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Country Level Determinants of Base Erosion and Profit Shifting (BEPS): A Systematic Literature Review

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Abstract

Based on the criticism that estimates of the fiscal and economic effects of Base Erosion and Profit Shifting (BEPS) derived from firm-level data are not sufficiently accurate, this paper surveys the literature on BEPS (2003-2024) that analyzes country-level data. The findings indicate possible gaps in current tax policies to address BEPS and emphasize the need for improved international coordination and tailored policies to effectively tackle profit shifting, ensuring fair tax competition and robust public revenues. Directions for future research concern the effects of effective tax rates on real vs. "phantom" foreign direct investment (FDI) and the distinctions between immediate vs. ultimate FDI.

Keywords: base erosion and profit shifting (BEPS); foreign direct investment (FDI); international tax policy; systematic literature review; tax avoidance

JEL: F42, H26

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1. INTRODUCTION

Base Erosion and Profit Shifting (BEPS) has emerged as a critical issue attracting significant attention from both policymakers and academics due to its substantial implications for global tax revenues, particularly within the European Union (EU). BEPS encompasses tax avoidance strategies employed by multinational corporations (MNCs) to shift profits from high-tax jurisdictions to low- or no-tax jurisdictions, thereby eroding the tax base of higher-tax countries. The Organization for Economic Co-operation and Development (OECD) and the G20 have led global initiatives to combat BEPS, culminating in the introduction of the BEPS Action Plan in 2013 and the subsequent adoption of a comprehensive 15-point BEPS package in 2015. In recent years, over 138 countries and jurisdictions have joined the OECD/G20 Inclusive Framework on BEPS, reflecting a global consensus on the urgency of curbing profit shifting. A pivotal element of these efforts is the OECD's Pillar Two initiative, which implements a global minimum corporate tax rate of 15% for MNCs with consolidated revenues above EUR 750 million. This measure, incorporated into EU law through Council Directive (EU) 2022/2523, is in force since 2024 and aims to mitigate harmful tax competition by ensuring that MNCs pay a fair share of taxes regardless of their tax planning strategies. The EU's adoption of the global minimum tax is expected to boost member states' revenues; OECD estimates suggest it will raise global corporate income tax revenues by 6.5% to 8.1%, adding approximately USD 155-192 billion annually (Hugger et al., 2024). However, success against BEPS will depend on consistent enforcement and coordination. Early analyses indicate potential impacts on global competitiveness, with some scholars noting that tighter tax rules may influence where firms invest (Jobbágy, 2022; Owens & Wamuyu, 2024).

The fiscal and economic effects of BEPS include factors such as taxable income, fiscal capacity, and the competitiveness of host countries. Analyses at the aggregate country level, which use macroeconomic data, provide more accurate estimates of the fiscal impacts than those based on micro-level firm data. While the latter can shed light on the channels of BEPS, they frequently depend on assumptions about firm behavior across different countries and industries (Bradbury et al., 2018). Another concern beyond the assumptions about firm behavior is also the coverage of firm-level data. For example, datasets such as Orbis are restrained by regionality (Álvarez-Martínez et al., 2021). Furthermore, Fuest et al. (2022, p. 460) who investigate profit shifting and the role of tax havens in the case of German firms, point out that Orbis captures only 35% of the subsidiaries of German MNCs that are situated outside of tax havens. Consequently, Bilicka (2019) and Tørsløv et al. (2023, pp. 1502-1503) note that data not based on macroeconomic levels tend to underestimate the extent of profit shifting.

In view of these issues, this study aims to address the fiscal impacts of BEPS through macroeconomic studies, that is studies which analyze country-level data. This study endeavors to (i) identify and synthesize the main macroeconomic research approaches in the BEPS literature, (ii) review the findings on the key macroeconomic determinants and consequences of BEPS, and (iii) highlight knowledge gaps to suggest avenues for future research. This study also summarizes common methodological approaches (e.g. data sources and indicators used) and offers a narrative of the key findings across studies.

The rest of the paper is structured as follows. Section two discusses the method and strategy of the systematic review of the literature. Section three presents and section four discusses the results. Section five concludes the study.

