Tax reforms in Sri Lanka – will a tax on public servants improve progressivity?

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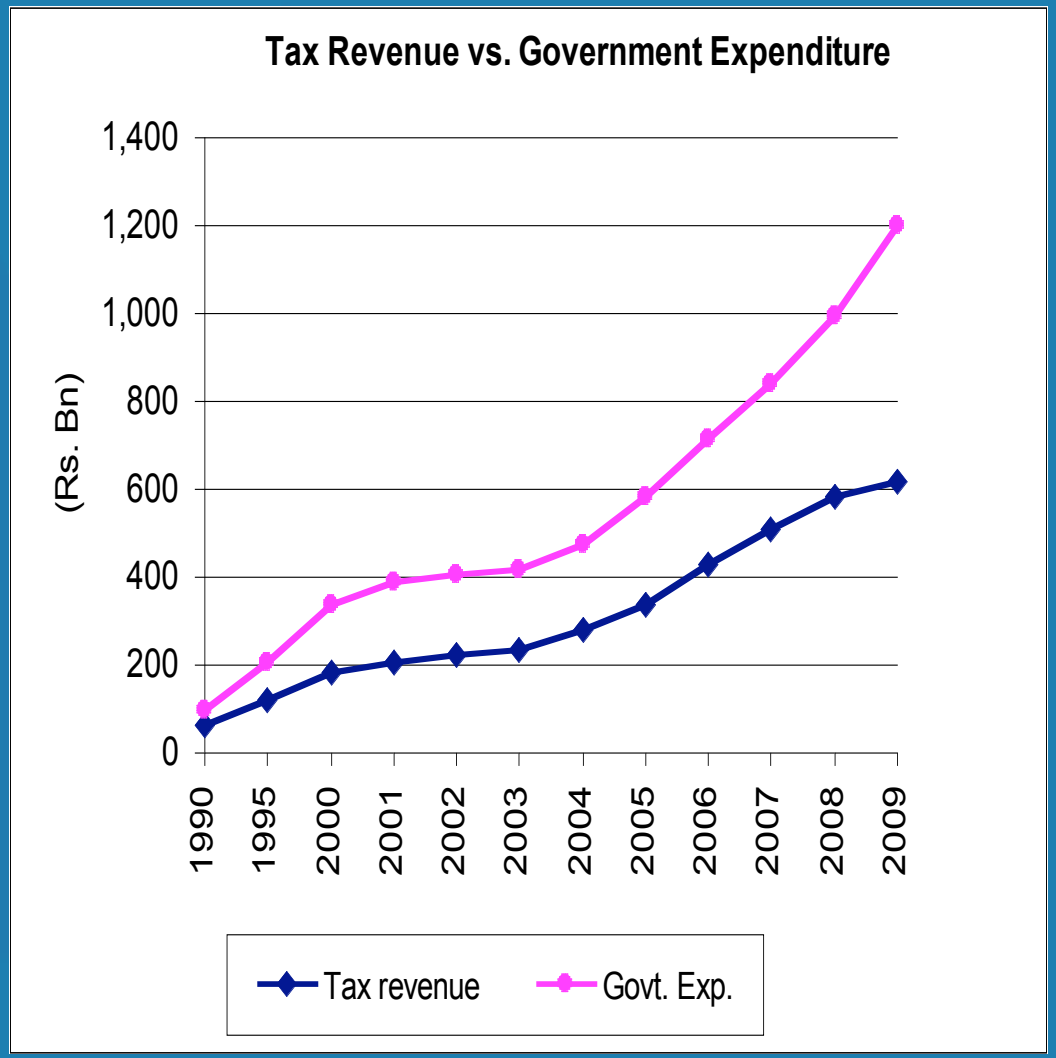
Summary

