

Macroeconomic Policy: Evidence from Growth Laffer Curve for Sri Lanka

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INTRODUCTION

- The concept of optimal taxation policies has recently emerged among many countries that are concerned on the internal control of the economies.
- Sri Lanka, as one of the developing economies, has shown a relationship of tax revenue and tax rate for facilitating GDP growth in terms of macroeconomic policy perspective.
- Even though, Sri Lankan tax system needs to be reformed with optimal taxation for macroeconomic policies, so far the attempts made by the taxation entities were not successful for obtaining the optimal tax revenues while maintaining the government size.

INTRODUCTION

- The literature regarding government expenditure (or government size) and economic growth is comprised of studies that assume a linear as well as a non-linear relationship between government expenditure and economic growth.
- Inefficiencies in tax systems make the governments difficult spending in economic growth such as public infrastructure and investment in human capital; in contrast, very high tax burdens can also be unfavorable to economic growth.
- The study intended to evaluate the appropriate macroeconomic policies for the optimum taxation under the determined government size.

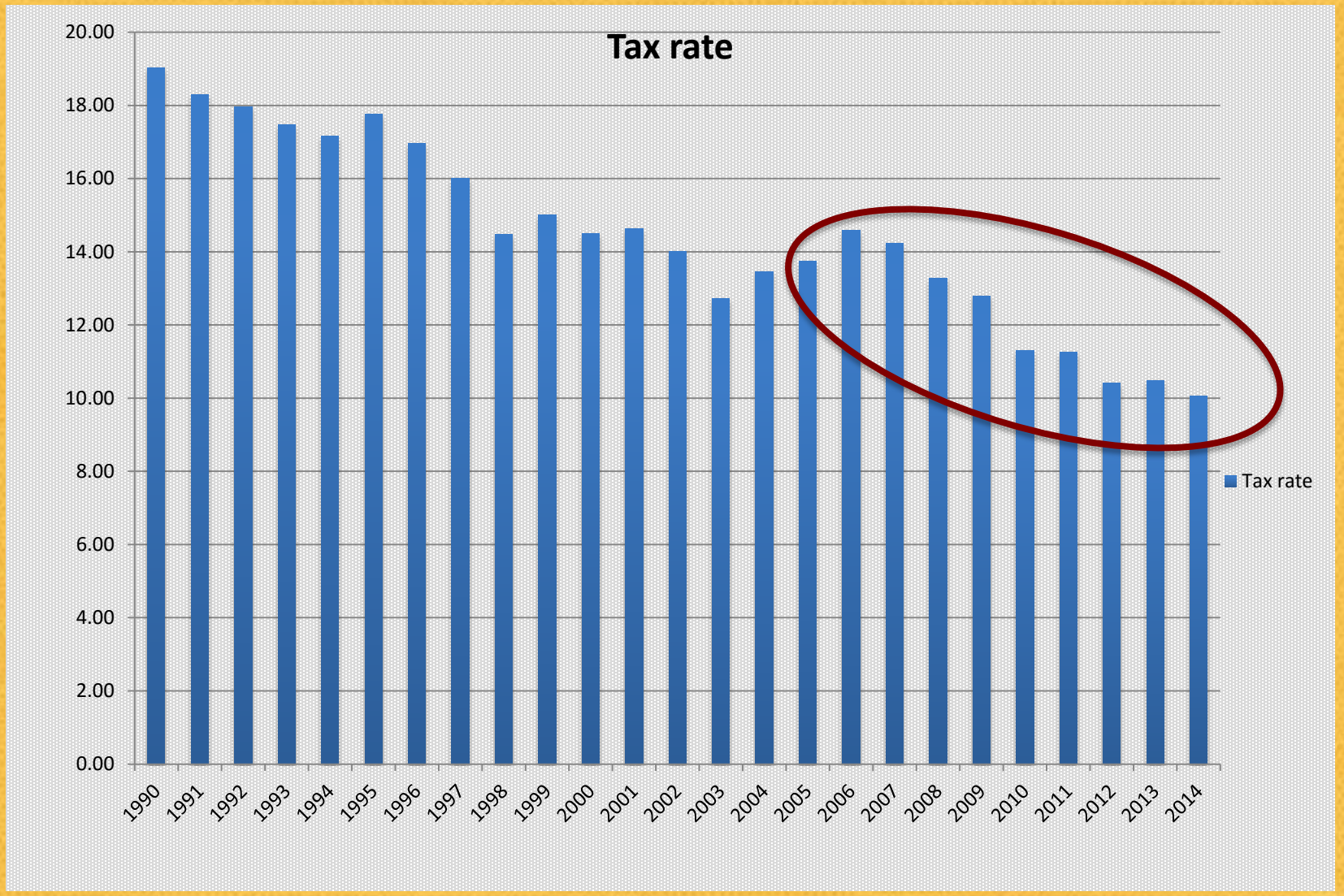
PURPOSE

- To identify the nexus of tax rate with tax revenue, and GDP.
- To determine the factors affecting the Laffer curve and growth Laffer curve.
- To measure the elasticities of Laffer/Growth Laffer curves.
- To find empirical evidences for prudent macroeconomic policies.
- To evaluate appropriate macroeconomic policies for optimum taxation under the government size (Government expenditure).

STYLIZED FACTS

- Tax revenue with respect to tax rate changes.
- Stylized facts of Sri Lankan economy in terms of real GDP per capita, Tax rate.
- Maximum Tax Rate: **19.02** and Minimum: **10.05**.
- Structural changes of the macroeconomic variables from 1960 to 2014.
- Structural break point is at **1986** for GDP per capita.
- Structural break point is at **1988** for tax rate.

