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Analysis in Brief

Extensions of indicators on base erosion and profit shifting in Canada

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Extensions of indicators on base erosion and profit shifting in Canada

by **Bala Vasudevan**

Introduction

According to the Organisation for Economic Co-operation and Development (OECD), base erosion and profit shifting (BEPS) refers to tax planning strategies that take advantage of gaps and mismatches in tax rules to artificially shift profits of corporations to locations where economic activity is less prevalent (OECD n.d.-b).

Such strategies can make use of deductible payments such as interest or royalties; while legal, they are detrimental to government revenues worldwide (OECD 2015a).

To address this, the OECD established the Inclusive Framework on Base Erosion and Profit Shifting in 2015. This initiative is a multilateral association with over 130 member countries, including Canada, and seeks to implement 15 action items addressing tax planning strategies aimed at artificially lowering a corporation's taxable income. Action Item 11 of the Inclusive Framework suggests an outline for developing indicators to identify such behaviour within an economy.

A previous Statistics Canada publication (Fortier-Labonté and Schaffter 2019) used form T1134 -Information Return Relating to Controlled and Non-Controlled Foreign Affiliates to propose indicators for BEPS.

This paper uses data from the Canada Revenue Agency's form RC4649 Country-by-Country Report to extend on the proposed indicators. Section 1 elaborates on the data source used in this paper. Section 2 proposes extensions to previous indicators using data from the Country-by-Country Report. Section 3 concludes by highlighting where multinational enterprises filing this report in Canada tend to base their various group functions. The paper concludes with directions for further research.

Section 1: Data source

Globalization fosters proliferation of complex entity groups to manage supply chains and opens the door to accounting strategies that can minimize taxes payable. There are growing concerns that these types of tax-minimizing strategies pose fairness concerns and should be measured.

The mandate to file the RC4649 Country-by-Country Report stems from the Inclusive Framework initiative and requires multinational enterprises (MNEs) to report cumulative figures for activities of all their foreign affiliates in each country where they have operations.¹ It is to be filed by MNEs whose ultimate parent entity is a resident of Canada, and who earned in excess of €750 million in global consolidated revenues in the prior fiscal year.²

The stated objective of collecting this information is to enhance transparency and provide tax administrations with adequate information on the activities of MNEs to conduct transfer pricing risk assessments to address base erosion and profit shifting (BEPS, 2015b).

Since 2016, Canada has been a signatory to the Multilateral Competent Authority Agreement. This agreement requires the Canada Revenue Agency to collect this report from Canadian filers, and share these data among tax administrations of countries with whom Canada has active exchange relationships.³

For the 2016 tax year, there were a total of 223 unique MNEs that filed the Country-by-Country Report with the Canada Revenue Agency, and they controlled 26,527 affiliates. The enterprises that reported in the 2016 tax year span a variety of industries, including mining, oil and gas extraction, and management of companies.

1. The values reported for each country contain information on the activities within that country, along with the activity of any foreign branches that are owned by affiliates in that country. For example, if CanadaCo—a Canadian affiliate of an MNE—owns a foreign branch in Spain, the operations of that Spanish branch would be included in the reporting for Canada. Legally, foreign branches are not considered separate legal entities (OECD n.d.-a).
2. There are other criteria, which, if satisfied, would mandate the filing of this report with the Canada Revenue Agency. They are not discussed here.
3. Additional information on the Country-by-Country Report can be found at canada.ca/en/revenue-agency/services/forms-publications/publications/rc4651/guidance-on-country-country-reporting-canada.html.

This study assumes that, for the MNEs that do report, the data provided are complete and that information is not selectively omitted.

In the analysis of BEPS, it is important to note that the focus is on transactions taking place within an enterprise group; these are affiliated legal entities of the same enterprise that are trading goods and services across international borders. This differs from studying data from financial reporting, which present information on the performance of the corporation in transactions with non-affiliates.

Statistics Canada has already published a first analytical paper by Fortier-Labonté and Schaffter (2019) that applies the framework developed by the Organisation for Economic Co-operation and Development. This study expands on these indicators with this new source of data.