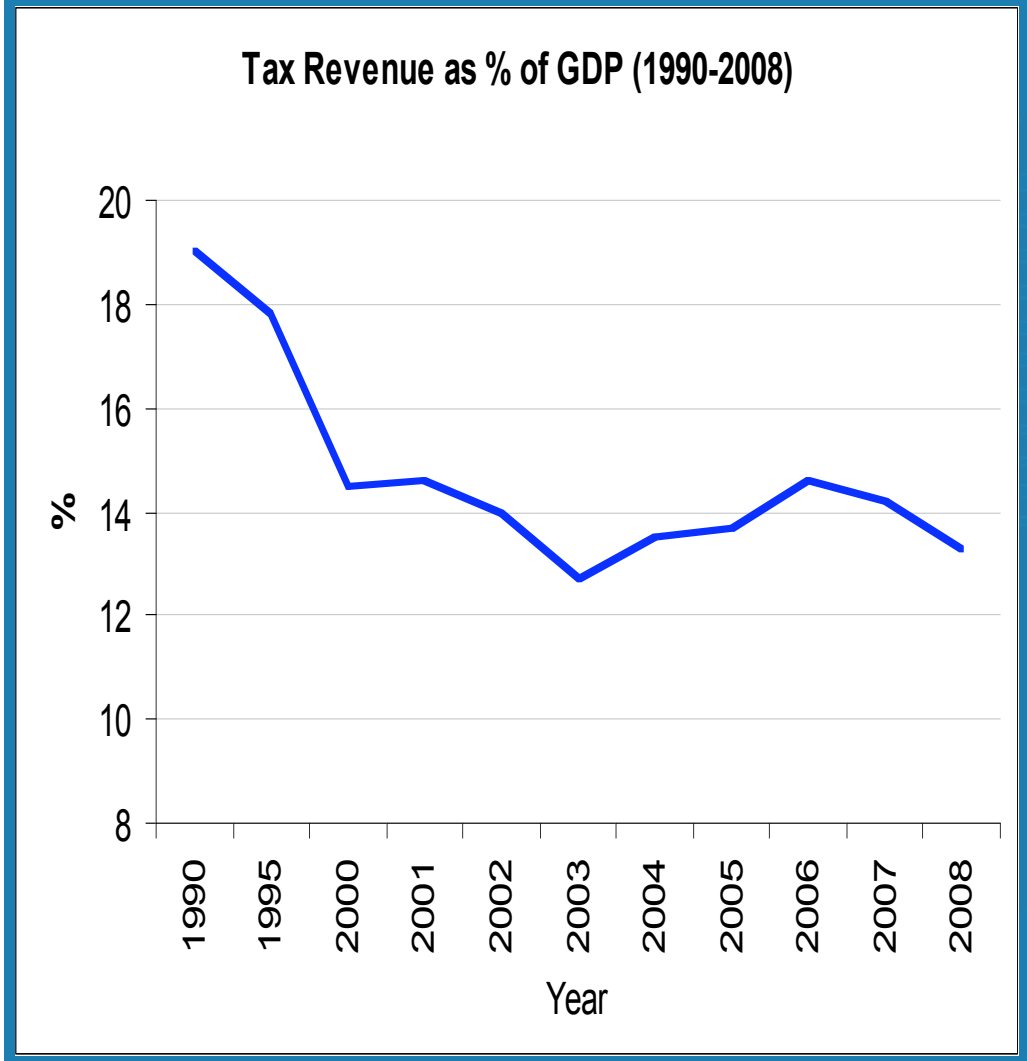
- Faced with budget constraints the Sri Lankan government (SLG) entered an International Monetary Fund Stand-by-Arrangement (IMF-SBA) for USD 2.6bn in 2009.
- With this, the SLG has committed to raising the revenue-to-GDP ratio from 14 percent at present (2009) to 16.9 percent of GDP by 2012.
- A recently appointed presidential commission on taxation is contemplating taxing the, presently tax exempt, public servants in the country as a means of broadening the tax base and raising revenue.
- The proposed study uses household income and expenditure data to assess the progressivity and horizontal inequity considerations of such a change in tax policy.