TAX RATE


Tax rate
20.00
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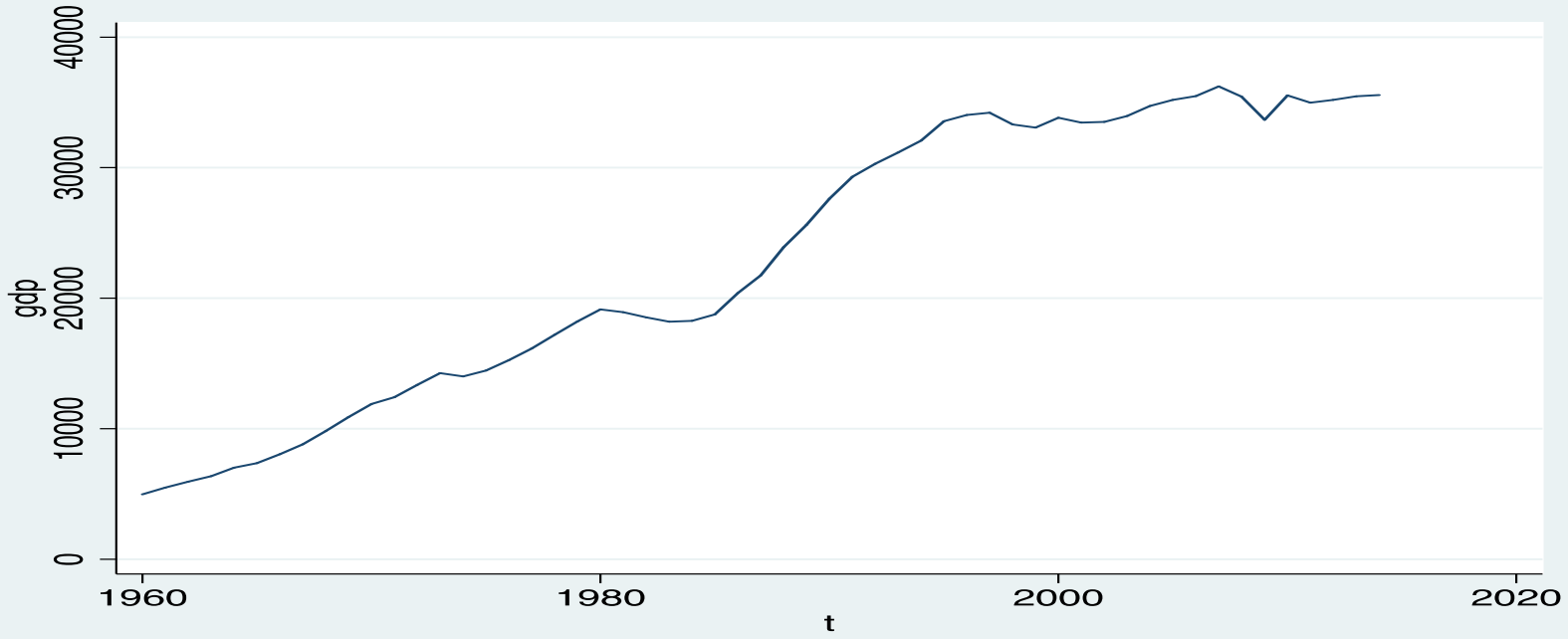
Tax rate

GDP GROWTH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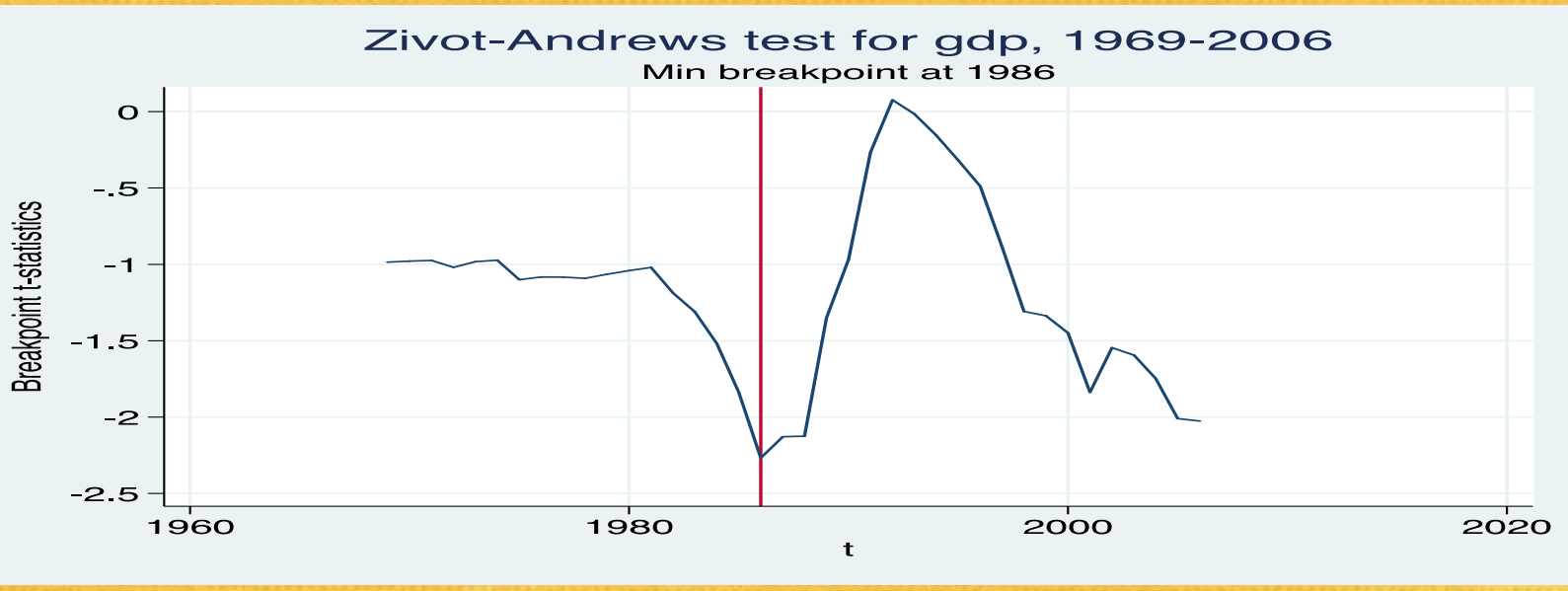
Zivot-Andrews test for gdp, 1969-2006
Min breakpoint at 1986
Breakpoint t-statistics
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TAX RATE


