of test (ADF, introduced exogenous variables -

constant, trend) and includes test results, critical values for each level of relevance (1, 5 and 10%) and the probability, p, associated test result.

The second part of the test shows the estimated equation, which was calculated based on the test.

- 2. The purpose of testing is to determine, as will appear from Chart 2 that required plan earnings during the period 2007-2010 was not sustainable given the level of earnings in the same period and that future planning is required to change the way income reviewed the county budget.
- 3. Check the strings stationarity: plan required, actual receipts and proposed plan

To test the unit root level of the series we used the software required Eviuws 7.

3.1. Analysis series represented stationarity planning imposed from January 2007 - June 2010 (see annex table. 1). Source data used is earnings records in the database has DGFP Satu Mare.

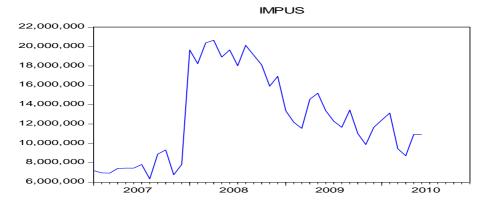


Chart. no. 3 Evolution of budgetary revenue planning - plan required

The chart shows that the series should be the nonstationary analysis, observation will be confirmed by tests of stationarity. Thus, the ADF test results,

Level option - effective range for the series of values required management plan for AFP Negreşti Oas, with a total of 41 statistical observations are:

Test No.1

Null Hypothesis: IMPUS has a unit root Exogenous: Constant, Linear Trend

Lag Length: 0 (Automatic based on SIC, MAXLAG=9)

		t-Statistic	Prob.*
Augmented Dickey-Fu Test critical values:	iller test statistic 1% level 5% level 10% level	-1.788613 -4.198503 -3.523623 -3.192902	0.6920

<sup>\*</sup>MacKinnon (1996) one-sided p-values.

Augmented Dickey-Fuller Test Equation

Dependent Variable: D(IMPUS)

Method: Least Squares Date: 10/08/10 Time: 09:27

Sample (adjusted): 2007M02 2010M06 Included observations: 41 after adjustments

	Coefficient	Std. Error	t-Statistic	Prob.
IMPUS(-1) C @TREND(2007M01)	-0.151302 2305107. -13927.96	0.084592 1204639. 32658.75	-1.788613 1.913525 -0.426470	0.0817 0.0632 0.6722
R-squared Adjusted R-squared S.E. of regression Sum squared resid Log likelihood F-statistic Prob(F-statistic)	0.092812 0.045065 2416633. 2.22E+14 -659.2321 1.943830 0.157128	Mean depend S.D. depende Akaike info c Schwarz crite Hannan-Quir Durbin-Watse	ent var riterion erion nn criter.	90575.32 2472998. 32.30400 32.42939 32.34966 2.073959

Indeed, the critical values (MacKinnon) of the test for significance levels 1%, 5% and 10% are larger than the mode ADF test mode, implying the existence of an order unit roots, confirming the existence a unit-root (root of order one), so the series analyzed is nonstationary.

The same conclusion is supported by the hypothesis probability value stationarity not determine with a high value of 69.20%.

The correlation coefficient value (R-squared) of 9.2812% indicates a bad connection between the absolute values of revenues from one period to another (lag. = 9).

3.2. Analysis series stationarity planning represented by the actual earnings in the period January 2007 - June 2010, having also a number of 41 statistical observations:

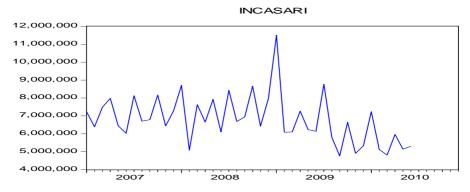


Chart. no. 4 Evolution of actual receipts

The chart shows that the series should be considered a stationary observation will be confirmed by tests of stationarity. Thus, the ADF test results,

Level option - effective range for the series of actual receipts AFP values Negrești Oas, with a total of 41 statistical observations are:

Test No.2

Null Hypothesis: INCASARI has a unit root

Exogenous: Constant, Linear Trend

Lag Length: 0 (Automatic based on SIC, MAXLAG=9)

		t-Statistic	Prob.*
Augmented Dickey-Fu Test critical values:	iller test statistic 1% level 5% level 10% level	-6.800706 -4.198503 -3.523623 -3.192902	0.0000

<sup>\*</sup>MacKinnon (1996) one-sided p-values.

