

Evaluating the Methodology for Implicit Tax Rate on Capital: Analysis of Alternative Approaches and Key Methodological Insights

SUMMARY

The Implicit Tax Rate on Capital (ITR) remains a vital tool for understanding capital taxation and comparing international tax regimes. However, economic cycles can create discrepancies between tax revenues and capital income, while certain forms of wealth, such as capital gains, may not always be included in the denominator of the ITR. This results in an incomplete representation of the overall tax burden on capital. To maintain the ITR's relevance, continuous refinement is necessary, particularly in improving the capture of capital gains and mitigating the impact of economic fluctuations. By refining the ITR methodology, it is possible to better align it with actual tax practices, leading to more precise assessments of the capital tax burden and providing a clearer understanding of international tax competitiveness.

As part of **Activity 3.1**, comprehensive methodological support was provided for the calculation of the ITR on capital, following the approaches detailed in the 2022 Taxation Trends Report (pages 49-55) and the corresponding methodological notes (pages 304-315). Both traditional and alternative methods of calculating the ITR were thoroughly evaluated. Several improvements and alternative approaches were proposed, focusing on key methodological aspects such as data accuracy, resolving inconsistencies across data sources, and ensuring that tax rates better reflect real-world capital income practices. The implicit tax rates for the reference year 2022 were successfully computed using the most up-to-date data available, offering valuable insights into the tax burdens on capital across the European Union.

Activity 3.2 involved a detailed ex-post assessment aimed at critically evaluating both the statistical precision and the economic significance of the different approaches to ITR calculation. A comprehensive comparison was made between the advantages and disadvantages of each method—both traditional and alternative—focusing on their effectiveness in accurately capturing the true tax burden on capital. As a result of this assessment, targeted improvements to the methodological notes were identified and recommended, ensuring that future ITR calculations adopt the most accurate, reliable, and comprehensive approach available.

Assessment of the Implicit Tax Rate on Capital (ITRc) and the Implicit Tax Rate on Capital Income (ITRc_income)

ITRc and ITRc_income offer two different approaches to measuring the tax burden on capital, each with distinct advantages and limitations. The primary difference lies in the treatment of wealth taxes, which are included in ITRc but excluded in ITRc_income. This distinction has significant implications for how each measure reflects the real tax environment for capital income versus wealth.

Advantages of ITRc

- **Comprehensive Scope:** ITRc captures all capital-related taxes, including wealth taxes (such as property and inheritance taxes), providing a more complete picture of the total tax burden on capital. This is especially useful in countries where wealth taxes constitute a large portion of public revenues.
- **Reflects Redistribution Efforts:** By including wealth taxes, ITRc better represents the redistributive aspects of tax policy, which are key in countries focused on addressing economic inequality.

- **Full Tax Burden on Capital:** ITRc accounts for both capital income and the ownership of capital assets, making it more comprehensive, particularly in countries with high property taxes.

Disadvantages of ITRc

- **Volatility:** Wealth taxes are often based on asset values, which fluctuate with property markets and broader economic conditions. This introduces volatility into the ITRc, making it less stable as a measure of capital taxation.
- **Potential Overstatement:** Including wealth taxes may exaggerate the perceived tax burden on productive capital (profits, dividends, interest) by conflating asset ownership with income generation. This could mislead policymakers or investors regarding the true economic environment.
- **Cross-Country Comparisons:** ITRc may distort comparisons between countries with high wealth taxes and those without. Countries like France or Spain, which rely heavily on property taxes, might appear to have a disproportionately high capital tax burden relative to their actual taxes on capital income.

Advantages of ITRc_income

- **Focused on Productive Capital:** By excluding wealth taxes, ITRc_income offers a clearer and more accurate measure of how taxation affects income-generating capital, such as corporate profits and dividends. This approach provides a better reflection of the tax burden that directly influences investment and business behavior.
- **Stability:** Without the volatility caused by fluctuating asset prices, ITRc_income is a more stable and predictable measure, making it ideal for year-on-year comparisons and long-term policy analysis.
- **Improved Cross-Country Comparability:** ITRc_income provides a more uniform basis for comparing the tax burden on capital income across different countries, as it avoids the distortions caused by varying wealth tax structures.