Section 2: Extensions to previously developed indicators

Disconnect between financial and real economic activity

Discrepancies between financial and real economic activity within a country can be a sign of base erosion and profit shifting (BEPS). The following indicator relies on data from the Country-by-Country Report, aggregated to the country level.

Indicator: Mismatches between proportions of revenues earned by related parties in countries with favourable corporate income tax rates

Certain countries are hubs for certain types of activities. For example, Canada is a hub for resource-extraction activity. A country's ability to attract foreign investment and business is influenced by a variety of framework characteristics, such as the jurisdictions' legal and regulatory environment, political stability, the predictability and reliability of law enforcement, and the tax system (OECD 2007). An asymmetry between these framework characteristics and actual foreign investment might allude to the existence of artificial transactions, which are meant to reduce the corporation's taxes payable, or BEPS.

This indicator aims to understand where MNEs with operations in Canada are earning the most revenue from transactions with related parties.

The existence of related-party transactions is not indicative of BEPS by itself. However, large proportions of such revenues earned in a country with a smaller economy could suggest that enterprises are engaging in BEPS. One measure of economic activity could be the number of employees that MNEs have employed in each tax jurisdiction. Data from the Country-by-Country Report suggest that MNEs are engaging fewer employees in tax-favourable countries, while the proportion of revenue reflected in the same countries is largely from transactions with related-parties, or foreign affiliates.

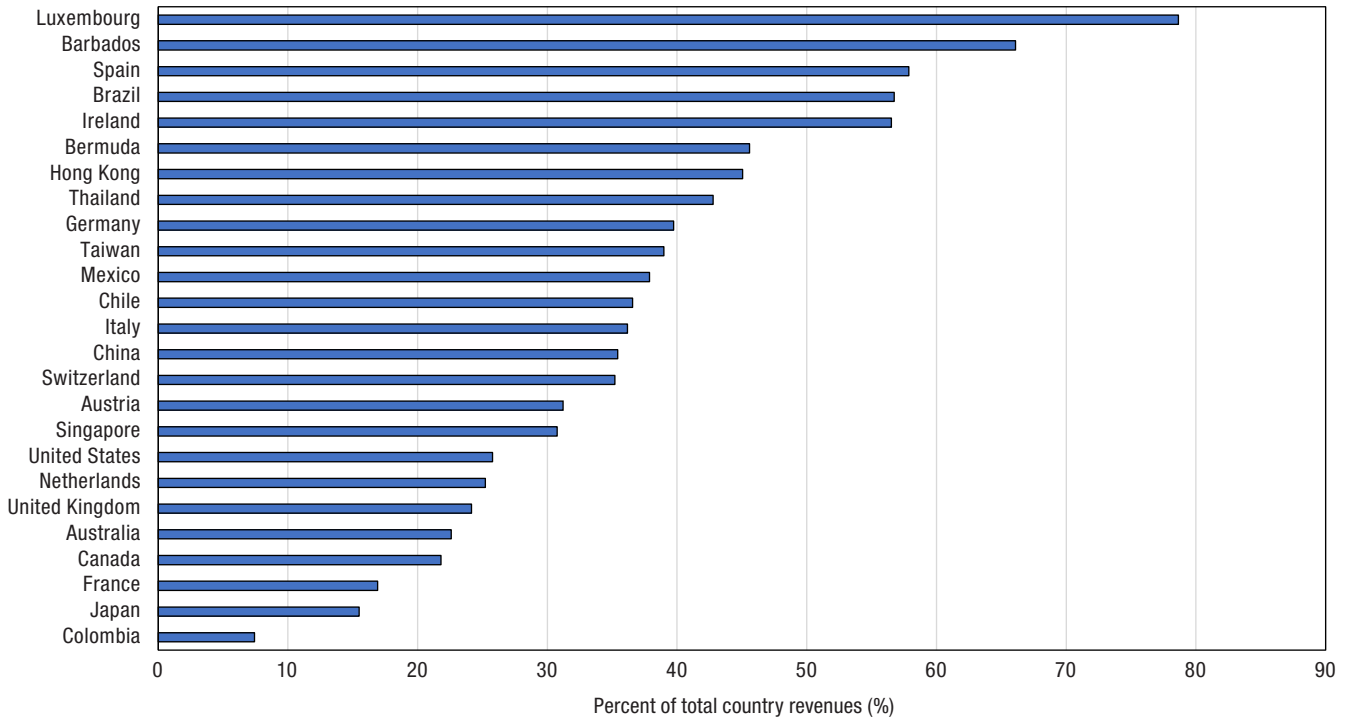
Chart 1 shows that 78.7% of the revenues earned in Luxembourg are from transactions with related parties. Other countries, including Barbados, Ireland and Bermuda, rank among the countries earning the largest proportions of revenues from related parties. Of the top six countries earning the largest proportion of related-party revenues, four are countries that have been identified by tax knowledge groups⁴ to be tax-favourable countries.