2. METHOD

2.1 Systematic review methodology and selection criteria

This study employs a systematic literature review methodology for rigor and transparency in identifying, selecting, and synthesizing existing research on the macro-level determinants and impacts of BEPS. We followed the Preferred Reporting Items for Systematic Reviews and Meta-Analyses (PRISMA) 2020 guidelines (Page et al., 2021) to ensure a comprehensive and replicable process. By adhering to PRISMA standards, the review minimizes bias and clearly documents the search and inclusion process.

The literature search focused on peer-reviewed journal articles, policy reports, and select institutional publications (e.g., OECD, IMF) published between 2003 and 2024. This time frame starts with the year BEPS was first formally named in policy discussions and extends to include the most recent studies and policy developments (such as the 2021-2024 global tax reforms). We conducted the search across multiple academic databases: Google Scholar, EBSCO, ABI/ProQuest, Scopus, and Web of Science. These databases were selected due to their extensive coverage of literature in economics, taxation, and public finance. To ensure the inclusion of high-quality, peer-reviewed sources, only articles listed in both Scopus and ABS (Association of Business Schools) and indexed under the relevant JEL codes (E63, F42, H25, H26, H87) were considered.

The search strategy employed a comprehensive approach by using a combination of keywords related to BEPS and macroeconomic variables. The keywords “base erosion”, “profit shifting” and “tax avoidance,” are central to the post-2013

international tax agenda (OECD Action Plan on BEPS, 2013). The terms "base erosion" and "tax avoidance" were used in the literature at least since the 1990s (Alm et al., 1991), as well as "profit shifting" (Janeba, 1996). The search terms were systematically combined using Boolean operators (AND, OR) to ensure the retrieval of pertinent literature, (see Table 1). Other keywords related closely to BEPS such as "transfer pricing", "tax havens" and "tax competition" were not included. Despite related to BEPS, they span broader disciplinary domains – particularly microeconomics, finance, accounting, and tax law. "Transfer pricing," for example, is a technical mechanism that can be used both legitimately and abusively, and its inclusion without context could introduce noise into the dataset. Similarly, "tax competition" and "tax havens" encompasses a wide range of phenomena, only a subset of which relate to BEPS. The Appendix figure indicates how the addition of these keywords inflates the results.

Insert Table 1 here

2.2 Inclusion and exclusion criteria

The following inclusion criteria were applied to ensure the relevance and quality of the selected studies:

- Studies were published between 2003 and 2024. These studies are divided into two periods of 11 years each (2003-2013 and 2014-2024).
- Peer-reviewed journal articles and government/policy reports.
- Papers analyzing BEPS in macroeconomic contexts, with specific focus on corporate tax rates, foreign direct investment (FDI), and tax base erosion.
- Research on EU tax policy and its relationship with BEPS.

- Articles listed in Scopus, ABS, and Web of Science databases, ensuring academic rigor.
- Articles that address strictly only macroeconomic dependent variables.

Exclusion criteria:

- Studies focusing solely on microeconomic, accounting, or administrative aspects of BEPS.
- Papers not published in English.
- Working papers, conference proceedings, pilot studies, doctoral dissertations, and books.
- Articles that do not explicitly address the fiscal and economic effects of BEPS with the analysis of country-level data.
- Articles that do not explicitly address macroeconomic dependent variables and not microeconomic dependent variables.
- Articles not being triple-listed in Scopus, Web of Science and the Academic Journal Guide of the Chartered Association of Business Schools.

To ensure methodological rigor and avoid bias, studies focusing on microeconomic perspectives were excluded. While these studies offer insights into firm-level behavior, they did not match the study's focus on macroeconomic variables.

2.3 Data extraction and study selection process

The study selection process followed a multi-stage approach, as outlined in Figure 1, which details the PRISMA flow diagram for study identification, screening, and inclusion. In the initial identification phase, 16,500 records were retrieved from the database search covering the period of 2003-2024, of which 15864 were excluded for

not being indexed in Scopus or Web of Science. After further screening based on titles and abstracts, a total of 221 articles were assessed for eligibility. The final review included 21 research papers and 5 meta-analyses, all of which met the inclusion criteria. The selected studies primarily focused on macroeconomic variables such as corporate tax rates, FDI, tax base erosion, and their implications for national revenues. Each study was reviewed for its methodological approach, key variables, and overall contribution to the understanding of BEPS within the EU.