Disadvantages of ITRc_income

- **Incomplete Representation:** By excluding wealth taxes, ITRc_income may not fully capture the total tax burden on capital, particularly in economies where property taxes play a significant role.
- **Neglects Redistributive Policies:** The exclusion of wealth taxes means ITRc_income does not reflect the broader social goals of wealth redistribution, which are critical in many European welfare states. This could limit the measure's relevance in evaluating progressive tax policies.

Decision-Making Factors

The choice between ITRc and ITRc_income depends on the specific context and objectives of the analysis:

- **When to Use ITRc:** ITRc is preferable when the goal is to understand the full tax burden on capital, including both income-generating assets and wealth. This is especially relevant in countries with high property taxes or where wealth taxes are used to address inequality.
- **When to Use ITRc_income:** ITRc_income is more suitable for analyses focused on productive capital, particularly when stability and investment analysis are key concerns. It is ideal for understanding how tax policies affect capital allocation and economic growth, without the distortion of wealth taxes.

In conclusion, while ITRc provides a more comprehensive view of capital taxation, ITRc_income offers greater precision for assessing the tax burden on productive capital, making it the more stable and comparable measure for investment-related decisions.

Constructional Shortcomings and Methodological Issues of ITRc and ITRc_income

Both ITRc and ITRc_income have methodological shortcomings that affect their accuracy in measuring the true tax burden on capital. The primary issue with **ITRc** is the mismatch between the taxes included in the numerator and the inadequate representation of capital stock in the denominator (CAPbase). Specifically, taxes on wealth, like property taxes, are included in the numerator, but the full value of the corresponding assets, such as real estate, is not fully captured in the denominator. This results in an overstatement of the tax burden on capital, particularly in countries with substantial property taxation.

Key issues:

- **Inadequate CAPbase:** The value of real estate and other capital stock is not fully reflected, leading to a distorted view of capital taxation.
- **Imputed Rent Mismatch:** Imputed rents, used as a proxy for property value, do not capture actual income, further deflating the denominator and overstating the ITRc_Income.

Wealth Taxes to Exclude

Certain wealth taxes, such as **property taxes on primary residences** and **inheritance taxes**, should be excluded from ITRc. These do not directly relate to productive capital and can distort the measurement of the true tax burden on income-generating assets.

Wealth Taxes to Include:

Wealth taxes tied to productive assets, such as **commercial real estate** and **financial assets** (stocks, bonds), should be included in the ITRc, as they reflect the taxation of capital that actively contributes to economic output.

ITRc_income as a More Accurate Measure

ITRc_income addresses some of these issues by excluding wealth taxes, providing a clearer focus on the taxation of productive capital. However, this approach may understate the overall tax burden on capital by ignoring wealth taxes that contribute to wealth distribution and capital accumulation. However, it is necessary to reconsider the denominators of ITRc_income (see below).

To improve the accuracy of ITRc, it is crucial to refine the tax base to better reflect the value of income-generating assets while excluding taxes on non-productive assets. For a more focused analysis of productive capital, ITRc_income is preferable, though it may miss broader considerations like wealth inequality. Balancing these approaches depends on the specific policy goals—whether measuring the full burden on capital or focusing on investment behavior.

ITRc_income Denominator Inconsistency

The key issue with ITRc_income lies in the inconsistency between its numerator and denominator. While wealth taxes are excluded from the numerator, elements like imputed rents, which are not actual income, but hypothetical values tied to property ownership, remain in the denominator. This mismatch distorts the measure, as the denominator includes non-productive wealth elements, while the numerator focuses only on productive capital income.

To maintain consistency, the denominator should be adjusted to exclude imputed rents and other non-productive elements, leaving only actual income flows like corporate profits, dividends, and realized rental income from commercial real estate. This adjustment would more accurately reflect the true tax burden on productive capital.

It is worth pointing out that there are difficulties in separating imputed rent from net mixed income in the national accounts (B2A3N S14_S15). This can be particularly problematic in countries with a high share of owner-occupied housing, such as the Czech Republic, Poland

and Croatia, where these elements form a significant part of the CAPbase. The inability to disaggregate these components complicates the analysis.

The disparity between ITRc and ITRc_income is most evident in countries like France, Belgium, and Portugal, where wealth taxes significantly contribute to public revenue. This gap underscores a misalignment between the CAPbase and income-generating capital, leading to volatility in tax revenues due to property market fluctuations.