Chart 2 presents the number of employees engaged for the same list of countries (excluding Canada, the United States and China⁵). There is an inverse relationship between related-party revenue and the number of employees working for MNEs in tax-favourable countries.

4. Garcia-Bernardo et al. have published a paper classifying tax jurisdictions as offshore sinks and offshore conduits. Additionally, the International Monetary Fund has also done some work on identifying offshore financial centres.

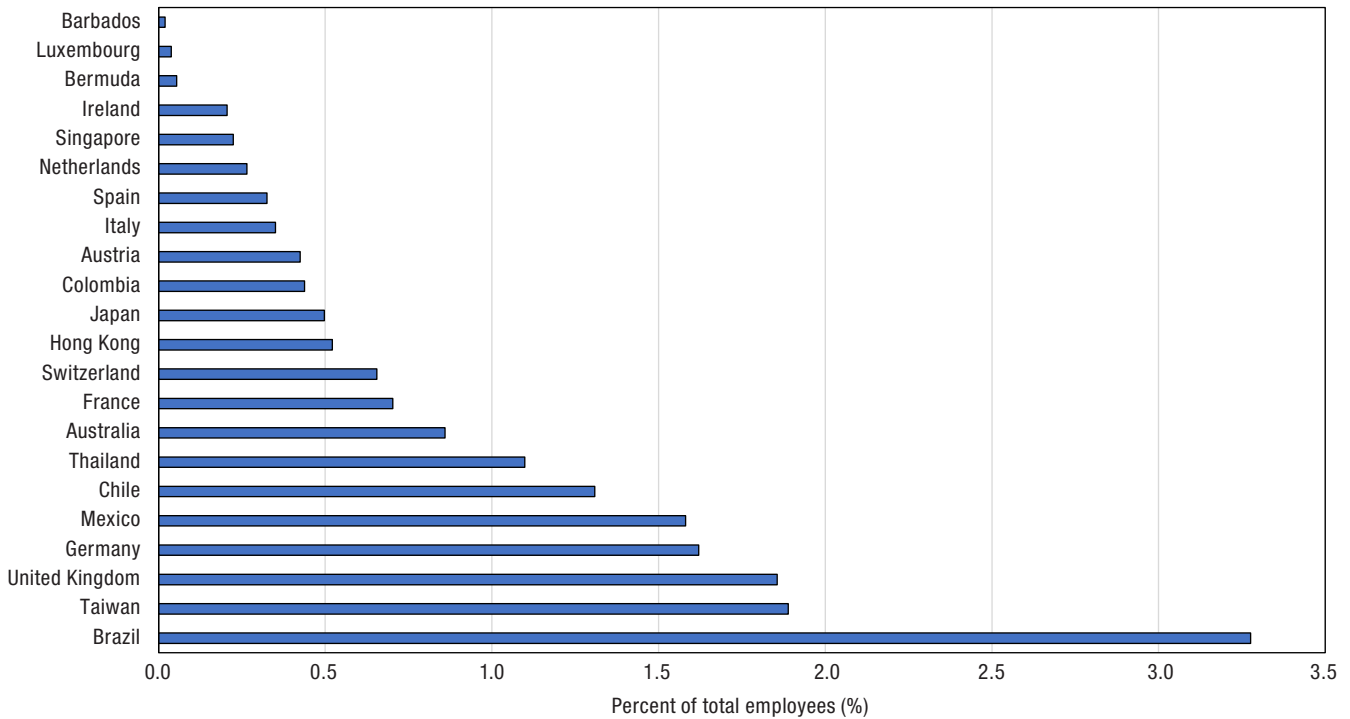
5. These countries that have been excluded as MNEs operating in Canada employ a substantial number of employees in these jurisdictions.