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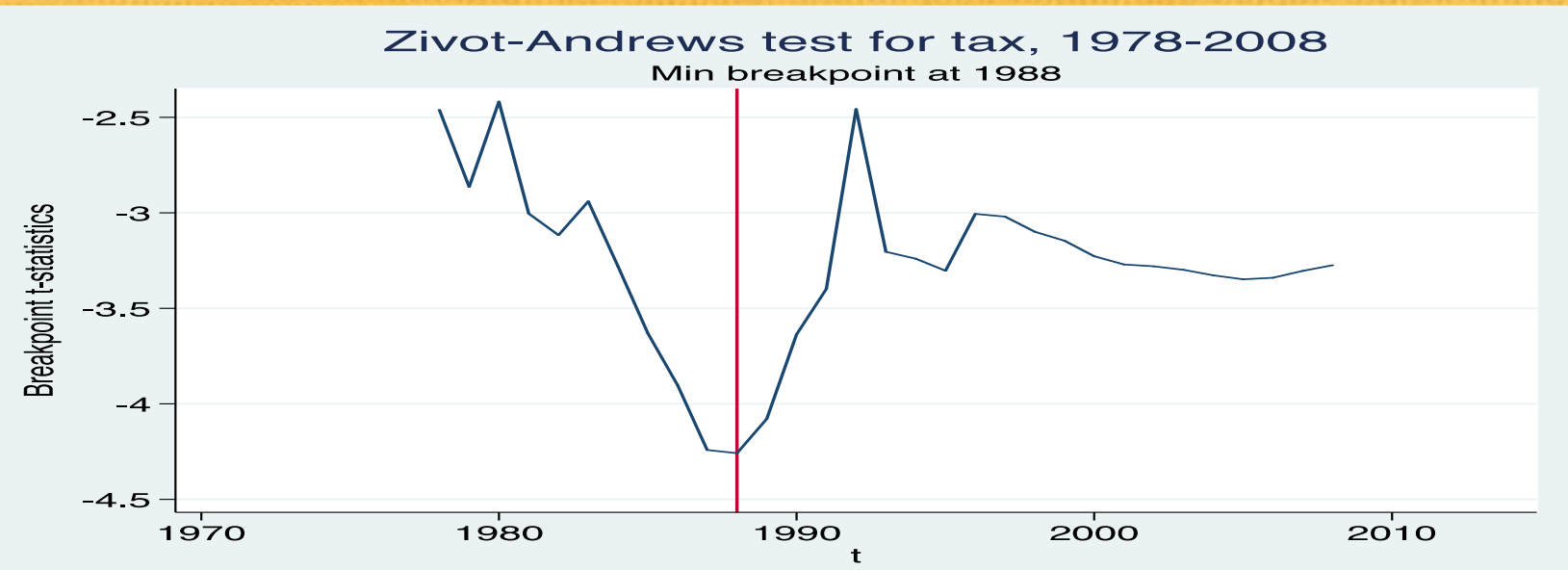
Zivot-Andrews test for tax, 1978-2008
Min breakpoint at 1988
Breakpoint t-statistics
-2.5
-3
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1970
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1990
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2010
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LITERATURE REVIEW

- Malcomson (1986) explained that the relationship between tax rate and tax revenue is not continuous for all tax rates instead an inverted U-shape. It is tested for inverted U-shaped Laffer curve after employing a U-test to estimate this links.
- Spiegel and Templeman (2004) found that even if an individual Laffer curve has one single peak an aggregated Laffer curve can have multiple peaks due to income inequalities between individuals, and will also test for more complex shapes.
- Schmitt-Grohe` and Uribe (1997) derivate the hump-shaped Laffer curve for labor income tax in a neoclassical growth model.

LITERATURE REVIEW

- Trabandt and Uhlig (2011, 2013) estimate the Laffer curves for consumption, labor, and capital taxes for the U.S. and EU 14 using a neoclassical growth model. Nutahara (2015) applies the model of Trabandt and Uhlig (2011) to the Japanese economy.
- Fe`Ve, Matheron, and Sahuc (2013) investigate the Laffer curves for consumption, labor, and capital taxes in an incomplete-market economy.
- Holter, Krueger, and Stepanchuk (2014) focus on the effect of households' heterogeneity and progressive tax scheme on the peak tax rate of the Laffer curve for labor income tax using an overlapping generations model.

LAFFER CURVE

The theory provides a foundation, as tax revenue is the function of tax rate, which develop the Laffer curve potentially downward sloping.