Significant Differences Between ITRc and ITR_income Across Countries

Countries like France, Spain, Italy, and Portugal show notable differences between ITR and ITR_income, primarily due to the large proportion (35-40%) of capital tax revenue derived from wealth taxes, especially property taxes. However, it is often unclear from tax records whether these revenues come from commercial properties, which contribute to productive capital, or from personal properties, representing wealth ownership.

This raises the issue of whether excluding all wealth-related components from the ITRc calculation is appropriate.

Assessment of the Implicit Tax Rate on Corporate Income: Traditional vs. No Dividends Version

The Implicit Tax Rate (ITRc) on corporate income plays a pivotal role in understanding the tax burden on corporate profits, which directly impacts investment decisions and economic growth. Corporations are central to capital allocation, job creation, and innovation, making the tax treatment of their income crucial for assessing economic competitiveness.

Traditional ITRc on corporate income includes taxes on all corporate income, including dividends. This provides a broad view of the total tax burden but may obscure the true cost of capital reinvestment since dividends are often subject to separate taxation policies, such as exemptions under the EU's parent-subsidiary directive.

No Dividends ITRc on corporate income excludes dividends from the calculation, focusing solely on taxes imposed on retained earnings and reinvested profits. This version highlights the tax burden on profits that are crucial for long-term business growth, allowing for a clearer picture of how taxation affects capital reinvestment and corporate sustainability.

Both approaches provide insights:

- **Traditional ITRc** on corporate income offers a comprehensive view of the tax burden but may overstate the impact on corporate reinvestment due to the inclusion of dividends.
- **No Dividends ITRc** on corporate income provides a sharper focus on the taxation of reinvested earnings, offering a more relevant measure for assessing the impact on corporate growth and sustainability.

Ultimately, analyzing both methods is essential for understanding corporate tax policy and making informed decisions about the investment climate in different jurisdictions.

Traditional Version of the ITRc on Corporate Income

Advantages

- **Comprehensive Coverage:** Reflects a wide range of corporate income, including dividends, providing an expansive view of the corporate tax burden.
- **Alignment with National Accounts:** Including dividends simplifies the calculation and aligns with national reporting standards, aiding cross-country comparisons.
- **Simplicity:** The inclusion of dividends reduces the need for exclusions, lowering the risk of calculation errors.

Disadvantages

- **Dividend Distortions:** The inclusion of dividends, especially under EU exemptions, can distort the real tax burden by either inflating or deflating the perceived tax base.
- **Reduced Accuracy:** The variable treatment of dividends across jurisdictions can lead to an inaccurate reflection of taxable corporate income, complicating cross-country comparisons.

No Dividends Version of the ITRc on Corporate Income

Advantages:

- **Greater Precision:** By excluding dividends, this version minimizes distortions, offering a more accurate reflection of the tax burden on reinvested earnings and operational income.
- **Policy Alignment:** It aligns better with tax systems that exempt dividends from corporate taxes (e.g., the EU Parent-Subsidiary Directive), providing a true measure of the tax burden.
- **Enhanced Comparability:** This version improves comparisons across firms by focusing on taxable income that is more consistent than dividend distributions.

Disadvantages:

- **Reduced Scope:** Excluding dividends may underestimate the tax burden for corporations that heavily rely on dividend income, especially in sectors where dividends are a major income source.
- **Complexity of data collection:** The exclusion of net operating surplus and property income when dividends are excluded may cause data collection problems, leading to potential inconsistencies in analyses between countries (especially if capital gains are not sufficiently captured).

Impact of Dividend Taxation on Corporate Capital Allocation

The role of dividend taxation is critical in shaping corporate capital allocation and behavior, influencing both reinvestment strategies and dividend payout policies. The inclusion or exclusion of dividends in the ITRc on corporate income significantly alters the interpretation of the corporate tax burden, particularly in systems with varying tax treatments, such as under the EU Parent-Subsidiary Directive.

Impact of Taxed Dividends on Capital Allocation:

- **Capital Misallocations:** When dividends are taxed, firms may reinvest profits into less optimal projects to avoid the cost of distributing profits to shareholders. This can result in inefficient capital allocation, as managers prioritize reinvestment over payouts to shareholders.
- **Influence on Dividend Policy:** Heavily taxed dividends can motivate firms to adjust their payout strategies to minimize the overall tax burden, potentially leading to strategic timing of distributions to mitigate triple taxation (profits, dividends, and capital gains).