Insert Figure 1 here

3. RESULTS

3.1 Key dependent variables affected by BEPS and key independent variables influencing BEPS

The review identified several dependent variables commonly used to assess the fiscal and economic effects of BEPS. Table 2 presents the common dependent variables until and after 2013. The field of international taxation has undergone significant transformations, particularly following the introduction of the OECD's BEPS Action Plan in 2013. This study provides a comprehensive analysis of research publications in this domain, highlighting the key differences between studies conducted until and after 2013. Until 2013, research on tax and investment was primarily descriptive and foundational. Studies during this period focused on basic comparative tax analysis, providing preliminary insights into profit shifting and the dynamics of tax havens. Key characteristics of pre-2013 research include: limited understanding of BEPS,

comparative tax analysis (based mostly on statutory tax rates), institutional investigations (e.g. Dharmapala and Hines, 2009). Several influential studies from this period include Devereux et al. (2008), which examined whether countries compete over corporate tax rates; Dharmapala and Hines (2009), which identified which countries become tax havens; and Djankov et al. (2010), which analyzed the effect of corporate taxes on investment and entrepreneurship.

The introduction of the BEPS Action Plan in 2013 (OECD, 2013) marked a significant shift in the focus and methodologies of tax and investment research. Post-2013 studies are characterized by advanced computational techniques regarding profit shifting detection methods and BEPS estimation (e.g. revenue impact assessments), and comprehensive global network analysis (e.g. multinational tax strategy investigations). Key studies from this period include those by Pavel et al. (2021), who investigated tax factors affecting FDI allocation in the EU post-socialist states; Cobham and Janský (2018), who re-estimated the global distribution of revenue loss from corporate tax avoidance; Garcia-Bernardo and Janský (2024), who analyzed the profit shifting of multinational corporations worldwide.

The study of tax and investment has advanced, focusing on FDI, reported profits, and corporate tax base. FDI is widely examined in tax competition research, while Reported Profits are central to post-2013 profit shifting studies. Corporate tax base is mainly studied regarding base erosion. Meta-analyses summarize findings on FDI and reported profits, whereas research papers explore broader outcomes. This shift highlights international concerns about tax base erosion and profit shifting, leading to deeper analyses of global taxation issues. The evolution of tax and investment research reflects the growing international concern about base erosion and profit shifting

strategies. An important development is the distinction between real FDI and phantom FDI (Albori et al., 2024).

Insert Table 2 here

Furthermore, several independent variables were identified as critical in influencing BEPS practices, particularly in the context of multinational profit shifting. These variables provide insights into how corporate behavior is shaped by tax policy and macroeconomic factors. Table 3 summarizes the common independent variables and their references in studies before and after the 2013 BEPS Action Plan. Research papers published until 2013 focus on statutory tax rates and FDI determinants, and provided limited insights of tax differentials or profit shifting. In post-2013 research there is a shift on tax avoidance determined by effective tax rates, and tax competition in these terms. Effective tax rate differentials become central to profit-shifting research (e.g., Tørsløv et al., 2023) and meta-analyses (e.g., Heimberger, 2021) verify the existence of tax competition effects. Finally, more nuanced variables are used for the estimation of the impact on BEPS (e.g., logarithmic tax rates, tax haven shares).

Insert Table 3 here

3.2 The changing nature of the international tax landscape

Table 4 presents a comparison of the focus in studies published up to 2013 versus those in studies from 2014 onward, reflecting how research interests and findings have shifted following the OECD's BEPS initiative. The systematic review

distinguishes three main topics: tax competition, tax revenue losses and the size of profit shifting.

Tax competition was discussed largely as a theoretical concern in earlier studies and evidence emerged via steadily falling corporate tax rates worldwide, the so-called "race to the bottom" (Keen and Konrad, 2013). The issue of tax competition has been extensively researched, particularly concerning its impact on FDI. Both statutory tax rates (e.g., Dharmapala and Hines, 2009; von Brasch et al., 2023) and effective tax rates (e.g., Djankov et al., 2010; Pavel et al., 2021) have been utilized in the literature, with both early and later studies indicating a negative effect on FDI. Data from the OECD on effective tax rates enables researchers to conduct thorough analyses, as they can draw on effective tax rate data available in the OECD database from 2017 onwards. This allows for a more consistent methodology in estimating the impact of taxation on FDI and in general, assessing the effects of BEPS. By utilizing a standardized approach to calculate effective tax rates, researchers can enhance the rigor and comparability of their findings.