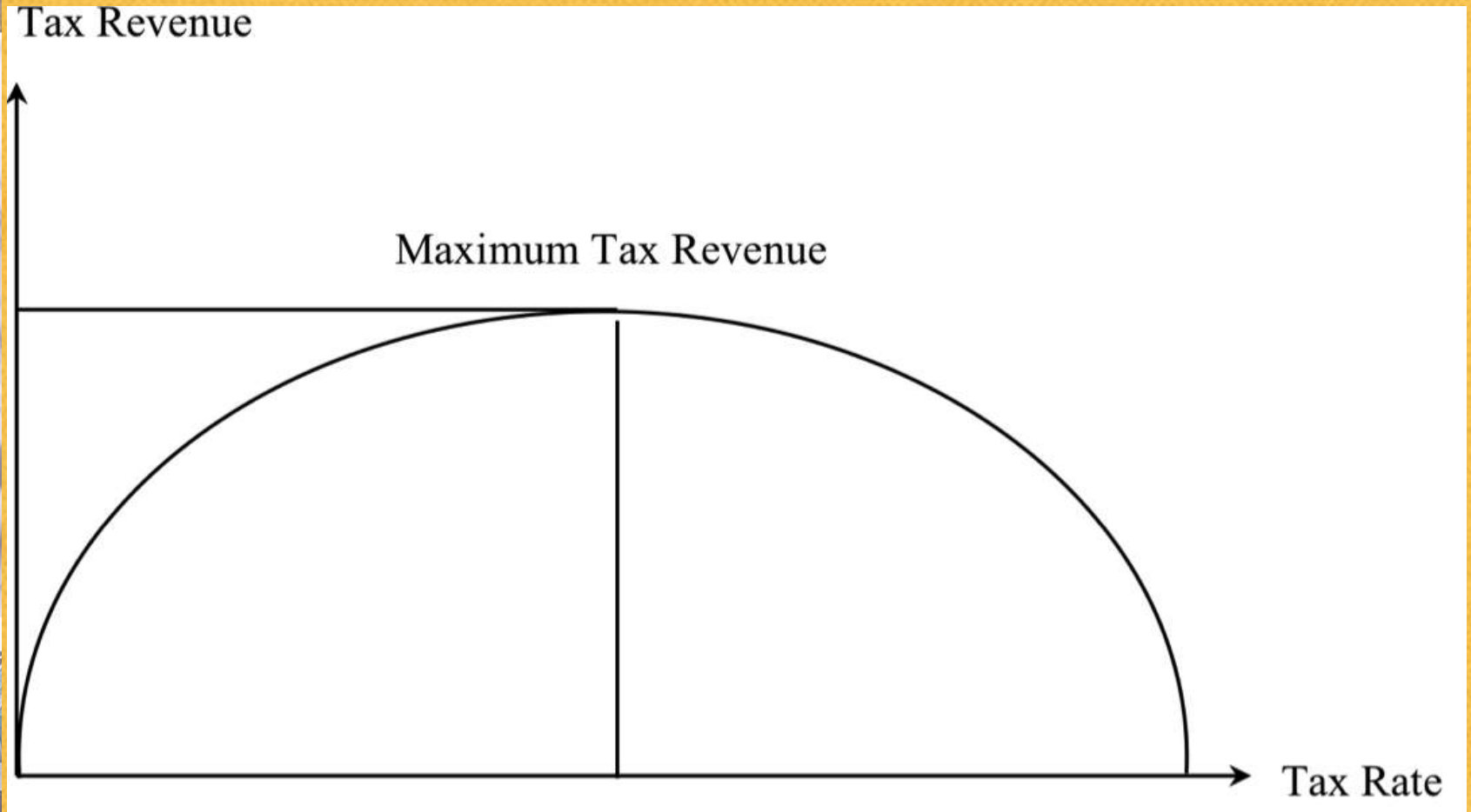

Figure 4: Laffer curve as the relationship between tax revenue and tax rate.

GROWTH LAFFER CURVE

- The studies that assume a linear as well as a non-linear relationship between government expenditure and economic growth. The growth Laffer curve is designed as nonlinear function as proven in the literature.
- Most of these studies are based on linear models, although Sheehey (1993), Armey (1995), Tanzi & Zee (1997), Vedder & Gallaway (1998), Giavazzi, Jappelli & Pagano (2000), among others, subscribe to forms of non-linear relationship.

MACROECONOMIC POLICY

- The evidences show that the macroeconomic volatility leads to lower economic growth: a very general fact is that volatility tends to be associated with uncertainty.
- A more specific argument related to the existence of financial constraints is bound to increase with macroeconomic volatility, particularly during sharp recessions (Martin and Rogers, 1997; Talvi and Végh 2000).
- Exploring the underlying reasons for a Laffer curve depicting the relation between volatility and growth, the study focus on the economic crisis. This is because of their importance in explaining large swings in economic growth.

MACROECONOMIC POLICY

- While the consensus view is that crises - being associated with high volatility - are very detrimental for growth (Hnatkovska and Loayza, 2005), they could also serve as a catalyst for change and, thereby, enhance long term growth.
- Policymakers have long been interested in how potential changes to the personal income tax system affect the economy. Tax reform is more complex, as it involves tax rate cuts as well as base-broadening changes. Tax reform, as defined above, involves reductions in income tax rates as well as measures to broaden the tax base; namely, to reduce the use of tax expenditures or other items that narrow the base.

MODEL SPECIFICATION

$$Tax\ revenue = f(Tax\ rate) \ldots\ldots\ldots\ldots\ldots\ldots\ldots\ldots\ldots\ldots\ldots\ldots\ldots\ldots\ldots\ldots\ldots\ldots\ldots\ldots (1)$$

- Tax revenue with respect to tax rate;

$$y_{it} = \alpha_i + \beta_1 Tax_{it} + \varepsilon_{it} \ldots\ldots\ldots\ldots\ldots\ldots\ldots\ldots\ldots\ldots\ldots\ldots\ldots\ldots\ldots\ldots\ldots\ldots\ldots\ldots\ldots (2)$$

- Baseline model specification;

The baseline specification is:

$$lny_{it} = \alpha_i + \beta_1 Tax_{it} + \beta_2 Tax_{it}^2 + \beta_3 X_{it} + \varepsilon_{it} \ldots\ldots\ldots\ldots\ldots\ldots\ldots\ldots\ldots\ldots\ldots\ldots\ldots\ldots (3)$$

EMPIRICAL MODEL

The basic model for estimating the Laffer curve can be expressed in terms of:

$$y_t = \alpha_1 + \beta_1 Tax_t + \beta_2 Tax_t^2 + \beta_3 X_t + \varepsilon_t \ldots\ldots\ldots\ldots\ldots\ldots\ldots\ldots\ldots\ldots\ldots (4)$$

- **Inclusion of explanatory variables into baseline model specification;**

$$y_{it} = \alpha_i + \beta_1 Tax_{it} + \beta_2 Tax_{it}^2 + \beta_1^* (Tax_{it} * Z_{it}) + \beta_2^* (Tax_{it}^2 * Z_{it}) + \beta_3 X_{it} +$$

$$\varepsilon_{it} \ldots\ldots\ldots\ldots\ldots\ldots\ldots\ldots\ldots\ldots\ldots\ldots\ldots\ldots\ldots\ldots (5)$$

- **Inclusion of integration of explanatory variables and tax rate into baseline model;**

EMPIRICAL MODEL

- Inclusion of lag variable into baseline model specification;

$$y_{it} - y_{it-1} = \alpha_i + \vartheta y_{it-1} + \beta_1 Tax_{it} + \beta_2 Tax_{it}^2 + \beta X_{it} + \varepsilon_{it} \ldots\ldots\ldots\ldots\ldots\ldots\ldots\ldots\ldots\ldots\ldots\ldots\ldots(6)$$

- Re-defining the lag dependent variable in baseline model;

- Re-adjusting the lag dependent variable in the baseline model;

$$y_{it} = \alpha_i + (\vartheta + 1) y_{it-1} + \beta_1 Tax_{it} + \beta_2 Tax_{it}^2 + \beta X_{it} + \varepsilon_{it} \ldots\ldots\ldots\ldots\ldots\ldots\ldots\ldots\ldots\ldots\ldots\ldots\ldots(7)$$

ESTIMATION OF MODEL

Instrumental Variable – Generalized Method of Moment

- It is widely stated that growth regressions are apprehended with many concerns (Islam, 1995, Caselli, Esquivel & Lefort, 1996, or Temple, 1999). Caselli et al. (1996) discussed that there exist mainly two sources of inconsistency.
- First, the incorrect treatment of country-specific effects, representing differences in technology or tastes, gives rise to the omitted variables bias.
- Second, most regressors are endogenous to economic growth, and the presence of simultaneous or reversed causality can generate a bias in the estimation.