Motivation – SLG needs to broaden the tax base

- SL has experienced high budget deficits in the recent past, due to
  - Growing pressures on public finances owing to
    - Continued welfare spending,
    - Infrastructure investments,
    - Defense expenditure, and,
    - Reconstruction efforts in the North and East
  - And, slow increase of tax revenue
- the need to broaden the tax base and raise more revenue has become a policy priority of the government.

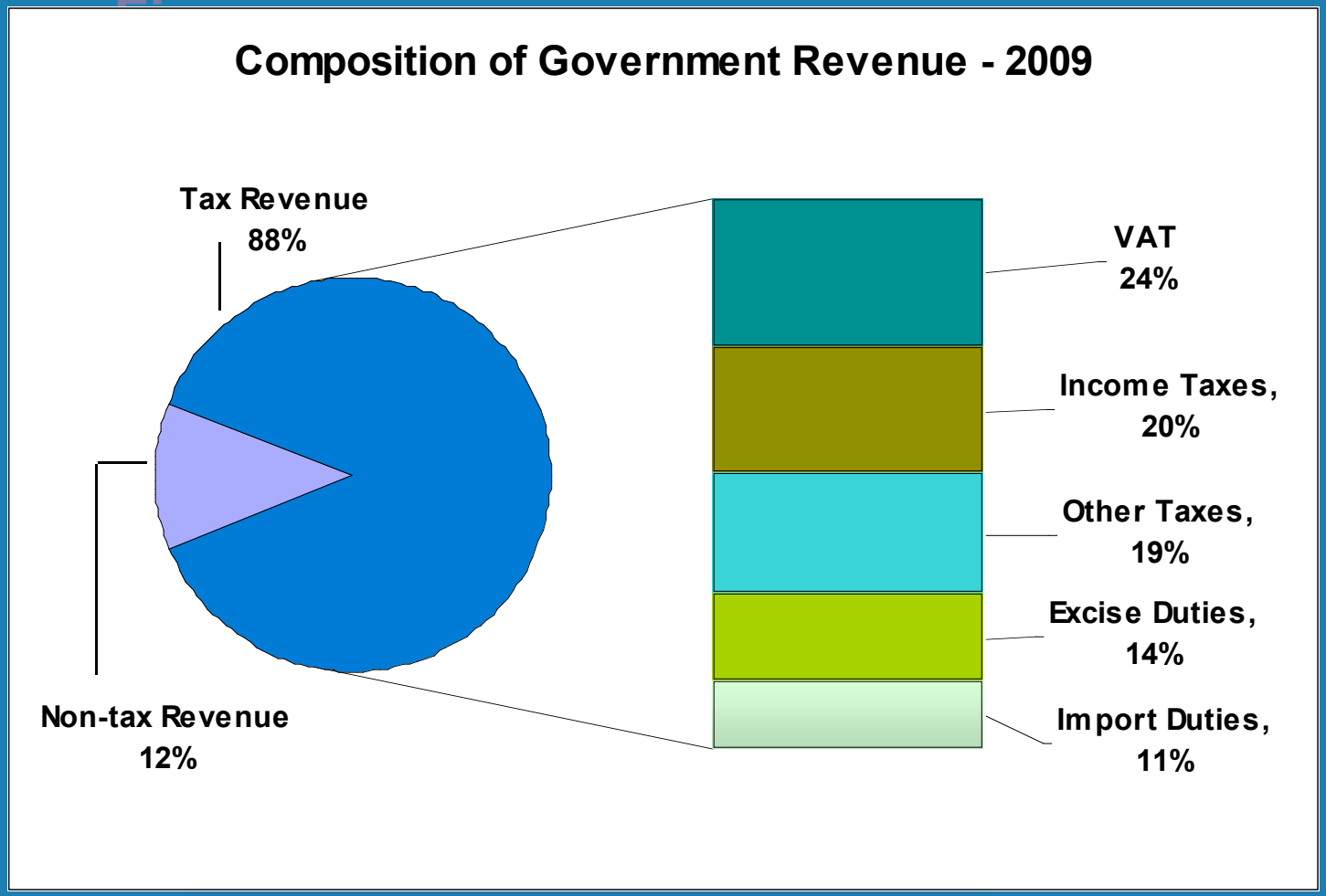


Motivation – SLG needs to raise tax revenue



- The government entered into an IMF Stand-by Arrangement (SBA) for USD 2.6bn in 2009.
- With this, the gov is committed to raising the revenue-to-GDP ratio from 14 percent at present (2009) to 16.9 percent of GDP by 2012,
- A Presidential Commission on Taxation was appointed to investigate policy options

Motivation - Composition of government revenue



Majority of government revenue is from tax revenue, of this about 20% is from income taxes