Chart 1
Related party revenues as a percentage of total revenue earned, by country



Source: Form RC4649 filings (Country-by-country report), author's calculations.

Chart 2
Proportion of employees by country (excluding Canada, USA, China)



Source: Form RC4649 filings (Country-by-country report), author's calculations.

These figures suggest that there is a mismatch between revenues earned and real economic activity in that country. Fewer employees are able to generate and manage larger volumes of revenues in tax-favourable locations than in other jurisdictions, suggesting an asymmetry in employee productivity, a framework characteristic. Consequently, this could suggest MNEs with operations in Canada are engaging in BEPS behaviour.⁶

Profit rate differentials within top global multinational enterprises

Affiliates of an MNE that operate more efficiently in jurisdictions with low effective tax rates may be a sign that some of the enterprise's income was artificially shifted. The following indicator is created using data from MNE groups from the Country-by-Country Report for the 2016 tax year.

Indicator: Higher pre-tax profit margin of MNEs in jurisdictions with lower effective tax rates

In accounting and finance, the pre-tax profit margin is an effective measure to compare enterprises within an industry. It is computed as the ratio of earnings before tax to total revenues. This metric aims to capture the operating efficiency of a business, or how effectively a business converts revenue to (pre-tax) profit.

In the context of this analysis, this ratio can be viewed as the profitability of affiliates in each of these countries. **Chart 3** provides a plot of profitability and effective tax rates for each country.

On aggregate, affiliates are more profitable in jurisdictions where the effective tax rate paid is lower.⁷

This indicator stems from a few nuances of the plot.

First, of the countries where MNE affiliates are most profitable, three are documented as tax-favourable countries.⁸ This could suggest that MNEs are earning more profit in jurisdictions where they would pay less tax.⁹

Secondly, affiliates in lower-tax locations are more profitable than affiliates in higher-tax locations. A negative relationship exists between the effective tax rate and the affiliate's profitability.

Thirdly, of the top five jurisdictions where foreign affiliates are most profitable, three (Luxembourg, Barbados and Bermuda) are among the top recipients of revenues from related parties.

By changing certain terms of intercompany transactions¹⁰ between foreign affiliates, MNEs have the opportunity to increase expenses for affiliates in high-tax jurisdictions, lowering the tax base in that country. Similarly, they can decrease expenses in low-tax jurisdictions, and this would increase the tax base in that country.¹¹

Chart 3 suggests that MNEs are earning a larger proportion of their profits in jurisdictions where the tax rate is lower. This suggests MNEs are structuring their operations to realize a tax benefit, indicating that they could be engaging in BEPS behaviour.

