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Session 3: Estimating Revenue Foregone

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Introduction

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- Methods

- Focus on technicalities:
  - **Estimating Revenue foregone under the Income Tax**
    - Zoom in on two important issues

    1. A firm's profitability
    2. Timing effects

  - **Ordering, interactions and reporting**

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Methods

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Three methodologies or approaches to measure TEs:

- ***Revenue forgeone***: estimates the amount by which taxpayers have their tax liabilities reduced as a result of a TE based on their actual current economic behavior
- ***Revenue gain***: estimates the additional revenue that would be collected if a TE was removed, accounting for potential behavioral changes resulting from this removal
- ***Outlay equivalent***: estimates the government cash outlay required for an alternative direct spending program replacing the TE that would have the same benefit for the taxpayers - also, assuming no behavioral changes

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- Important to remember that revenue foregone is an **<u>estimate</u>**.
- Many of the calculations bring together data from different parts of government etc., and at times we must rely on assumptions
  - This is the case wherever TE reporting is carried out
- For some, the requisite data does not exist, or it is not captured in an appropriate manner.
- Or modelling might suffer from some limitations
  - Again, this is commonplace.

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Estimating TE under the Income Tax

- Often area where most interest lies – e.g., CIT holidays viewed as harmful / opaque.
- Calculation methods differ from provision to provision
  - Microsimulation model can be useful, but not always necessary
  - Some basic principles are useful and can be applied in most cases

Revenue foregone under the Corporate Income Tax (CIT)

Utilizing data from CIT administrative returns; broadly:

- Step 1: Estimate the tax unit or size of the base on which to estimate revenue foregone **[difficult]**
- Step 2: Multiply by Statutory CIT rate **[easy]**

Income Tax: CIT Holiday

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E.g. (i) a tax holiday:

- Assume **Firm A** received a CIT holiday and sets up manufacturing plant.
- Data required: CIT returns

- The firm's CIT return shows that Chargeable (Taxable) income in FY21/22 was $100m.
- CIT rate = 30%
  - Revenue foregone in FY21/22 = $30m. [$100m * 30% CIT rate]

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Data

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- Different levels of detail help us to better estimate revenue foregone

- Consider the case of a tax deduction that represents a TE. You might have administrative data on:

1. Amount of deduction claimed, in a given year
2. Amount of deduction claimed, **and firms' income position in a given year**
3. Amount of deduction claimed, ***and firms' income position for many years***

- Following example: Show how different levels of detail in the data per (1) (2) (3) lead to difference in a) estimate of revenue foregone and b) timing of revenue foregone

Income Tax: Deductions

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- You have data on:

- **1. Amount of deduction claimed in a given year**
  - E.g. in 2018/19, company claims a tax deduction of $500m
  - Statutory CIT rate is 30%
  - Very basic approximation of revenue foregone would be:

$500m*(30%) = **$150m in 2018/19.**

Income Tax: Deductions

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- **2. You now have data on: Amount of deduction claimed, and firms' income position in a given year**

Consider 3 different firms

	Profit / Loss	Tax deduction	Taxable Income	Tax Liability	Tax liability if deduction did not exist	Revenue Foregone
Firm 1	$1,000m	$500m	$500m	$500m * 30% = **$150m**	$1,000m * 30% = **$300m**	**$150m**

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Timing issues and loss carried forward

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- The ability to carry forward losses is a standard feature of income tax systems and not normally considered as a TE.
  - (Some countries do place restrictions)
- But when calculating the revenue foregone from deductions under the income tax, then an understanding of a firms' loss position ***over time*** is crucial.
- If a TE (such as a deduction) brings the firm into a tax loss position, then the effect of this could take some years to 'wash out' and thus revenue foregone is spread out over a number of years.

Timing issues and loss carried forward

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- $500m deduction in the year FY18/19
- For this, and each of the subsequent years, firm makes a taxable profit of +$250m, but makes no further investments that qualify for a deduction.
- Assume asset not depreciable (unrealistic!).
- **You have data on the firms' income position over time**

[1]	[2]	[3]	[4]	[5]	[6]	[7]	[8]	[9]
Financial Year	Loss from previous year	Profit / Loss	Deduction	Taxable income [3] – [4]	CIT paid	Taxable income if no deduction in FY18/19	Revenue Foregone (30% of Taxable Income)	Loss carried forward

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Timing issues and loss carried forward

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- In this hypothetical scenario, revenue foregone from a deduction taken in FY18/19 is spread across two financial years.

- **Over two years, the total TE is $150m** (75m in each year)
  - *If we had just looked at the year in which the deduction takes place, we would have only counted $75m in 2018/19, and nothing in subsequent years*

- Thus, both issues of a firm's profitability and loss-making position can affect how much – and when – revenue foregone is reported.

- We made simplifying assumptions – in reality this is more complex.

- It might not be possible to fully incorporate this: a lot of data required.

Ordering, interactions and reporting: Two TEs

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- Consider an import, worth \$100 (CIF value)
- Customs Duty is levied at 25% (on CIF value) = \$25
- VAT is levied at 20% (on CIF value + Customs Duty) = (\$125*20%) = \$25

Under Benchmark System:

\$100 + (25%) = \$125

+ (20%) = **\$150**

Gov't would collect \$25 in customs and \$25 in VAT

How would we calculate revenue foregone if this item was (i) customs exempt (ii) VAT exempt or (iii) both?

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Ordering, interactions and reporting: Two TEs

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(i) What if item was customs exempt (with VAT at 20%)?

How to calculate revenue foregone?

- If no Customs duty, then current VAT collections = $100*20% = $20
- Recall: Customs duty forms part of the VAT base
- So, revenue foregone from customs exemption (vs. benchmark) is 25% of $100 =($25)
- **+** there is a "knock on" effect on VAT base
  - Simply additional 20% of that $25 = $5
- $30 ($25 + $5) revenue foregone in total arising from the customs exemption

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Ordering, interactions and reporting

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- **(ii) What if item was only VAT exempt?**

$100 + (25%) = $125

+ (20%) = **$150**

- Recall: comparing with the benchmark system
- Revenue foregone from the VAT exemption is 20% of CIF + Customs ($125) = **$25**

- **(iii) What if it was both VAT and customs exempt?**

- Revenue foregone from both provisions..?
  - $30 + $25 = $55

Ordering, interactions and reporting

- We found:
  - $30 revenue foregone from the customs exemption vs Benchmark
  - $25 revenue foregone from the VAT exemption vs Benchmark
- *In isolation* these statements / calculations are correct.
- But you cannot add these and say that total revenue foregone from both provisions is $55.
  - Many TE reports do not include a 'total' revenue foregone figure for this reason (amongst others)
- With T.E.s that interact, calculating both vs. benchmark system then summing might lead to misleading estimates.
  - Ordering and method chosen is also important.

Concluding Remarks

- Revenue foregone the most common method of computing Tax Expenditures

- Under the Corporate Income Tax, holidays and deductions are common TEs.

- We highlighted how differing levels of detail in data can affect *how much* and *when* revenue foregone is reported.
  - Firm profitability
  - Timing effects & loss carried forward

- When TEs interact, the order in which you do the calculation matters: estimating both separately and summing can be misleading!

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Annex: multiple TEs

”Alternative Approach” : Calculates RF

(BM Customs Duty – Actual Customs Duty) + (BM VAT – Actual VAT)

($25 - $0) + ($25 – 0)