

Tax Composition and Income Inequality in Sri Lanka

H. R. A. C.Thilanka and J. G. Sri Ranjith

*Department of Economics and Statistics, Faculty of Arts,
University of Peradeniya*

Keywords: *Taxes; Inequality; Compliance; Co-integration; Tax Revenue*

Introduction

Tax revenue is an instrumental objective of fiscal policy. Depending on the nature of the tax, it is differently felt as a tax burden by the tax payer. With this regard, many of the existing academic discourses have focused on tax composition because it causes particular effects. Tax composition affects net inequality in two ways: first, taxes have a different degree of progressiveness, and therefore the mixture of taxes is responsible for part of inequality. Second, the tax composition affects economic incentives (e.g. labor market incentives, savings and investment), and thus indirectly affects net inequality (Drucker et. al, 2017). In the Sri Lankan context tax revenue which largely consists of indirect taxes, is the major source of financing the fiscal deficit and the means of meeting other public expenditure needs. According to the Central Bank of Sri Lanka, income taxes amounted to 16 per cent of the total tax income of the government, and indirect taxes amounted to 71 per cent in 2016 (CBSL, 2016). In fact, the poorest 20 per cent pay as much as 13 per cent and the poorest 10 per cent pays as much as 23 per cent of their income in the form of indirect taxes while the richest 10 per cent pay less than 1 per cent as indirect taxes (Ranasinghe, 2018). This evidence tells us that the tax system of Sri Lanka does not act as a helpful instrument in mitigating the income inequality.

The impact of tax composition on income inequality has gained interest among existing academic discourses in recent years. Among those, Drucker *et al.* (2017) revealed that income taxes on individuals and non-recurrent property taxes are negatively correlated with inequality and economic

growth; corporate tax impedes economic growth and has no clear impact on inequality; taxes on consumption increase both inequality and growth in developed countries. Similarly, Troiano (2017) shows that income inequality is raised after all the tax policy reforms; especially, introducing new income taxes on existing income tax has caused an increase in the inequality index. Meanwhile, “with a few exceptions the impact of tax allowances and tax credits on inequality is small and tax concessions appear ill-suited to target resources towards households in the bottom part of the income distribution in European countries” (Avram, 2014). Further, “statutory corporate income tax rates are strongly negatively associated with income inequality by controlling for various other determinants of income distribution while personal income tax rates have no impact on income inequality” (Immanuel et.al 2012). However, “progressivity of national income tax reduces inequality in observed income, but has a significantly smaller impact on actual inequality in selected developed and developing countries” (Duncan and Peter, 2017). Thus, empirical evidence suggests how tax composition affects income inequality under different scenarios. Regarding the Sri Lankan context there is a dearth of research in quantitative studies on tax composition and income inequality but, investigating the relationship is necessary due to income equality in Sri Lanka not being satisfactory compared to other countries in the region. Thus, income inequality should be minimized by means of better policies especially through simplifying the tax composition and broadening the tax basis.

Objectives

The main objective of this study is to identify the impact of tax composition on income inequality in Sri Lanka. It also attempts to identify the impact of other selected factors which affect income inequality; tax compliance and real GDP.

Methodology

This study adopts a multivariate cointegration and Vector Error Correction model to capture the dynamic relationships of selected variables following the methodology of an empirical study conducted by Kesavarajah (2016).

$$GINI_t = \beta_0 + B_1VAT_t + \beta_2ID_t + \beta_3ITX_t + TC_t + LNRGDP_t + u_t \quad (1)$$

Where variables GINI, VAT, ID, ITX, TC and LNRGDP denote Gini index, value added tax or goods and services tax, import duties, income taxes which are presented as a percentage of total tax revenue, tax compliance and logarithm of real GDP respectively. Further, u is the white noise error term, t is the time period (1985-2015).

The study involves two steps, namely identifying the presence of non-stationarity (unit root) and long-run relationship between variables. This study uses ADF and PP unit root tests in order to identify the existence of non-stationarity or unit root. Next, Johanson cointegration test is adopted to ensure whether a long-run relationship exists when series follow the same order of integration. For the purpose of finding out the short-run relationship between variables Error Correction Model was employed. This study used annual data covering the period from 1985-2015 and data were extracted from various issues of annual report of Central Bank of Sri Lanka.

Results and Discussion

ADF and PP unit root tests were carried out to identify the order of relevant variables as a prerequisite for the co-integration test. Results of these tests show that all variables in the model are not stationary at level, but stationary at their first difference ensuring that variables are integrated in order [I(1)]. This requirement fulfills employing the Johanson cointegration test to identify the long-run relationship of the model. However, before that the optimal lag length needs to be identified using lag length selection criteria such as LR, FPE, AIC, SC and HQ. As one co-integrating relation can be identified in the system of equations at 5% level of significance it is indicated that there is a long run relationship between variables and it was obtained by employing the VECM. Long-run relationship is shown in Equation 1.

$$\begin{aligned} GINI = & 57.02 + 0.06VAT^* + 0.15ID - 1.16ITX^* + 12.80LNRGDP^* \\ & + 0.18TC^* \end{aligned}$$

Above results show that VAT and LNRGDP positively affect income inequality while ITX and TC affect it negatively because, these four

variables are statistically significant at 1% significant level. In line with the objective of the study, tax composition is identified as influentially affecting income inequality. VAT affects income inequality positively implying that tax on consumption adversely affects the income distribution of the country. However, as income tax negatively affects income inequality, this kind of tax can be used to address the income distribution problem along with raising tax revenue. Moreover, real GDP positively affects income inequality implying a Kuznets curve effect which is the part before the threshold level of per capita income as appropriate for explaining the Sri Lankan context. Also, tax compliance negatively affects income inequality so that a higher degree to which tax payers comply with the tax rules may help mitigate income inequality. According to the ECM, the error correction term is not significant and does not have the expected sign to bring a long-run equilibrium at the speed of adjustment implying there is no long-run equilibrium in the model. Moreover, all independent variables in the model do not affect income inequality in the short-run, implying that there is no instance response of income inequality to the change in the independent variables.

Conclusion

This study examines the impact of tax composition and other selected variables on income inequality in Sri Lanka adopting an econometric technique. The findings of the study mainly consisted of a positive impact of VAT, but a negative impact of income tax on income inequality. Along with this, the study identified that tax compliance has a negative effect while real GDP positively affects income inequality in Sri Lanka. Findings of this study suggest policy recommendations which support mitigating income inequality by taking necessary measures on tax composition in Sri Lanka. The government can broaden the income tax base and give less weight on goods and services taxes in order to reduce the gravity of income inequality. Moreover, tax policy reforms are needed to fine-tune tax compliance and minimize the income inequality.

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