ESTIMATION OF MODEL

Instrumental Variable – Generalized Method of Moment

- To handle this issues like the unobserved effects and the endogeneity of explanatory variables and of the lagged dependent variable.
- Thus, the Instrumental Variable Generalized Method of Moments (IV-GMM) is used as a technique combining system of the previous regressions in differences instrumented by lagged values, with an additional set of equations in levels, by using lagged first differences as instruments.

ESTIMATION OF MODEL

Instrumental Variable – Generalized Method of Moment (IV-GMM)

Considering the model:

$$y = X\beta + u, \qquad u \sim (0, \Omega) \quad \ldots\ldots (8)$$

With $X\,(N \times k)$ and define a matrix $Z\,(N \times l)$ where $l \geq k$. This is the Generalized Method of Moments IV (IV-GMM) estimator. The l instruments give rise to a set of l moments:

$$g_i(\beta) = Z_i' u_i = Z(y_i - x_i\beta)\ i=1, N \quad \ldots\ldots (9)$$

where each g_i is an l-vector. The method of moments approach considers each of the l moment equations as a sample moment, which we may estimate by averaging over N:

$$\bar{g}_i(\beta) = 1/N \sum_{i=1}^{N} = Z_i(y_i - x_i\beta) = 1/N\ Z_i' u_i \quad \ldots\ldots (10)$$

ESTIMATION OF MODEL

The method of moments problem is then k equations in k unknowns, and a unique solution exists, equivalent to the standard IV estimator:

$$\hat{\beta}_{IV} = (Z'X)^{-1}Z'y \quad \text{……} (11)$$

In the case of *over-identification* ($l > k$) we may define a set of k instruments:

$\hat{X} = Z'(Z'Z)^{-1}Z'X = P_Z X$, which gives rise to the two-stage least squares (2SLS) estimator

$\hat{\beta}_{2SLS} = (\hat{X}'X)^{-1}\hat{X}'y = (X'P_Z X)^{-1}X'P_Z y]$ which despite its name is computed by this single matrix equation.

ESTIMATION OF MODEL

The GMM estimator minimizes the criterion,

$$J(\hat{\beta}_{GMM}) = N\,\bar{g}(\hat{\beta}_{GMM})' W \bar{g}(\hat{\beta}_{GMM}) \quad \ldots\ldots\ldots\ldots\ldots\ldots\ldots\ldots\ldots\ldots\ldots\ldots\ldots\ldots\ldots\ldots\ldots\ldots\ldots\ldots\ldots\ldots\ldots\ldots .(12)$$

where W is a $l \times l$ symmetric weighting matrix.

Solving the set of FOCs, IV-GMM estimator can be derived of an overidentified equation:

$$\hat{\beta}_{GMM} = (X'ZWZ'X)^{-1} X'ZWZ'y \quad \ldots\ldots\ldots\ldots\ldots\ldots\ldots\ldots\ldots\ldots\ldots\ldots\ldots\ldots\ldots\ldots\ldots\ldots\ldots\ldots\ldots\ldots\ldots\ldots\ldots\ldots .(13)$$

$S = E[Z'uu'Z] = \lim N_{\to\infty} Z^{-1}[Z'\hat{\Omega}Z]$ With a consistent estimator of S derived from 2SLS residuals, defining the feasible IV-GMM estimator as

$\hat{\beta}_{FEGMM} = (X'Z\hat{S}^{-1}Z'X)^{-1} X'Z\hat{S}^{-1}Z'y$, Where *FEGMM* refers to the *feasible efficient* GMM estimator.

DATA

- The dataset includes Sri Lankan data from WDI of the World Bank and PWT 9 from 1980-2014.
- Annual data on tax revenues, tax-rates, government expenditure, real GDP per capita, inflation, total population growth, old dependency ratio, young dependency ratio, foreign direct investment, unemployment rate, debt, trade openness, workforce and education expenditure, population density are generated.
- All nominal values are converted to constant 2015 U.S. dollars using the CPI.

RESULTS AND DISCUSSION

Table 1: Summary statistics of the variables

Variables	Mean	Standard Deviation	Min	Max	Observations
Revenue	3.68e+11	8.32e+10	6.12e+10	1.05e+12	43
Tax rate	14.96	4.30	10.05	19.02	43
Young	51.85	5.85	43.70	61.92	55
Old	14.00	2.76	7.91	18.02	55
Hc	3.10	0.28	2.58	3.53	55
FDI	1.72	1.92	0.06	9.90	45
Inflation	13.01	19.26	-0.41	33.82	55
TFP	0.71	0.13	0.39	0.85	55
Exchange rate	103.95	63.60	79.79	160	55
GDP per capita	6332.21	2742.11	3665.09	10642.44	55
Population	17.02	5.44	12.51	20.77	55
Unemployment	0.48	0.01	0.46	0.49	55
Population density	271.40	72.94	199.51	331.34	55
Openness	75.88	21.76	22.74	125.57	55

Note: variables are Young = young dependency ratio; old=old dependency ratio; Hc=human capital; TFP=total factor productivity.



Table 1: IV-GMM estimation results of Laffer curve

Dependent Variable:	IV GMM ln (Revenue) (1)	ln (Revenue) (2)	ln (GDP) (3)	ln (GDP) (4)
Tax	-1.092***	-1.143***	-0.521***	-1.186***
	(0.64)	(0.02)	(0.14)	(0.90)
Tax^2	1.020**	0.175**	0.131**	0.146**
	(0.00)	(0.02)	(0.12)	(0.42)
Tax^3		-0.415**		-0.372**
		(0.00)		(0.00)
Tax^4		0.218		0.117
		(0.00)		(0.02)
Lag (Tax)	0.024***	-1.025***	-0.024***	-0.066***
	(0.36)	(0.07)	(0.01)	(0.30)
ln (lag (Rev))	1.141	0.638***	0. 797***	0.805
	(0.27)	(0.02)	(0.01)	(0.04)
Young		0.055**		0.058***
		(0.01)		(0.02)
Old		-1.002		-1.029
		(0.04)		(0.04)
Hc	-2.954	0.115***	-1.255	-2.782*
	(0.31)	(1.25)	(1.49)	(0.51)
Unemployment		-3.268**		-1.082
		(2.71)		(3.81)