Augmented Dickey-Fuller Test Equation Dependent Variable: D(INCASARI)

Method: Least Squares Date: 10/08/10 Time: 09:32

Sample (adjusted): 2007M02 2010M06 Included observations: 41 after adjustments

	Coefficient	Std. Error	t-Statistic	Prob.
INCASARI(-1) C @TREND(2007M01)	-1.099897 8458633. -47073.79	0.161733 1305271. 18203.66	-6.800706 6.480368 -2.585952	0.0000 0.0000 0.0137
R-squared	0.549231	Mean depend	dent var	-46960.44

25506 S.D. de	ependent var 1876127	
92342. Akaike	info criterion 31.05217	7
5E+13 Schwar	z criterion 31.17755	5
3.5694 Hannar	n-Quinn criter. 31.09782	2
15020 Durbin-	Watson stat 2.001362	2
00000		
	2342. Akaike 5E+13 Schwai 3.5694 Hannar 15020 Durbin-	12342. Akaike info criterion 31.05217 5E+13 Schwarz criterion 31.17755 3.5694 Hannan-Quinn criter. 31.09782 15020 Durbin-Watson stat 2.001362

Critical values (MacKinnon) of the test for significance levels 1%, 5% and 10% lower than the value in the way how the ADF test, which shows that there is an order of a unit root, thus confirming that series considered is stationary.

The same conclusion is supported by the probability value stationarity not verify if that is null (0.00%).

The correlation coefficient value adjusted (Adjusted R-squared) of 54.92% indicates a significant link between the

string values from one period to another (lag. = 9).

Regarding the Durbin-Watson test, close to the critical threshold value 2 indicates that residual values are not autocorelate.

3.3. Analysis series stationarity represented by the proposed plan of January 2007 - June 2010 (see annex table. 1). Source data used is item D.G.F.P. Satu Mare.

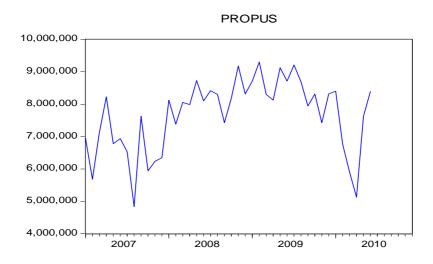


Chart. no. 5 Evolution of budget revenues planning - plan proposed

The chart shows that the series could be considered a stationary observation will be confirmed by tests of stationarity. Thus, the ADF test results,

Level option - effective range for the series of values proposed plan to AFP Negreşti Oas, with a total of 41 statistical observations are:

Test No.3

Null Hypothesis: PROPUS has a unit root Exogenous: Constant, Linear Trend

Lag Length: 0 (Automatic based on SIC, MAXLAG=9)

		t-Statistic	Prob.*
Augmented Dickey-Fu Test critical values:	ıller test statistic 1% level 5% level 10% level	-3.519663 -4.198503 -3.523623 -3.192902	0.0504

<sup>\*</sup>MacKinnon (1996) one-sided p-values.

