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# *Analysis of the Effective Tax Burden on Investment in Ten Sub-Saharan African Countries*

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# Background

- **Culmination of ten country studies in Sub-Saharan Africa over the period September, 2004 to September 2006.**
  - **Zambia**
  - **South Africa**
  - **Rwanda**
  - **Tanzania**
  - **Madagascar**
  - **Lesotho**
  - **Mauritius**
  - **Mozambique**
  - **Namibia**
  - **Sierra Leone.**

- **Analysis of business tax regimes using a common analytical approach**
  - **Qualitative analysis employing private sector interviews**
  - **Quantitative analysis employing the concept of the Marginal Effective Tax Rate (METR) on capital**

# The Marginal Effective Tax Rate (METR)

- **Quantitative tool to assess the impact of the statutory tax regime (instruments, rates, and base) on investment**
- **Incorporates several features of the tax system:**
  - **Corporate Tax Rate**
  - **Tax Depreciation**
  - **Investment Allowances**
  - **Investment Tax Credits**
  - **Implicit Sales Taxes on Capital, etc.**
- **Allows for a comparison of tax distortions across assets, sectors and countries**

# METR Explanation

- Investment is a function of the “cost of capital” faced by a firm.
  - The minimum, or “**hurdle**”, rate of return (ROR) an investment must earn in order to be profitable.
- METR measures the “tax wedge” between the **before**- and **after**-tax hurdle rate of return on a marginal investment (one that just earns the hurdle ROR after tax).

# METR Example

- The after-tax hurdle rate of return required by investors is 10 percent.
  - An investment must earn a rate of return, after the payment of taxes, of at least 10 percent in order to be undertaken.
- Given the provisions of the tax code, the before-tax rate of return required to generate this after-tax hurdle rate of return is 12 percent
- METR on capital is 16.67%:  $(12-10)/12$ 
  - The share of the before tax rate of return on a marginal investment required to pay the taxes associated with the investment

# METRs and Tax Distortions

- A high overall METR on capital discourages investment – **inter-temporal distortion**
- Differences in METRs across assets – **inter-asset distortions**
  - Machinery and Equipment
  - Buildings and Structures
  - Land
  - Inventories
  - Weighted Average Aggregate

# METRs and Tax Distortions

- Differences in METRs across sectors - **inter-sectoral distortions**
  - Manufacturing
  - Agriculture
  - Tourism
  - Mining
  - Finance
  - Small and Medium Enterprises (SMEs)

# METRs and Tax Distortions

- **Tax distortions cause capital to be allocated across sectors and assets for tax reasons rather than economic reasons**
- **Impedes growth, lowers the standard of living and reduces economic well-being**

# Benchmarking METRs

- **How can you tell whether the METR on capital in a particular country in a particular sector on a particular asset is “too high” or “too low”?**
  - **You can’t!!**
  - **State of the art in tax policy analysis is not at the point where there is a straightforward answer to this question.**

# However . . .

- **We can benchmark countries against countries, sectors against sectors and assets against assets to identify distortions and anomalies**

**. . . and we do know that . . .**

- **Small, open, developing economies should not have METRs that are too high relative to larger, developed economies**
- **Inter-sectoral METR distortions should be minimized, with a few exceptions**
  - **SMEs subject to a lower rate, simplified regime**
  - **Sectors with location specific rents – e.g., mining – should be taxed at a higher rate (via royalties)**

# ... and finally ...

- **In the absence of market failures the business tax system should be as neutral as possible**
  - **Should not distort a firm's choice of inputs, its investment decisions, or its how it is organized.**
- **The returns to all investments should be taxed at (roughly) the same rate and taxes should be levied in a uniform fashion on all factors of production and outputs**

... therefore ...

- Tax incentives should be narrowly restricted to sectors and assets with **identifiable *market failures***
  - SMEs – high compliance costs, credit constraints
  - Negative pollution externalities
  - Positive R&D spillovers
  - That's about it