TFP		-2. 743**	0.463***	1.430**	-1.390***
		(2.40)	(0.05)	(1.34)	(1.62)
ExRate			-1.402***		-1.094***
			(0.00)		(0.05)
FDI		-1. 144**	0.909**	1.014***	0.711**
		(0.62)	(0.00)	(0.00)	(0.00)
Inflation			0.047		0.023***
			(0.00)		(0.00)
Pop. Density			0.000		0.043
			(0.00)		(0.00)
Population			0.045		0.153
			(0.17)		(0.04)
Openness		-2.004***	-1.405***	-2.623**	-1.725***
		(0.12)	(0.03)	(0.50)	(0.60)
Constant		3.129	1.421**	2.041**	-8.114***
		(5.66)	(0.09)	(0.02)	(2.91)
N		24	24	24	24
Adj. R^2		93.70	91.49	90.29	93.87
Wald	Chi2	3861.51	2817.94	7235.20	4633.27
statistic		(0.000)	(0.000)	(0.000)	(0.000)

Note: Cluster robust standard errors in parenthesis. a * denotes statistical significance at the 10 percent level and a ** denotes statistical significance at the 5 percent level and a *** denotes statistical significance at the 1 percent level. Both time and year fixed effects are used. Instrumental variables: Lag variable of the explanatory variables are used as instrumental variables in the model in addition to the government consumption expenditure, labour force and population density. Adjusted sample 1981-2014.

Table 2: Nonlinear relationship of tax revenue and tax rate

Dependent Variable: Revenue	Coefficient	Std. Err.	t-value	p-value
Tax	-5.55e+11***	9.32e+10	-5.95	0.000
Tax^2	1.55e+10***	3.21e+09	4.82	0.000
Constant	5.05e+12***	6.62e+11	7.63	0.000
N	25			
R-square	0.8843			
F-value	93.73			
p-value	0.000			

Cluster robust standard errors in parenthesis. a * denotes statistical significance at the 10 percent level and a ** denotes statistical significance at the 5 percent level and a *** denotes statistical significance at the 1 percent level. Both time and year fixed effects are used.

Table 3: U-test results for nonlinear relationship

	Value	Lower bound	Upper bound
Interval	-	10.05	19.02
Slope	-	-2.44e+11	3.37e+10
t-value	-	-8.24	1.10
p-value	-	0.000	0.14
Extreme point	17.93***	-	-
Overall test	1.11	H1: Presence of a Inverse U shape	
p-value	0.014	-	-

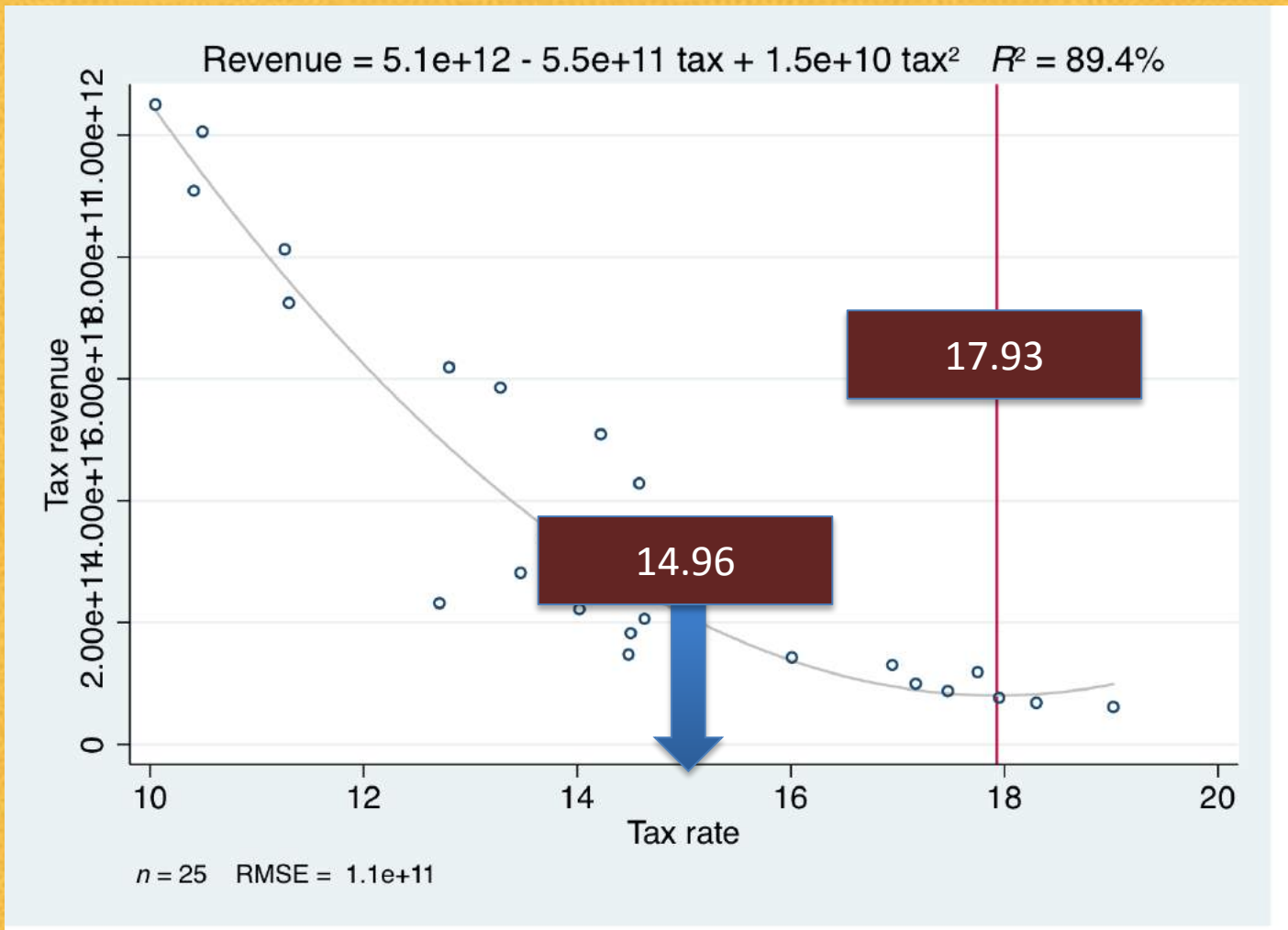

Figure 1: Laffer curve: nonlinear relationship between tax revenue and tax rate

LAFFER CURVE ESTIMATION

- Estimation (1): tax rate, openness, foreign direct investment, total factor productivity are negatively, and tax^2, and lag (tax) are positively significant.
- Equation (2): more variables to predict the relationships and it shows that tax^2, young dependency ratio, human capital, total factor productivity, and foreign direct investment are positively significant while tax, tax^3, lag (tax), unemployment, exchange rate, trade openness are negatively significant.
- Equation (3): exposes that tax^2, lag (tax), total factor productivity, and foreign direct investment are positively significant, whereas tax, lag (tax) and trade openness are negatively significant.