Augmented Dickey-Fuller Test Equation

Dependent Variable: D(PROPUS)

Method: Least Squares Date: 10/08/10 Time: 09:33

Sample (adjusted): 2007M02 2010M06 Included observations: 41 after adjustments

	Coefficient	Std. Error	t-Statistic	Prob.
PROPUS(-1) C @TREND(2007M01)	-0.491780 3489306. 14545.28	0.139724 1027498. 13200.79	-3.519663 3.395923 1.101849	0.0011 0.0016 0.2775
R-squared Adjusted R-squared S.E. of regression Sum squared resid Log likelihood F-statistic Prob(F-statistic)	0.245854 0.206162 950591.6 3.43E+13 -620.9772 6.194047 0.004695	Mean depende S.D. depende Akaike info co Schwarz crite Hannan-Quir Durbin-Watso	ent var riterion erion an criter.	35243.20 1066910. 30.43791 30.56330 30.48357 2.062782

The analysis suggests that the probability is less than 10%, so the null hypothesis is rejected, so the series is stationary and has no random trend. We know that "where the probability is 0.00 or less than 5% or 10%, the null hypothesis is rejected, so the series is stationary and has no random trend.

3.4. Extraction of residue with the option New-Object-Equation Given the

test result we can say that the series is closer PROPOSED PROCEEDS series because somehow evolve together, which must be demonstrated extracting the residue with the option New-Object-Equation, the equation: c Receipts Proposed where we get an equation like Proceeds variable = constant + a \* Proposed as seen from the test below:

Test No.4

Null Hypothesis: RESID01 has a unit root Exogenous: Constant, Linear Trend

Lag Length: 0 (Automatic based on SIC, MAXLAG=9)

		t-Statistic	Prob.*
Augmented Dickey-Fu Test critical values:	ıller test statistic 1% level 5% level 10% level	-7.403388 -4.198503 -3.523623 -3.192902	0.0000

<sup>\*</sup>MacKinnon (1996) one-sided p-values.

Augmented Dickey-Fuller Test Equation

Dependent Variable: D(RESID01)

Method: Least Squares Date: 10/26/10 Time: 08:02

Sample (adjusted): 2007M02 2010M06 Included observations: 41 after adjustments

	Coefficient	Std. Error	t-Statistic	Prob.
RESID01(-1) C	-1.183876 1221431.	0.159910 417020.1	-7.403388 2.928950	0.0000 0.0057
@TREND(2007M01)	-58508.70	17576.14	-3.328871	0.0019
R-squared	0.590821	Mean depend	dent var	-55182.02
Adjusted R-squared	0.569286	S.D. depende	ent var	1841460.
S.E. of regression	1208529.	Akaike info c	riterion	30.91806
Sum squared resid	5.55E+13	Schwarz crite	erion	31.04344
Log likelihood	-630.8203	Hannan-Quir	ın criter.	30.96372
F-statistic	27.43448	Durbin-Watso	on stat	2.058932
Prob(F-statistic)	0.000000			

The analysis of test results shows that null hypothesis is rejected (calculated T <T critical and the probability is 0.00), which means that the residue series is stationary and therefore the proposed variables are PROCEEDS cointegrate, they have a common stochastic trend.

If variable PROCEEDS imposed and can not extract the residue series variable required is stationary only after first differentiation, so it has the same order as the variable cointegration PROCEEDS.

Phillips-Perron test - works on the same principle as the Augmented Dickey-Fuller test, the result is similar.

#### III. Conclusion

Making an analysis of the data above, that a schedule of receipts for which there is no stationarity, relevant, practical planning policies promote unsustainable earnings. Instead planning new proposed budget revenue collection is a sustainable planning, as seen in the demonstration made.

The difference was "the pen" by sharing a plane over the possibilities of collecting and without any explanation of the nature of the economic climate, increasing voluntary tax evasion or noncompliance that would adversely affect the collectability of the Negreşti Oas.

Must be made clear that results on the progress of the plan proposed by us are much more credible, the margin is very tight this fall, which is normal considering the fact that:

- Working conditions, provision of computers and operating procedures are similar, at least at the county level analysis;

- Software used to track taxpayers, payments, and coordination are similar methodology, given that there are centrally, county and even at NAFA;
- Personnel selection and training conditions and training of officials of similar structures are analyzed, considering the fact that these activities are the management responsibilities of the county;
- In the county in question, ie areas where tax administrations operate shown, individual taxpayers and legal work in the same legal and regulatory framework, with no differences in this regard.