# Aggregate METRs: Large Corporations, General (Non-Incentive) Tax Regimes

	<b>General CIT Rate</b>	<b>Manufacturing</b>	<b>Agriculture</b>	<b>Tourism</b>	<b>Mining</b>	<b>Finance</b>
<b>Zambia</b>	35.0%	5.0%	10.0%	5.0%	0%	30.0%
<b>South Africa</b>	29.0%	21.3%	5.7%	13.9%	0.4%	29.8%
<b>Tanzania</b>	30.0%	15.3%	23.1%	14.9%	22.5%	28.9%
<b>Rwanda</b>	30.0%	17.0%	7.0%	13.0%	20.0%	28.0%
<b>Madagascar</b>	30.0%	23.8%	15.2%	14.2%	11.1%	29.1%
<b>Lesotho</b>	30.0%	11.0%	18.0%	43.0%	26.0%	51.0%
<b>Namibia</b>	35.0%	15.9%	1.8%	10.4%	16.1%	43.1%
<b>Mozambique</b>	32.0%	40.0%	16.0%	40.0%	51.0%	57.0%
<b>Sierra Leone</b>	30.0%	27.0%	24.0%	22.0%	45.0%	28.0%
<b>Mauritius</b>	25.0%	-22.0%	-3.2%	-42.3%	na	na

A lot of inter-sectoral variation!

Is this intentional?

# C.D. Howe Institute METRs: Selected Industrial Countries (Manufacturing)

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	<b>2006 GENERAL CIT RATE</b>	<b>METR ON CAPITAL</b>
<b>Germany</b>	38.4%	38.1%
<b>U.S.</b>	39.2%	38.0%
<b>Russia</b>	22.0%	37.6%
<b>Canada</b>	34.2%	36.6%
<b>France</b>	35.4%	32.1%
<b>Korea</b>	27.5%	31.5%
<b>India</b>	33.0%	30.2%
<b>U.K.</b>	30.0%	28.5%
<b>New Zealand</b>	33.0%	25.4%
<b>Australia</b>	30.0%	23.6%
<b>Italy</b>	37.3%	23.2%
<b>Norway</b>	28.0%	22.3%
<b>Sweden</b>	28.0%	17.8%
<b>Poland</b>	19.0%	16.3%
<b>Ireland</b>	12.5%	14.0%
<b>Mexico</b>	30.0%	13.8%
<b>Hong Kong SAR</b>	17.5%	6.1%
<b>Turkey</b>	30.0%	-0.2%



# C.D. Howe Institute METRs: Selected Developing Countries

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	<b>2006 GENERAL CIT RATE</b>	<b>METR ON CAPITAL</b>
<b>Congo</b>	38.0%	55.7%
<b>Costa Rica</b>	30.0%	29.7%
<b>Indonesia</b>	30.0%	28.7%
<b>Botswana</b>	25.0%	25.6%
<b>Kenya</b>	30.0%	25.3%
<b>Kazakhstan</b>	30.0%	22.5%
<b>Bolivia</b>	25.0%	22.2%
<b>Malaysia</b>	28.0%	20.3%
<b>Thailand</b>	30.0%	19.1%
<b>Georgia</b>	20.0%	18.2%
<b>Jamaica</b>	33.3%	17.7%
<b>Romania</b>	16.0%	9.3%
<b>Ukraine</b>	25.0%	7.7%

# Tax Incentive Regime: E.G. Namibia

	<b>Manufacturing</b>			
	<b>General (35% CIT rate)</b>	<b>Qualifying (18% CIT rate)</b>	<b>General Exporter (7% CIT rate)</b>	<b>Qualifying Exporter (3.6% CIT rate)</b>
<b>Equipment</b>	7.1%	0.7%	-0.3%	-0.2%
<b>Buildings</b>	22.6%	-1.1%	3.3%	-0.5%
<b>Land</b>	-16.1%	-5.3%	-1.1%	0.0%
<b>Inventories</b>	26.9%	13.0%	4.9%	2.5%
<b>Weighted Average</b>	15.9%	2.7%	1.7%	0.2%

Introduces *intra*-sectoral distortions within manufacturing

# Tax Incentive Regime: E.G. Mozambique

Standard Regime					
	Manufacturing	Tourism	Agriculture	Mining	Finance
Equipment	46%	46%	16%	56%	71%
Buildings	34%	41%	14%	43%	41%
Land	8%	8%	38%	-195%	8%
Inventory	29%	29%	9%	32%	29%
Aggregate	40%	40%	16%	51%	57%

Incentive Regime					
	Manufacturing	Tourism	Agriculture	Mining	Finance
Equipment	2%	-19%	-9%	-4%	61%
Buildings	13%	23%	-2%	7%	30%
Land	8%	8%	43%	-76%	8%
Inventory	29%	29%	2%	24%	29%
Aggregate	11%	16%	6%	5%	46%