Motivation – Taxing public servants

- The policy policy makers agree that the tax base needs to be broadened.
  - This would include revisiting the various exemptions granted in individual and corporate and income tax.
  - Within this, the current practice of income tax exemption granted to Sri Lanka's public sector employees has come under particular scrutiny.

- Sri Lanka's public sector employs around 1 million of the country's 7 million strong labour force.
  - This includes public sector officials, parliamentary legislators and other politicians.

Background - Structure of the labour market

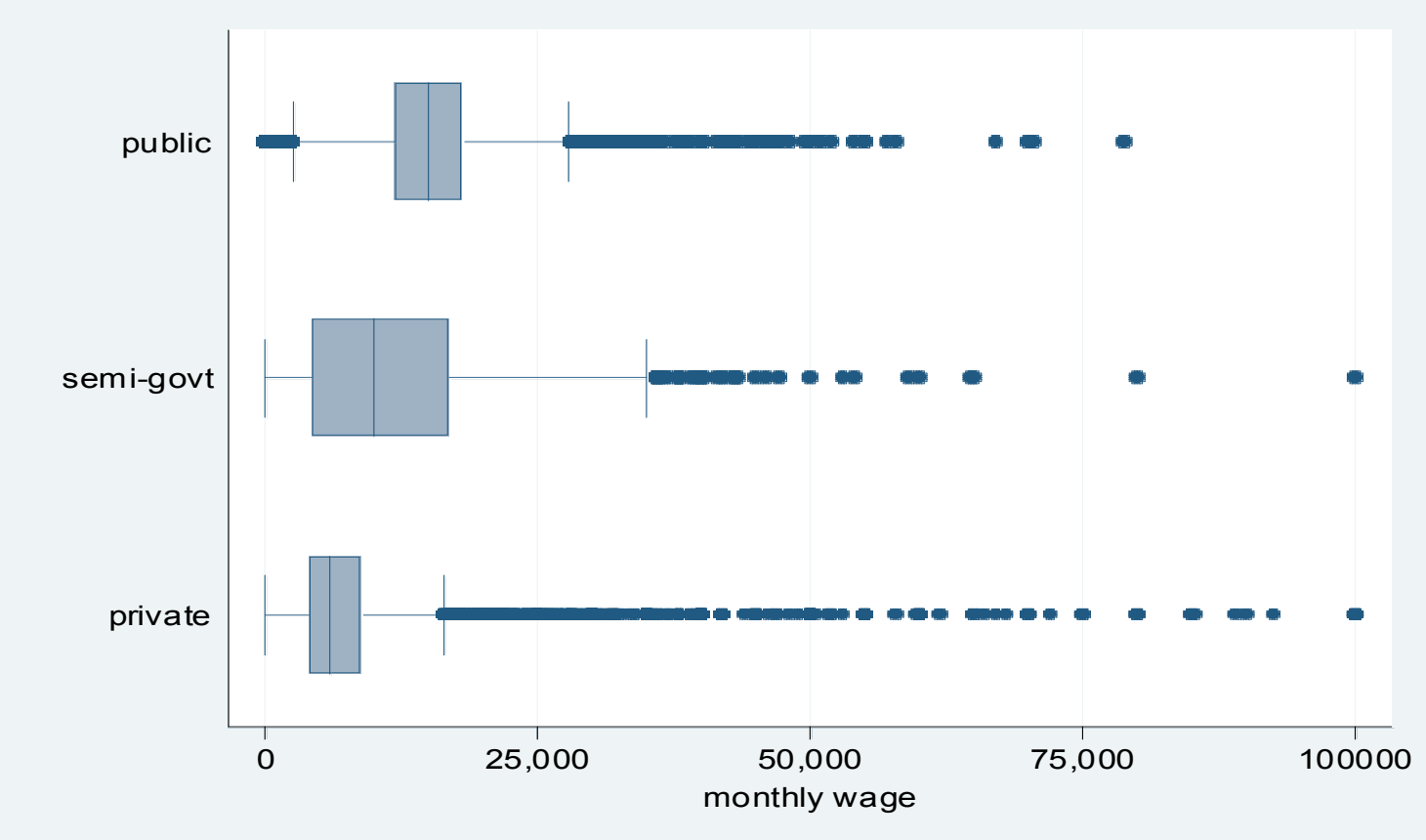
	All		Wages above Rs.25,000	
Type	**Freq.**	**%**	**Freq.**	**%**
Employee – public	656,091	9.2	24,120	26.1
Employee – Semi govt	299,107	4.2	13,592	14.7
Employee private	2,296,458	32.3	54,602	59.1
Employer	221,765	3.1		
Own account worker	2,189,878	30.8		
Unpaid family worker	744,992	10.5		
No permanent employer	699,049	9.8		
Total	7,107,340	100.0		