If we take into account the foregoing, it follows that there are real reasons, as one of the structures to achieve results so weak, if Negreşti Oas, outside the fact that the distribution plan was not well grounded structures.

Appendix no. 1 Comparative evolution of the actual earnings of the required plan and the proposed plan

and the proposed plan				
	Year	Actual earnings	Required plan	Proposed plan
2007	January	7.235.331	7.186.404	6.954.389
	February	6.389.002	6.950.004	5.680.291
	March	7.487.312	6.925.003	7.128.683
	April	7.980.765	7.422.805	8.228.487
	Mai	6.453.091	7.447.303	6.780.095
	June	6.025.784	7.447.905	6.939.489
	July	8.126.774	7.821.522	6.527.479
	August	6.709.165	6.321.490	4.835.219
	September	6.790.441	8.890.992	7.632.541
	October	8.167.009	9.321.554	5.940.281
	November	6.436.996	6.752.052	6.233.880
	December	7.285.217	7.821.521	6.348.962
2008	January	8.705.687	19.653.000	8.125.439
	February	5.090.848	18.240.666	7.381.496
	March	7.631.979	20.386.121	8.055.400
	April	6.652.602	20.653.000	7.985.361
	Mai	7.924.706	18.919.879	8.729.304
	June	6.105.340	19.653.333	81.00.053
	July	8.425.086	18.020.665	8.415.328
	August	6.686.621	20.132.438	8.302.867
	September	6.943.331	19.114.369	7.426.758
	October	8.663.421	18.112.443	8.190.406
	November	6.430.270	15.908.894	9.178.976
	December	7.967.418	16.926.963	8.312.768

2009 January	11.500.272	13.366.667	8.713.956
February	6.090.426	12.180.238	9.302.441
March	6.106.765	11.549.480	8.301.419
April	7.271.253	14.553.096	8.125.471
Mai	6.236.258	15.183.854	9.126.493
June	6.141.521	13.365.765	8.711.965
July	8.773.049	12.292.394	9.210.664
August	5.815.716	11.660.000	8.690.892
September	4.763.890	13.449.323	7.941.890
October	6.646.677	11.027.606	8.316.391
November	4.909.930	9.870.677	7.422.118
December	5.331.936	11.659.001	8.315.389
2010 January	7.242.670	12.409.722	8.401.333
February	5.129.203	13.139.611	6.763.948
March	4.815.285	9.450.278	5.904.902
April	5.970.802	8.720.389	5.126.563
Mai	5.147.100	10.930.000	7.622.994
June	5.309.953	10.899.992	8.399.360

## **REFERENCES**

Codrilaşu Adrian	Applied Econometrics using EViews 5.1, ASE Bucharest, 2007;
Herbei Marius	Professional management in modern tax administration, Eikon
Gheorghe Mocan	Publishing House, Cluj Napoca, 2010;
Gheorghe Mocan	Tax Guide executor under a modern tax administration, Eikon
	Publishing House, Cluj Napoca, 2009;
Talpos Ioan	Sustainability of fiscal and budgetary policies, Timisoara 2009 Course
	Notes;
Talpos Ioan	Testing the influence budget policy on economic growth the business
	cycle in Romania, Timisoara 2009 Course Notes;
	NAFA website, the page "strategy in the medium term reform of NAFA
****	2007-2011" and "medium-term reform strategy of NAFA 2010-2013;
****	NAFA, NAFA Performance Report page 2009;
****	GDPF site, Activity Report, Satu Mare DGFP June 30, 2010;
	NAFA website, the classification of arrears Guide developed by NAFA
****	and the Direction Generale des Finance Publique of France, the
****	project funded by the transitional facility en. 2007/ib/fi-08.
****	Law 571 / 2003 regarding the Fiscal Code;
****	Law 241/2005 for preventing and combating tax evasion;
****	GO 92/2003 regarding the Fiscal Procedure Code, as supplemented
****	and amended;
****	Ministry of Finance approving the classification nr.1954/2005 public
00888	finance indicators.