6. For the 2016 fiscal year, on aggregate from all RC4649 filers.

7. Effective tax rate is computed as taxes paid divided by earnings before taxes (taxes paid / earnings before tax).

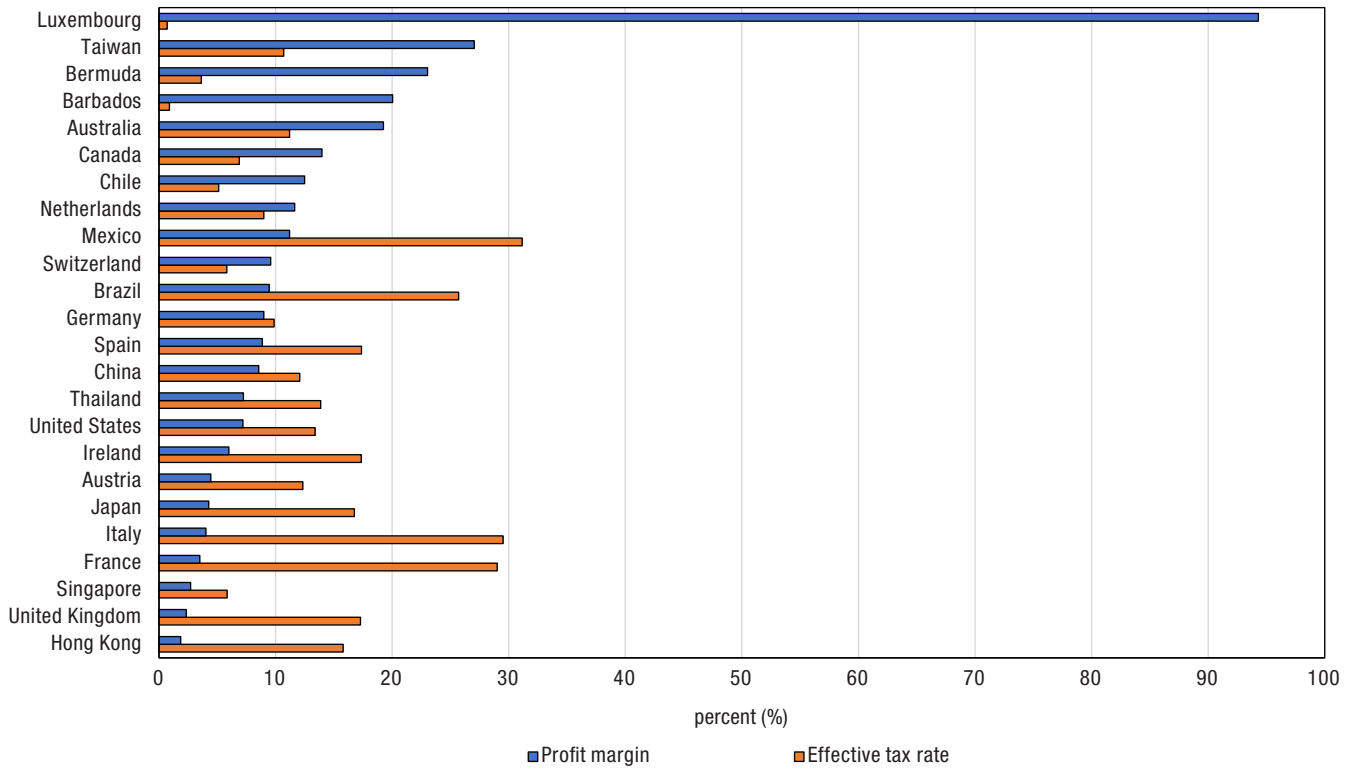
8. See [Appendix 1](#) for a classification of tax jurisdictions.

9. Variations in efficiency among countries are themselves not firm indicators of BEPS. Globalization has facilitated MNEs optimizing their value chains to maximize their returns; it is important in the analysis of BEPS to take indicators in context, and in tandem with other indicators, before asserting the existence of BEPS.

10. For example, by enhancing a piece of intellectual property, or by providing additional services, and increasing the price at which a piece of intellectual property is licensed to an affiliated foreign firm.

11. The Inclusive Framework on Base Erosion and Profiting Shifting sets limits on such transactions, and MNEs have comparatively limited ability to minimize their taxes by changing the transfer price. The international guidelines require the transfer price between affiliates to be well documented and justified.

Chart 3
Effective tax rates vs. pre-tax profit margin, by country



Source: Form RC4649 filings (Country-by-country report), author's calculations.

Section 3: A glimpse of where multinational enterprises operating in Canada base their business functions

The second section of the Country-by-Country Report collects information on the foreign affiliates (see [Appendix 2](#)). Filers are required to provide a list of each of their foreign affiliates by tax jurisdiction, provide the tax identification number for each of these entities, and provide a categorization for the main line of business for that affiliate.

These data are useful in identifying tax jurisdictions where multinational enterprise (MNE) group functions tend to cluster.

Figure 1 provides a cartographic view of the countries where foreign affiliates of MNEs are clustered.