By including dividends in the traditional ITRc, analysts gain a holistic view of how taxation influences corporate financial strategies, shedding light on the interplay between tax incentives and corporate behavior. Unfortunately, it is difficult to capture in the national accounts which dividend flows are taxed and which are exempt from tax.

Impact of Exempt Dividends on Capital Allocation:

- **Neutrality in Capital Allocation:** In cases where dividends are exempt from taxation, firms can allocate capital based on investment returns without tax considerations distorting their decisions. This leads to more efficient capital allocation across high-return projects.

- **Implications for ITR Calculations:** Excluding dividends from the ITRc in this scenario aligns with the goal of avoiding double taxation. It provides a clearer view of the tax burden on reinvested earnings and operational income, reflecting the real impact on corporate profitability and reinvestment capacity.

Choosing Between the Traditional and No Dividends Versions of ITRc on Corporate Income

The decision to use the traditional or no dividends version of the ITRc on corporate income depends on specific policy objectives and data requirements.

Key Considerations:

- **Policy Alignment:** The no dividends version better reflects corporate taxation practices but may miss insights on how dividend taxation impacts capital allocation.
- **Comprehensive View:** The traditional version offers a broader picture but risks distortion from dividend exemptions.
- **Capital Gains:** Both versions are methodologically sound, but the lack of inclusion of capital gains in the denominator is a potential issue, leading to an underestimation of the taxable base.

Ultimately, the choice between versions hinges on whether the goal is to capture the full income base, including dividends, or to focus on the core taxable corporate income. Each version serves different analytical purposes, depending on the desired depth of analysis and alignment with tax policies.

Difference in ITRc on Corporate Income by Country

Significant differences between the traditional ITRc on corporate income and the no-dividends version are evident in countries like **France, Cyprus, the Netherlands, and Luxembourg**. These differences arise from the relative importance of dividends in these countries' corporate income, affecting the interpretation of their tax burdens.

- **France:** The high volume of dividends paid and received by French multinational corporations heavily influences the traditional ITRc on corporate income. This reliance on dividend flows, especially from foreign subsidiaries, creates a substantial difference between the traditional and no-dividends versions.
- **Netherlands:** As a key jurisdiction for holding companies, the Netherlands receives substantial dividend income due to its favorable tax treaties. The traditional ITRc on corporate income reflects these large dividend flows, while the no-dividends version narrows the taxable base significantly.
- **Cyprus:** Known for its low-tax environment, Cyprus attracts holding companies, leading to large dividend inflows. Excluding dividends from the ITRc on corporate income results in a sharp reduction in the taxable base, demonstrating the country's dependence on dividend income.

Impact of Excluding Dividends

Excluding dividends from the ITRc calculation results in a narrower taxable base for countries where dividends play a significant role in corporate taxation. This distinction is especially important for financial hubs, where dividend flows form a major part of corporate financial transactions. The traditional version, which includes dividends, captures these flows, while the no-dividends version provides a clearer view of the tax burden on operational and reinvested income. This again underlines the importance of capturing capital gains more accurately.

Luxembourg's Negative ITRc on Corporate Income (No Dividends Version)

Luxembourg's negative ITRc on corporate income in the no-dividends version highlights the country's reliance on dividend flows as a major component of its corporate income base.

This situation arises from Luxembourg's favorable tax policies, which incentivize the distribution of dividends through structures like SOPARFI (Société de Participations Financières) and its extensive network of double taxation treaties (DTTs). When dividends are excluded, the capital base becomes negative, reflecting the limited contribution of other income components, such as net operating surplus or property income.

Implications of a Negative ITRc

A negative ITRc occurs when the numerator (tax revenue) is positive, but the denominator (capital base) becomes negative due to the exclusion of dividends. This situation is a mathematical artifact reflecting a mismatch between positive tax revenues and a diminished corporate base. It indicates a need for better alignment between the taxable base and the actual sources of tax revenues, especially in countries with significant cross-border dividend flows. Without methodological refinements, such results can distort cross-country comparisons and mislead policy analysis.