Another important development is based on FDI data. MNCs facing substantial tax obligations may resort to international tax planning strategies, by utilizing intermediary countries to mitigate their tax burdens. The introduction of the 4th edition of the Benchmark Definition of FDI (OECD, 2018) brought new insights into the literature and enabled a more accurate and comprehensive construction of the global FDI network, tracing investments back to ultimate investors. For example, Erokhin (2023) found that the corporate tax rate has a negative effect on immediate FDI and no significant effect on ultimate FDI. It also led to the reporting of FDI from Special Purpose Entities, with little or no physical presence and no other activities than holding and financing (phantom FDI). The studies utilizing new data provide a deeper

understanding of the effect of taxation on FDI. For example, Damgaard et al. (2024) found that although the corporate tax rate in the host country does not have a significant effect on real ultimate inward FDI, it has a negative effect on total (phantom plus real) ultimate inward FDI. It is expected that the new evidence will deepen our understanding of tax competition and whether corporate taxes or other instruments (e.g. "state aid", see López and Navarro, 2024) are more important in attracting different types of FDI.

Regarding the second distinction on Table 4, several studies after 2013 have estimated tax revenue losses. Some research suggests that low- and lower-middle-income countries experience the highest average revenue losses as a share of GDP (Crivelli et al., 2016; Cobham and Janský, 2018; Chiari, 2024). Conversely, other studies indicate that high-income non-OECD countries endure the most significant revenue losses relative to their GDP (Janský and Palanský, 2019). Additionally, recent findings show that OECD countries are now experiencing greater revenue losses from BEPS compared to earlier assessments (Tørsløv et al., 2023). Garcia-Bernardo and Janský (2024) consider the logarithmic specification of the semi-elasticity model to be more accurate with respect to estimating the global scale of profit shifting and estimate that lower-middle-income countries experience the highest revenue losses as a share of GDP. This new evidence should be evaluated using a larger sample before drawing any conclusions.

Concerning the third distinction on Table 4, early studies established that profit shifting by MNCs exists, but data limitations led to varied estimates of its scale. Research utilizing firm-level data, such as that conducted by Hines and Rice (1994), provided early evidence of U.S. firms shifting profits to tax havens. Subsequent studies in the 2000s confirmed the significance of profit shifting, although estimates of its magnitude varied (Beer et al., 2020). Other early evidence on profit shifting was in the

form of financial wealth held in tax havens: e.g. Zucman (2013) indicated that approximately 8% of global household financial wealth was held in tax havens and Alstadsæter et al. (2018) reported that the stock of offshore wealth constituted about 10% of world GDP. Recent studies utilize improved data and yield more precise estimates. They focus on phantom FDI and estimate that it constitutes approximately 40% of global FDI (Albori et al., 2024; Damgaard et al., 2024). These estimates can be utilized to evaluate the potential effects of policy initiatives, such as the implementation of a global minimum tax.

Insert Table 4 here

4. DISCUSSION

4.1 BEPS measures: tax rates and FDI

A key aspect of this review is the examination of how BEPS alters the effectiveness of tax incentives, as highlighted by Owens & Wamuyu (2024). Their analysis indicates that traditional tax incentives, which are often designed to attract FDI and stimulate economic growth, may become less effective in a landscape shaped by BEPS. As MNCs increasingly engage in profit-shifting strategies, the anticipated benefits of these incentives can be undermined. For instance, if MNCs can shift profits to low-tax jurisdictions, the intended fiscal benefits of tax incentives in high-tax countries may not materialize, leading to a misallocation of resources and reduced overall economic efficiency.

The introduction of global minimum tax structures further complicates this dynamic. By establishing a baseline tax rate, the global minimum tax aims to reduce the incentive for MNCs to exploit lower tax jurisdictions. However, it also raises questions about the competitiveness of countries that rely heavily on tax incentives to attract investment. As countries adjust their tax policies in response to the global minimum tax, the effectiveness of existing tax incentives may diminish, necessitating a re-evaluation of how these incentives are structured and implemented.

FDI emerged as an important factor both in papers published in the aforementioned periods until and after 2013, with evidence suggesting that profit-shifting practices distorted investment patterns. MNCs often directed their investments into low-tax jurisdictions to facilitate profit shifting, affecting the real economic benefits of FDI in high-tax countries. Several of the reviewed papers, also showed that tax base erosion had measurable negative consequences on national revenues, particularly in developing and high-tax countries. This finding supports earlier research, including Heimberger (2021), indicating that BEPS disproportionately impacted countries with limited capacity to enforce complex tax regulations, leading to significant revenue losses.