Source: own calculations using LFS data 2006

Note: About 70% of the labour market is in the informal sector.

Background - Wage levels

- In a tax policy unique to Sri Lanka, the public sector is exempt from paying income tax on their emoluments.
- When policy introduced, public sector wages were lower than that of private sector.
- But this is no longer the case…



Source: calculated using IES 2006/07. Excludes 11 observations above Rs. 1000,000

Specific research questions asked

- Specifically the study aims to find answers to the following questions.

- 1. How much revenue can be earned by extending the income tax base to cover public sector employees, at the current rates? How will this policy redistribute the tax burden across households (i.e., does this policy lower the inequality of net incomes compared to the earlier policy? How does this affect progressivity?

- How does extending the income taxes to public servants affect horizontal inequity.

Methodology - Assessing tax systems

- A tax is said to be progressive if the introduction of a tax redistributed the living standards such that the poor benefit more than the non-poor.
- A progressive tax will make the distribution of net incomes more equal than the corresponding distribution of gross incomes.
- Put formally -
- Given: $N(X) = X - T(X)$, where X -gross income, N-net income and T - tax
- A tax T1 is said to be more progressive than a tax T2 if the corresponding distribution of net incomes N1 is more equal than that of N2
- (Duclos, Araar, 2006).

Methodology - Tools for assessing tax systems

- Progressivity of a tax system using these two approaches are usually assessed by using Lorenz and concentration curves
- When individuals are ranked according to increasing income or living standards values … $X_1 <= X_2 <= \ldots <= X_n$

- **Lorenz curve - $L_x(p)$**
  shows the cumulative percentage of total income held by the bottom p proportion of the population,

- The **concentration curve - $C_T(p)$**
  shows the cumulative percentage of a tax against the cumulative percentage of the population.

(Duclos and Araar, 2006)

Methodology - Progressivity and inequality comparisons

- There are two approaches to measuring progresivity at the global level:
  - Tax redistribution (TR approach), and
  - Income redistribution (IR approach)

- Using Lorenz and concentration curves as defined above one can determine whether a tax is progressive (at the global level) by using the following rules.