Net Operating Surplus as a Possible Solution for ITRc on Corporate Income

A potential approach to simplify the calculation of the ITRc on corporate income is to focus solely on Net Operating Surplus (NOS). NOS represents the income generated from a company's core operations after deducting operating expenses, but before considering interest, taxes, and non-operating income like dividends or interest received. By focusing on NOS, the calculation centers on a company's core profitability, which forms the foundation of taxable income in most tax systems.

Advantages

- **Focused Measure of Taxable Income:** NOS provides a direct reflection of a company's operational profitability, offering a clearer view of the tax burden on productive activities.
- **Reduces Distortions from Dividends and Interest:** Excluding dividends and interest—which are often treated preferentially—results in a cleaner analysis of the true tax burden on operating income.
- **Alignment with Corporate Decision-Making:** Corporations make strategic decisions (reinvestment, hiring) based on operating profits, so a tax-to-NOS ratio more accurately reflects the tax burden impacting those decisions.
- **Improved Cross-Country Comparability:** NOS is less affected by specific country factors like holding structures and cross-border dividend flows, leading to more consistent comparisons of corporate tax burdens between countries.

Disadvantages

- **Excludes Other Relevant Income:** NOS ignores significant sources of income, such as dividends, interest, and capital gains, which are crucial for sectors like finance.
- **Overlooks Impact of Dividend and Interest Tax Policies:** Excluding dividends and interest may miss how preferential tax policies affect overall tax revenue and corporate behavior.
- **May Not Capture the Full Corporate Tax Base:** Many corporations derive significant income from financial activities, so focusing solely on NOS could underrepresent the true tax burden in sectors like banking or investment.
- **Potential Misalignment with National Accounting Standards:** National accounts often include a broader range of income sources. Excluding these could create gaps between standard fiscal analysis and the NOS-focused approach.

Country-Specific Observations

- **Minimal Differences in Central and Eastern Europe:** Countries like the Czech Republic, Slovakia, and Poland, where dividends and interest play a smaller role, show minimal differences between the traditional, no-dividends, and NOS-based ITRc on corporate income versions.

- **Notable Differences in France, Cyprus, and the Netherlands:** These countries have significant dividend and interest flows, leading to slightly lower results in the NOS-based version compared to the no-dividends version.
- **Luxembourg's Positive ITRc (NOS Version):** Luxembourg is unique in that its NOS-based ITRc on corporate income shows positive results, primarily due to the removal of insurance/interest-related expenses that had excessively reduced the tax base in the other versions.

While using NOS as the basis for ITRc on corporate income provides a cleaner and more targeted view of the tax burden on operational income, it may overlook significant income sources, especially in financial sectors. This approach is useful for specific analyses but may not fully capture the complexity of corporate income, particularly where dividends and interest play a significant role. Sectors where NOS is not the primary income source should be analyzed separately if this method is adopted.

Evaluating the Most Effective ITRc on Corporate Income Methodology: Dividend Flows, Capital Gains, and Cross-Border Complexities

When determining the most suitable version of the Implicit Tax Rate on corporate income (ITRc), one must consider the financial structures of different countries. The three versions—**traditional ITRc**, **no-dividends ITRc**, and **Net Operating Surplus** on corporate income—each have their advantages and limitations, depending on the role of dividends, capital gains, and cross-border financial flows.

In countries like **Luxembourg, France, Cyprus, and the Netherlands**, where dividends and interest play a significant role, the traditional ITRc on corporate income is problematic. Dividend income, especially from cross-border flows, is often tax-exempt under EU rules like the **Parent-Subsidiary Directive**, leading to a mismatch between the tax revenues (numerator) and the inflated corporate income base (denominator). This results in an artificially low tax rate, which misrepresents the true corporate tax burden in financial hubs where dividends are a large part of income but are not taxed.

The **no-dividends version** corrects this distortion by excluding dividends from the denominator, offering a clearer view of the tax burden on taxable corporate income. However, in countries where dividends are a critical part of the corporate income structure, omitting them may overlook important insights into capital allocation strategies, which are essential for understanding the broader corporate tax environment.