LAFFER CURVE

- Equation (4) results tax^2, young dependency ratio, foreign direct investment, and inflation are significant positive determinants in the growth Laffer curve, while tax, tax^3, lag (tax), total factor productivity, exchange rate and trade openness are negative factors of predicting the GDP.
- Non-linear relationship of the Laffer curve is predicted based on the U-test, and results revealed that a strong relationship in the quadratic form of the equation and U-shape Laffer curve.



Table 4: Nonlinear relationship of GDP and Tax rate

Dependent Variable: GDP	**Coefficient**	**Std. Err.**	**t-value**	**p-value**
Tax	-2133.70***	279.69	-7.63	0.000
Tax^2	61.42***	9.62	6.38	0.000
Constant	19078.73***	1986.85	9.60	0.000
N	25			
R-square	0.9080			
F-value	120.00			
p-value	0.000			

Cluster robust standard errors in parenthesis. a * denotes statistical significance at the 10 percent level and a ** denotes statistical significance at the 5 percent level and a *** denotes statistical significance at the 1 percent level. Both time and year fixed effects are used.


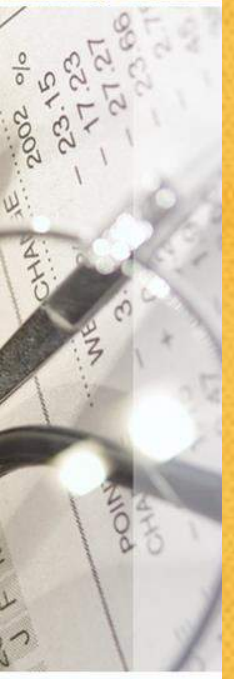


Table 5: U-test results for nonlinear relationship

	Value	Lower bound	Upper bound
Interval	-	10.05	19.02
Slope	-	-899.07	202.87
t-value	-	-10.12	2.22
p-value	-	4.77e-10	.018
Extreme point	17.36***	-	-
Overall test	2.23	H1: Presence of a Inverse U shape	
p-value	0.0183	-	-