- A tax T is TR progressive if: $\mathbf{C_T(p)} < \mathbf{L_x(p)}$ for all p

- A tax T1 is more TR progressive than a tax T2 if: $\mathbf{C_{T1}(p)} < \mathbf{C_{T2}(p)}$ for all p

- A tax T is IR-progressive if: $\mathbf{C_N(p)} < \mathbf{L_x(p)}$ for all p

- And, a net tax T1 is more IR progressive than a tax T2 if : $\mathbf{C_{N1}(p)} < \mathbf{C_{N2}(p)}$ for all p, where N1 and N2 are corresponding net incomes.

(Duclos and Araar, 2006)

Methodology - Measuring Horizontal equity

- The proposed study is directly concerned with issues of horizontal equity.
- There are two approaches to assessing horizontal equity in the literature. These include:
  - Classical horizontal equity – which asks whether equals in pre-tax incomes treated equally in taxes?
  - Reranking – which asks whether the redistribution result in reranking?
- These measures will be calculated using DAD software.

(Duclos and Araar, 2006)

Methodology - Progressivity Indices

- Graphical means of assessing tax systems, do not provide a measure of the magnitude of inequality that can be compared under different scenarios.
- Progressivity indices provide the desired numerical measures.

$$IT(\rho) = \int_0^1 (L_X(p) - C_T(p))\kappa(P;\rho)dp,$$

$$IV(\rho) = \int_0^1 (C_N(p) - L_X(p))\kappa(P;\rho)dp,$$

$$RR(\rho) = \int_0^1 (C_N(p) - L_N(p))\kappa(P;\rho)dp,$$

$$IR(\rho) = \int_0^1 (L_N(p) - L_X(p))\kappa(P;\rho)dp,$$

Where is k is weight dependent on the percentile p and the parameter ρ.

(Duclos and Araar, 2006)

Methodology - Progressivity Indices

- When $\rho=2$ these indices are known as:
  - IT(2) – Kakawani index of TR progressivity,
  - IV(2) – Reynolds-Smolensky index of IR progressivity,
  - RR(2) - Atkinson-Plotnick index of reranking,
  - and IR measures redistribution.

Methodology - Measuring Living Standards

- To assess the distributional impacts of taxing policies one must first define a means of measuring living standards.

- There are different means of measuring living standards.
- We will use value of consumption as a proxy for measuring living standards.