Figure 1
Concentrations of foreign affiliates of multinational entities by tax jurisdiction

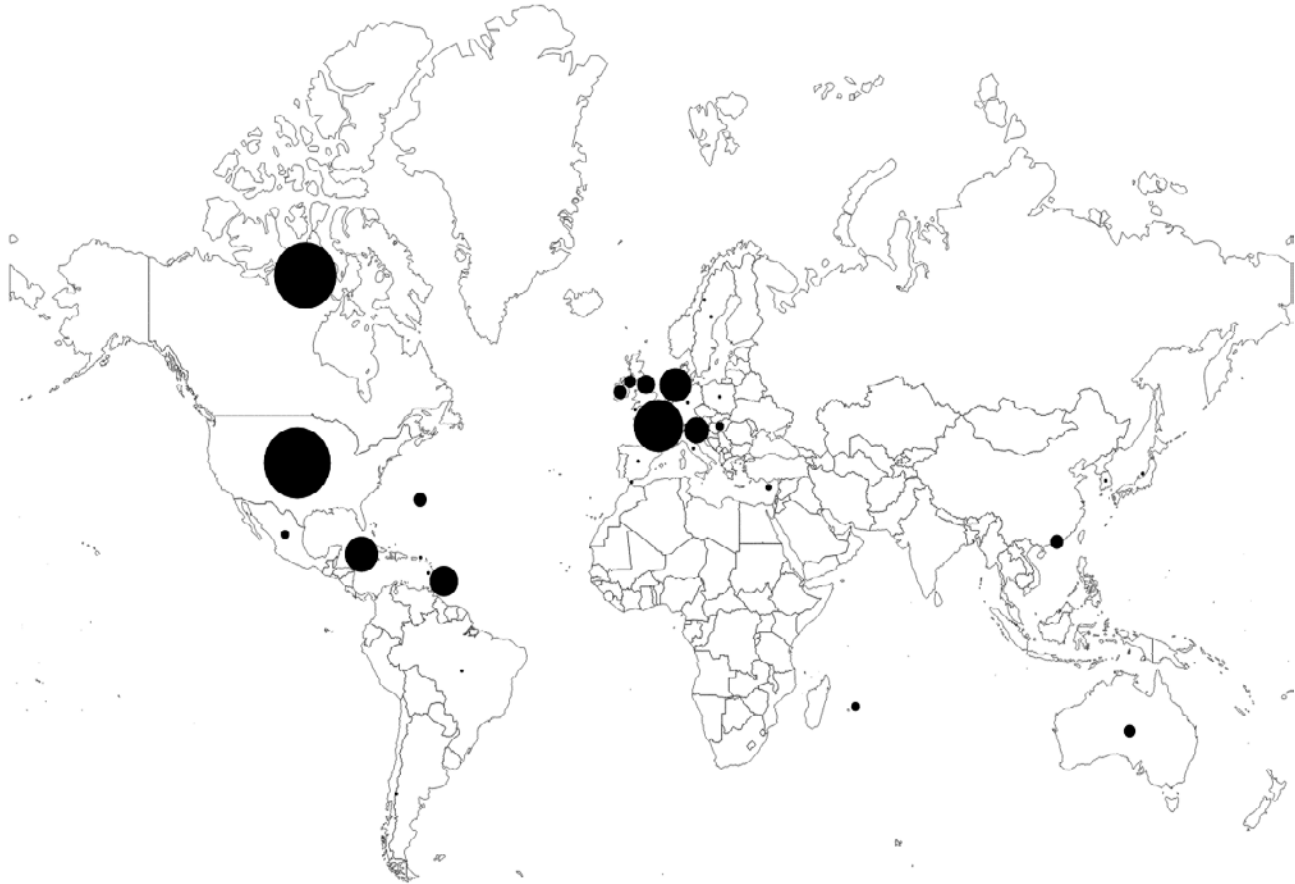


Source: Form RC4649 filings (Country-by-country report), author's calculations.

Figure 2 provides an overview of the internal group finance function of MNE filers in the extraction industry.

Figure 2

Concentrations of affiliates in the internal group finance function, by tax jurisdiction



Source: Form RC4649 filings (Country-by-country report), author's calculations.