The **NOS version** focuses on a company's core operational profitability, providing a simpler and more consistent way to compare corporate tax burdens across countries, especially in economies with less reliance on dividends and interest. However, in financial centers like Luxembourg, where financial flows are complex, the NOS version may overestimate the tax burden by excluding key financial components that are integral to understanding corporate taxation.

The under-capture of **capital gains** is a major oversight in all versions. Capital gains are an essential component of corporate profitability and wealth accumulation, yet they are often under-reported or under-taxed in national accounts. This omission leads to an underestimation of the effective tax burden, especially in countries where capital gains constitute a significant part of corporate income.

The choice of the most appropriate ITRc on corporate income methodology depends largely on the financial structure of the country. Countries with significant dividend and interest flows may benefit from a differentiated approach or a combination of elements from different versions to capture more accurately the corporate tax burden. In addition, addressing the adequate capture of capital gains is essential to develop a comprehensive measure of corporate taxation. Without these adjustments, the ITRc on corporate income risks oversimplifying complex financial structures, which may lead to misleading policy decisions regarding corporate taxation.

Challenges Associated with Conceptual Flaws in the ITRc Methodology

Several conceptual and methodological challenges emerge when calculating the Implicit Tax Rate on capital. While some issues, such as the treatment of imputed rents, may have a limited quantitative impact, **the most critical challenge is the omission of capital gains**, which significantly skews the representation of the true capital base. This leads to an underestimation of the effective tax burden on capital, particularly in cross-country comparisons.

Key Challenges in ITRc Methodology

1. Depreciation of Fixed Capital (CFC)

One of the methodological hurdles in ITRc is addressing the depreciation of fixed capital, or **Consumption of Fixed Capital (CFC)**. National Accounts (NA) apply depreciation at current prices, differing from tax accounting, which uses various depreciation methods, such as accelerated or straight-line depreciation. These variations lead to discrepancies between the economic depreciation captured in NA and the actual tax burden from national tax regimes.

- **Depreciation Methods and Periods:** Varying depreciation rules across countries—especially the treatment of assets like buildings, machinery, or intangibles—complicate cross-country ITRc comparability. Differences in tax accounting (e.g., accelerated depreciation) and the absence of detailed asset-specific data in NA add further complexity.
- **Mismatch Between National Accounts and Tax Accounting:** This issue stems from different asset valuation approaches and tax policies in each country. NA uses market valuations, while tax accounting follows historical cost or other methods. This discrepancy prevents the accurate capture of country-specific tax burdens on capital in the ITRc calculation.

2. Corporate Tax Deferrals and Group Taxation

Corporate tax deferrals and group taxation mechanisms introduce cyclical mismatches between taxable income and tax revenue, affecting the reliability of ITRc across countries.

- **Tax Deferrals and Loss Carryforwards:** In times of economic downturns, tax deferrals (such as loss carryforwards) allow businesses to reduce taxable income in future periods. This leads to **temporal misalignments**, where tax revenues remain low during recovery phases despite increased taxable income.
- **Group Taxation:** In countries allowing group taxation, profits and losses across subsidiaries can be consolidated, reducing taxable income volatility. This further complicates ITRc comparisons across countries, particularly those with different group taxation or deferral policies.

3. Inclusion of Imputed Rents

The inclusion of imputed rents—hypothetical income generated by owner-occupied housing—in NA but not in national tax systems poses another challenge. These untaxed rents inflate the capital base without generating corresponding tax revenues, leading to **underestimation of the effective tax burden** on capital.

- **National Accounts vs. Tax System:** Imputed rents in NA reflect housing services provided to homeowners, yet these are untaxed under most tax systems. Including imputed rents in the ITRc denominator results in an inaccurate reflection of the actual tax burden on productive capital.

Challenges in Different Methods Across Countries in ITRc Methodology

The variation in methods used by countries to estimate fixed capital stock, depreciation, and imputed rents presents conceptual challenges in calculating the Implicit Tax Rate

on capital. However, these differences do not undermine the core function of ITRc. Instead, they may serve as a reflection of each country's unique tax policy structure and economic priorities. Far from limiting its utility, these variations enrich the ITRc by highlighting structural nuances and policy choices within national tax systems, making cross-country comparisons more meaningful and informative.