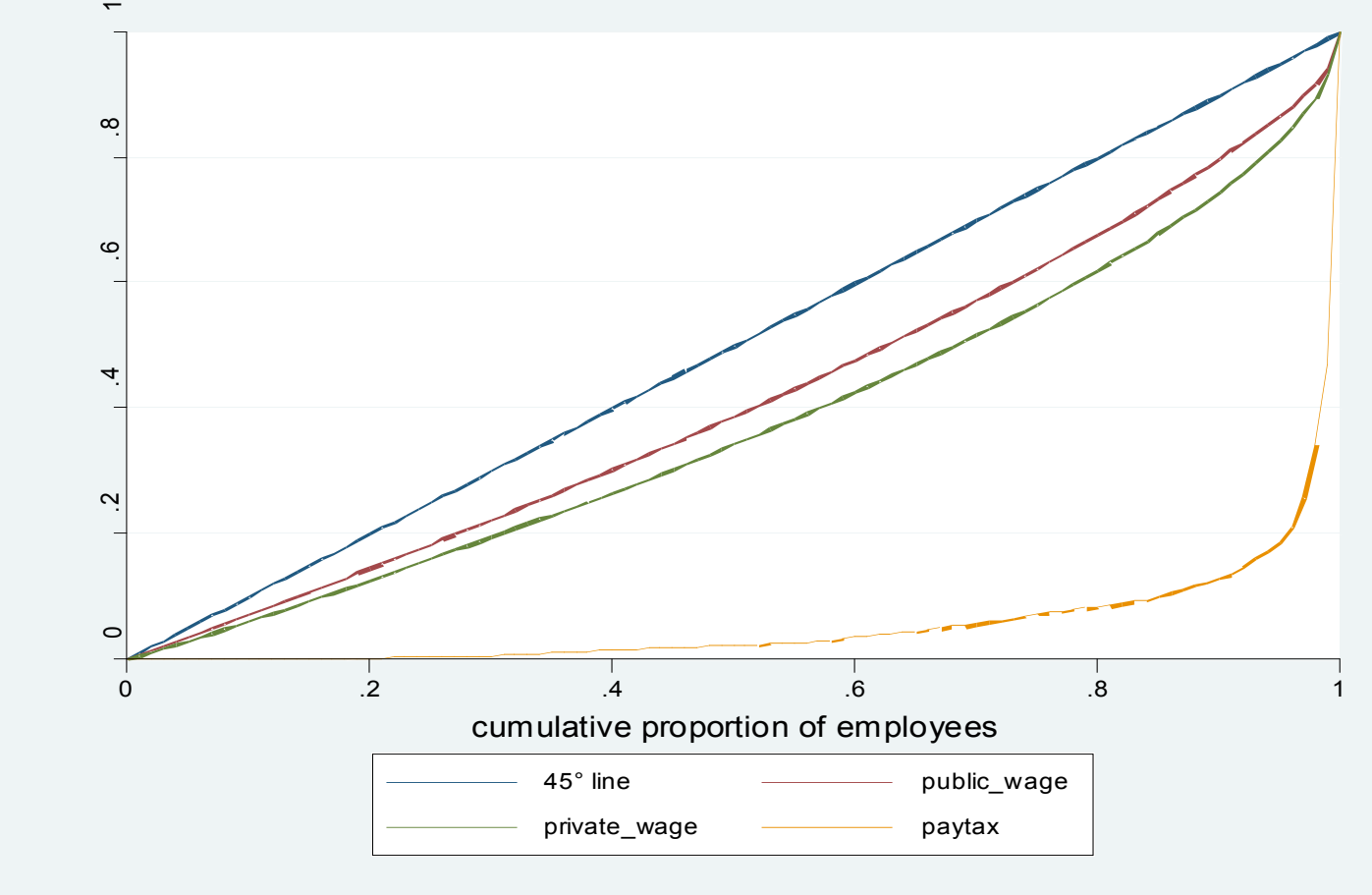
- There are three main steps for constructing a measure of living standards using consumption (World Bank, 2008; Dulos and Araar, 2006):
  - a) Aggregating different components of consumption,
    - (Deaton and Zaidi,2002)
  - b) Making adjustments for price differences, and
    - (WB,2008)
  - c) Making adjustments for household size and composition.

Data

- Household Income and Expenditure Survey (HIES)-2006/2007 conducted by Department of Census and Statistics.
- The sample size of this survey is 21,700 housing units. Further, it covers around 27,000 of employees, of which more than 3,000 (about 12 per cent) are from the public sector.
- The data indicates that on average public sector employees receive higher earnings (Rs.14,832) compared to private sector workers (Rs.7,475).
- In addition to this, secondary data on tax rates and revenue collected from various sources by the department of Inland Revenue will be used in the analysis, for making estimates and for validation purposes.

Preliminary look at data

- Wage and PAYE tax distribution of employees -- salary >25,000



Consultation and Dissemination Strategy

- **The proposal will be put forward to the Presidential Commission on Taxation for comments, via its Chairman – Prof Lakshman , advisor to the President.**

- **The results of the proposed study will be presented to the Commission, which consists of members drawn from private and public sector institutions as well as academia**

- National Conference on the findings of the study
  - Comprehensive press coverage (both print and electronic) will be solicited to enable wider public awareness of the conference proceedings.

- Publications:
  - IPS/PEP working paper
  - Journal article
  - Policy Brief to policy makers and other stakeholders
  - IPS website (http://www.ips.lk),
  - IPS blog 'Talking Economics' (http://ipslk.blogspot.com) – to get public feedback
  - "*Talking Economics Quarterly*, an e-bulletin that summarizes the discussions on IPS blog




Thank you

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