Consistent with the findings of the Parliamentary Budget Office and CORPNET, Luxembourg and the Netherlands are major loci of financial activity for MNEs.

Larger loci include the islands in the Gulf of Mexico, including the Cayman Islands and Barbados. These countries are documented as offshore tax centres by several tax knowledge groups, including CORPNET.

This visualization does not assert the existence of base erosion and profit shifting (BEPS) activity, but rather provides context to the indicators. One may be inclined to conclude that countries where companies base their group finance function—such as the Cayman Islands or Barbados—could be the focus of BEPS activity. However, this may not be accurate—these countries have relatively small economies, with strong financial sectors. An equally possible explanation might be that centres for internal group finance functions¹² such as the Cayman Islands, Barbados and Bermuda provide business incentives to attract MNEs.

Conclusion and further work

In conclusion, the indicators proposed in this study suggest that multinational enterprises (MNEs) with operations in Canada may have used strategies to minimize the amount of taxes owed globally in 2016, but further research is required to quantify the extent of these impacts on taxes collected by Canada.

12. "Internal group financing activities" refers to lending and borrowing activities between affiliates. These transactions which may include financial instruments by which risk is transferred within the MNE group. (OECD, 2020)

A disconnect between financial and real economic activities of MNEs was identified by comparing the proportion of revenues earned from affiliated firms with the number of employees, by jurisdiction. This indicator showed a large amount of revenue from related parties was earned by firms located in low-tax jurisdictions, and further, that these MNEs employed relatively fewer staff in low-tax jurisdictions.

Profit rate differentials were identified within MNEs, as there was a negative relationship between the pre-tax profit margin earned in each country and the effective tax rate paid. Tax jurisdictions where the highest pre-tax profit was earned were those where MNEs paid the lowest effective tax, on aggregate.

Section 3 concludes with a brief look at the tax structure of MNEs operating in Canada, with data from the Country-by-Country Report. It was demonstrated that MNEs located their group financing functions in countries commonly regarded as tax-favourable locations for the 2016 tax year.

The indicators that were developed using the Country-by-Country Report line up with the findings of Fortier-Labonté and Schaffter (2019), who also found that profit shifting behaviour was prevalent within the Canadian economy.

Our upcoming paper will further extend these indicators, incorporating data from non-arms-length transactions with foreign affiliates using data sourced from form T106 Information Return of Non-Arm's Length Transactions with Non-Residents.

Appendix

Appendix 1: Classifying tax jurisdictions

A previous study by the tax knowledge group CORPNET (Garcia-Bernardo et al. 2017) classified tax jurisdictions based on whether they were the ultimate destination of profit. To this end, they define two terms, sink offshore financial centres (OFCs), and conduit-OFCs. Sink-OFCs are jurisdictions where value disappears from the economy, and conduit-OFCs are jurisdictions through which value moves closer to a sink-OFC.

Jurisdictions where affiliates have a high pre-tax profit margin (PPM) could identify the ultimate destination of profit, or sink-OFCs. A higher ratio can be interpreted as a larger proportion of revenue being recognized as profit in the given jurisdiction, or the location being where the profit of an MNE is earned.

Jurisdictions with low PPMs but high revenues suggest that expenses are proportionally high. In conjunction with other indicators and the framework characteristics, it may be possible to identify whether this is BEPS activity seeking to shift profits out of that jurisdiction.

The PPM ratio can suggest whether a country is a sink or a conduit based on the Country-by-Country Report, because of its nature: filers are required to provide comprehensive data on their global operations. The data suggests that MNEs filing Country by Country report in Canada have affiliates which are more profitable in Luxembourg, an accepted OFC-Sink.

Appendix 2: Form RC4649 (Country-by-Country Report)

[Link to the tax form](#)

<https://www.canada.ca/content/dam/cra-arc/formspubs/pbg/rc4649/rc4649-19e.pdf>

[Guidance on filing the Country-by-Country Report](#)

<https://www.canada.ca/en/revenue-agency/services/forms-publications/publications/rc4651/guidance-on-country-country-reporting-canada.html>

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