Key Points on the ITRc Methodology's Strengths

- **Diversity in National Accounting Practices:** Differences in estimating fixed capital stock and depreciation across countries provide insights into how each nation manages and encourages capital investments. For instance, countries that apply accelerated depreciation tend to show lower ITRc values, signaling tax incentives for investment in productive assets. These differences add depth to ITRc as a tool, showing not only tax burdens but also reflecting each country's economic priorities.
- **Insight into Structural Tax Policy:** The ITRc captures more than just effective tax rates. It reflects the tax structure of each country, offering a benchmark for understanding tax policy beyond headline rates. Countries with tax incentives in place, such as those with favorable depreciation regimes or imputed rent exclusions, reveal the government's approach to stimulating investment or supporting specific sectors. This gives policymakers and analysts a comprehensive view of the tax environment that extends beyond surface-level tax rates.
- **Complementary Role of Other Metrics:** The Effective Average Tax Rate (EATR) and Effective Marginal Tax Rate (EMTR) are valuable supplements to ITRc, providing insights into corporate tax burdens and investment incentives. These metrics, focused on corporate taxation, are particularly relevant for investors interested in the investment climate and capital return incentives. When used alongside ITRc, EATR and EMTR enrich the overall understanding of how tax policies impact corporate behavior and capital allocation.

The ITRc's sensitivity to variations in national accounting practices might be a strength rather than a limitation. It not only captures the tax burden on capital but also reflects each country's tax policy structure, making it a relative indicator of effective capital taxation. This multidimensional perspective allows for nuanced cross-country comparisons and offers valuable insights into how different tax systems align with national economic goals. Rather than striving for strict uniformity, embracing these variations enhances ITRc's relevance as a comparative indicator in the global tax landscape. It therefore depends on the angle of view on how to approach the above challenges.

4. Omission of Capital Gains

The **non-inclusion of realized capital gains** remains a major flaw in ITRc methodology. Capital gains represent a key portion of corporate profitability, but NA often records only part of gains, resulting in an **incomplete tax base**.

- **Lack of Realized Capital Gains Data:** Current NA frameworks, such as the Revaluation Account, capture unrealized gains but not taxable events that occur upon realization, making it difficult to align tax revenues with the capital base accurately.

5. Impact of Central Banks' Non-Taxable Profits

Profits from central banks are non-taxable and aggregated within the financial corporate sector in NA. This distorts the ITRc calculation by inflating the denominator with income that is not subject to taxation.

- **Limited Quantitative Impact:** Although central banks' profits can affect the calculation, their overall contribution to the financial sector's net operating surplus is relatively small (approximately 5% of the capital base). Still, **excluding central bank profits** would improve accuracy in countries where these profits are significant.

6. Handling of Self-Employed and Household Interest Payments

Interest payments made by households and self-employed individuals are aggregated in NA, making it difficult to separate personal interest (non-taxable) from business-related interest (tax-deductible). This can lead to **overestimation of the tax base**, as non-deductible personal interest is included.

- **Potential Solutions:** To improve accuracy, national data on self-employed business-related interest should be collected separately, or **proxy indicators** could be used to estimate business-related interest.

7. Third-Pillar Private Pension Benefits

Private pension benefits (third-pillar pensions) are not consistently recorded as capital income in NA. This leads to their exclusion from the ITRc denominator, potentially inflating the ITRc.

- **Potential Solutions:** National tax authorities could provide data on private pension distributions to improve the accuracy of the ITRc. Alternatively, **adjustments based on estimates** of pension benefits as a share of capital income could mitigate the problem.

8. Opportunities and Limitations in Smoothing ITRc Data

While both tax revenues and the capital base are subject to economic cycles, their volatility can differ across countries, making consistent smoothing essential. **Moving averages, seasonal adjustments, and trend-cycle decomposition** can help address short-term volatility, but these techniques must be tailored to reflect each country's unique economic dynamics. The analysis of cyclical fluctuations therefore requires more scrutiny. It is also worth taking into account that it will always be a decomposition within a time series.

The ITRc methodology faces several conceptual and methodological challenges, particularly in reflecting capital gains, handling tax deferrals, and aligning national accounting with tax systems. While certain adjustments can improve accuracy, many of the inherent complexities, such as differences in depreciation regimes or the treatment of imputed rents, require more granular national data to achieve accurate cross-country comparisons, or may not be seen as a necessary bias but rather as an advantage for the ITRc interpretation.