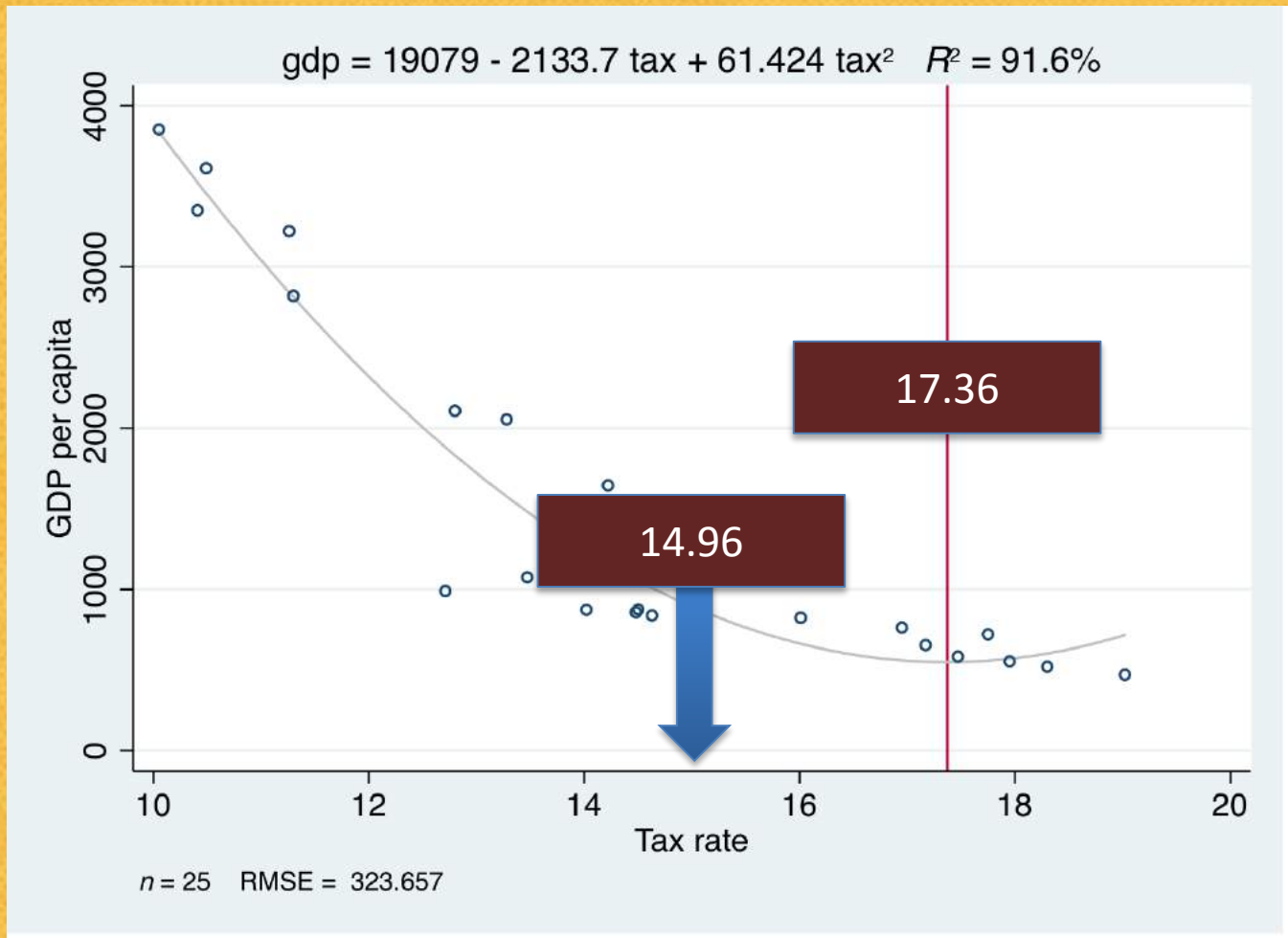

Figure 2: Growth Laffer curve: nonlinear relationship between GDP and tax rate

GROWTH LAFFER CURVE

- The growth Laffer curve (Table 4 & 5) estimation is to obtain the elasticities with respect to the tax rate.
- Moreover, the nonlinear relationship of the growth Laffer curve is predicted based on the U-test, and results revealed that a strong relationship in the quadratic equation and U-shaped growth Laffer curve.
- The most important prediction for the Laffer curve estimation is to obtain the elasticities with respect to the GDP per capita.



Table 4: IV-GMM Estimation of elasticities

Dependent Variable:	IV GMM (1) Ln (Tax Revenue)	IV GMM (2) Ln (GDP)
lnTax	0.045**	0.035**
	(0.05)	(0.04)
lnLag (Tax)	-0.076***	-0.081***
	(0.03)	(0.02)
ln(lag (Rev))	0.011***	-0.001
	(0.02)	(0.00)
ln (D.Rev)	0.063***	-0.062***
	(0.03)	(0.01)
lnYoung	-0.427***	-0.498***
	(0.42)	(0.09)
lnOld	0.614*	0.212*
	(0.72)	(0.11)
lnHc	4.774***	3.515***
	(0.23)	(0.39)
lnUnemployment	-1.915***	-1.746***
	(0.164)	(0.10)
lnTFP	1.289***	1.138***
	(0.06)	(0.06)



lnExRate	-0.711***	0.010
	(0.05)	(0.01)
lnFDI	0.013***	0.004
	(0.00)	(0.00)
lnInflation	-0.502***	0.001
	(0.06)	(0.00)
lnOpenness	0.310*	0.040
	(0.52)	(0.02)
Constant	3.929***	6.433***
	(0.45)	(0.57)
N	41	41
Centered R^2	99.82	99.88
F statistic	2859.26 (0.000)	3522.33 (0.000)
Under. Test:	7.932 (0.160)	9.046 (0.107)
Weak identification test	2.117	1.703
Hansen J statistics	5.734 (0.220)	3.433 (0.488)

Cluster robust standard errors in parenthesis. a * denotes statistical significance at the 10 percent level and a ** denotes statistical significance at the 5 percent level and a *** denotes statistical significance at the 1 percent level. Both time and year fixed effects are used. Instrumental variables: Lag variable of the explanatory variables are used as instrumental variables in the model in addition to the GDP per capita, government consumption expenditure, labour force and population density. Adjusted sample 1991-2014.

ESTIMATION OF ELASTICITIES

- Equation (1) results, tax, lag (tax), human capital, total factor productivity and foreign direct investment are significant positive elasticities while lag (revenue) and unemployment show a negative significance.
- These results implied that how much GDP could be increased with respect to increase of 1% of those variables.
- According to the equation (2), the results further confirm the previous results of equation (1). It shows that tax, lag (tax), human capital, and total factor productivity are positively significant elasticities whereas young dependency, and unemployment are negative and significant elasticities.

MACROECONOMIC POLICY

- Macroeconomic policy perspective: this study revealed the properties of the estimated parameters, which provide extra information about the potential policy directions; these coefficients of the estimated nonlinear equation provide evidences to prove or not to prove the existence of the Laffer curve.
- The geometric presentation of the quadratic function and its properties are established in the U-shaped curve, the coefficient of the square term of squared tax rate needs to be negative.

MACROECONOMIC POLICY

- The quadratic function specified above plots as a parabola, a curve with a single built in bump or wiggle.
- The positive sign of the linear term is designed to show the positive beneficial effects of government taxation on output, while the negative sign of the squared term means that the variable measures any adverse effects associated with increased governmental tax rates.
- Since the squared term increases in value faster than the linear term, the presence of negative effects from tax rates eventually will outweigh the positive effect, producing a downward-sloping portion. The values that were obtained in the case of Sri Lanka are consistent with this principle.

MACROECONOMIC POLICY

- The graphical solution of the optimum value is the peak of the quadratic curve. The mechanism can be used to calculate the elasticities of optimal level of tax rate using first partial differentiation.
- The study calculates the partial derivative of GDP with respect to tax rate, to indicate that all the other independent variables in the function are held constant when taking this particular derivative through partial differentiation.

CONCLUSION

- Laffer curve is estimated to identify the factors determining the optimal taxation and the long run relationships between economic growth and tax revenue from 1980 to 2014.
- The advantage of IV-GMM estimation of Laffer curve is that it counts for the many econometric issues like endogeneity, selection bias, and simultaneous equation problems.
- The results of the approximation revealed a strong correlation in Laffer curve equations for supporting with other covariates.

CONCLUSION

- It is found that many macroeconomic variables in the IV-GMM models have significant effect on the tax revenue with consistent coefficient signs as in economic literature.
- The empirical results of the IV GMM provide support for a robust long-run relationship between the variables, indicating that tax-rate is positively related to tax revenue.
- Overall, the results of the IV-GMM estimation provide a strong correlation of the tax revenue and tax rate.

CONCLUSION

- In summary of all different approximations of IV-GMM for the Laffer curve revealed that tax^2, young dependency ratio, human capital, total factor productivity, and foreign direct investment are positively significant while tax, tax^3, lag (tax), unemployment, exchange rate, trade openness are negatively significant in Sri Lanka.
- The test for U-shaped in the Laffer curve shows that extreme point is at 17.36 of the tax rate, and the significant of test implies that the structure is U-shape.

POLICY RECOMMENDATIONS

- Use of Laffer curve as a policy instrument in order to address the optimal taxation for generating revenue.
- It is recommended to develop a tax system that generates optimal tax revenue with adjustment of the tax rates based on the study.
- Strong evidences show that key factors need to be considered for designing such optimal tax reforms for Sri Lanka.
- Increase of tax rate will decrease the maximum revenue that can be achieved while considering other controlling macroeconomic determinants.


Tax
THANK
YOU!