Again, introduces *intra*-sectoral distortions

# The incentive regimes are problematic

- Typically NOT motivated by market failures
- Give rise to opportunities for tax arbitrage, transfer pricing, financial transfers and tax evasion
- Puts pressure on the tax base, increases general tax rate – vicious cycle
- Encourages rent seeking (interest group pressure for incentive treatment)
- Increases administrative and compliance costs
- Discretionary incentive regimes open opportunity for corruption and abuse

- **Economic arguments for special treatment are based on very high compliance and administration costs and (possibly) market failures due to credit market imperfections**
- **Focus should be on simplification and bringing small businesses into the tax net**
- **Much more later in the conference**

	VAT REGISTERED	NOT VAT REGISTERED
<b>South Africa</b>		
Large	15.9%	n.a.
0% CIT	0%	33.9%
10% CIT	0.5%	33.9%
29% CIT	5.1%	35.4%
<b>Tanzania</b>		
Large	15.3%	n.a.
1.1% Turnover Tax	6.7%	31.3%
1.3% Turnover Tax	7.6%	31.8%
2.5% Turnover Tax	12.7%	34.8%
3.3% Turnover Tax	15.8%	36.7%
<b>Rwanda</b>		
Large	17.0%	n.a.
30% CIT	17.0%	n.a.
4% Turnover Tax	18.0%	49.0%
<b>Zambia</b>		
Large	5.0%	n.a.
Small	5.0%	22.5%
<b>Namibia</b>		
Large	15.9%	n.a.
Small	15.9%	27.9%
<b>Lesotho</b>		
Large	11.0%	n.a.
Small	11.0%	40.0%
<b>Madagascar</b>		
Large	19.0%	n.a.
Small	19.0%	60.0%
<b>Mauritius</b>		
Large	-25.4%	-25.4%
Small	-25.4%	-25.4%
<b>Mozambique</b>		
Large	40.8%	n.a.
Small	40.8%	73.0%
<b>Sierra Leone</b>		
Large	18.0%	n.a.
Small	n.a.	28.8%

# Best Practices?

- **There is no “best practice” tax and administrative system that should be uniformly applied to all countries.**
- **Local economic conditions, institutional constraints, administrative capacity, culture and history are important factors that must be taken into consideration when designing tax and administrative systems.**

# Best Practices?

- **Internationally, countries differ considerably in the relative size of the government sector and in the specifics of tax policy, thresholds, rates, and administrative practices.**
- **BUT . . . some generalizations are possible.**

- **The general theme: the tax system should not interfere unduly with the allocation of resources in the economy.**
- **The tax system should raise the revenue required to finance government spending in the most neutral, least distortionary manner possible.**
- **With a few exceptions, the tax system should strive to minimize inter-sectoral and inter-asset distortions in the allocation of capital.**

- *Tax rates and instruments (allowances, depreciation, etc.) should be looked at as a package rather than individually.*
- *Targeted tax incentives, such as sectoral, activity or region specific tax rates and/or tax holidays, should be minimized.*
- *Unifying multiple corporate tax rates across sectors, regions and activities should be a high priority item in countries where they exist.*

# Conclusions/Recommendations

- *Special Economic Zones should focus on infrastructure and streamlined customs and export administration, and not as a vehicle for delivering tax incentives.*
- *Tax revenue saved from eliminating targeted incentives should be used to lower the general tax rate – **broad base, low rate.***
- *Further rate reductions should be explored within the context of other revenue raising possibilities, long run growth effects, and the short run mobility of book profits*

- *Tax depreciation systems should be reviewed.*
- *Investment incentives should be delivered by way of accelerated tax depreciation.*
- *Businesses should be allowed to opt for last-in-first-out (LIFO) inventory accounting for tax purposes, so as to eliminate the inflation tax on inventories.*

# Conclusions/Recommendations

- *Mining tax regimes should be reviewed – royalties.*
- *VAT refunds mechanisms don't work efficiently in practice and efforts should be made to make them run smoothly.*
- *VAT thresholds should be relatively high, with opt-in allowed.*

# Conclusions/Recommendations

- *SMEs with sufficient capacity should be subject to a simplified (transitional) VAT regime based on turnover*
- *SMEs should be subject to a special income tax regime – simplified, lower rate, turnover tax with notional taxable profits*
- *Given that SMEs face different challenges and constraints than larger enterprises, the administration of small firms' tax should be separated from that of large enterprises.*
- *SME taxation should be coordinated with licensing and registration systems to minimize compliance costs and maximize compliance.*

# Thank You