The findings also indicate that implementation of BEPS measures should also take into account the effective corporate tax rate and its effect on real/phantom and immediate/ultimate FDI. The introduction of baseline corporate tax rates and BEPS minimum standards and packages based on it would not reflect the dynamic nature of effective tax rates. The latter indicate the application of tax incentives, credits, or reliefs, reducing the overall tax burden. Furthermore, real FDI, which represents investments that are linked to actual business operations and contribute to the real economy, is different from phantom FDI, which refers to investments that flow through empty

corporate structures, often for tax avoidance purposes, and do not involve substantial business activity. Immediate FDI refers to the immediate origin, while ultimate FDI is foreign entity that ultimately controls the immediate investor. The existing literature on BEPS during the reviewed period has largely overlooked the impact of effective tax rates on both real and phantom FDI, as well as on immediate and ultimate FDI. Consequently, the findings in this field remain limited (e.g., Erokhin, 2023; Damgaard et al., 2024).

4.2 Insights and policy suggestions

The trajectory of research reflects a clear shift from diagnosis to action. In the earlier period, scholars were primarily focused on demonstrating the existence and consequences of BEPS. Groundbreaking work by Hines and Rice (1994) established that profit shifting to tax havens was happening, while subsequent studies refined these estimates and explored mechanisms (e.g., transfer mispricing, debt shifting). Throughout the 2000s and early 2010s, a series of papers documented how MNCs could significantly reduce their tax bills through tax planning strategies, leading to sizable revenue losses for higher-tax countries. These studies, surveyed by Beer et al. (2020), confirmed BEPS as a real concern for public finances. Tax competition was recognized in this era as a contributing factor – as countries saw mobile tax bases eroding, many responded by cutting corporate tax rates to attract or retain investment, thereby reinforcing the cycle of base erosion. Keen and Konrad (2013) capture the state of theory up to that point, describing how competition can drive rates downward. Yet, tangible policy solutions in this earlier phase were modest. Proposals like formulary apportionment were discussed (Avi-Yonah and Benshalom, 2011), but largely in

academic or hypothetical terms; no broad multilateral action had taken hold. Most countries pursued unilateral measures (tightening rules on interest deductions, controlled foreign corporations, thin capitalization limits, etc.) and engaged in limited cooperation through bodies like the OECD, but without a binding global framework.

In the recent period (late 2010s to 2023), the tone and focus of research shift noticeably toward evaluating and informing actual policy reforms. This change coincides with real-world developments: the G20/OECD BEPS initiative (mid-2010s) and the landmark 2021 agreement on a global tax overhaul (Pillars One and Two). With better data becoming available, recent studies have been able to more precisely quantify profit shifting and its impact. The findings are striking: profit shifting has continued to grow, reaching unprecedented levels before stabilizing at 40% of global FDI (Albori et al., 2024). This evidence base has strengthened the call for bold solutions. Unlike early literature where global coordination was a side note, now multilateral solutions take center stage. Recent research is devoted to analyzing the effects of the proposed 15% global minimum tax (e.g. OECD, 2020; Baraké et al., 2022) and suggests substantial gains, especially for EU countries. The tone of these analyses is cautiously optimistic – they treat the minimum tax as a potentially game-changing development that could, for the first time, put a floor on tax competition and greatly reduce profit shifting.

At the same time, recent papers consistently inject notes of caution that without broad adoption, a global minimum tax could fall short. Many authors point out scenarios where if even a few major economies (e.g. the US) do not implement the rules, corporate gaming will continue (e.g. Avi-Yonah, 2023). Consequently, alternative paths are actively discussed alongside Pillar Two in recent scholarship. For example, countries should be ready to implement domestic minimum taxes unilaterally (to tax profits escaping foreign jurisdictions) as a backup. Another alternative is the

establishment of regional agreements, such as the EU directive which led to the implementation of a minimum tax in 2024 (European Commission, 2021). Another option is formulary apportionment (Matheson et al., 2021; Palanský and Schultz, 2024), which would allocate MNC's income to countries by a formula (e.g., based on sales or employees).

In summary, the evolution from the early 2010s to the 2020s in international tax research and policy is evident. We have moved from acknowledging a problem to actively engineering solutions. The questions raised in older studies – how big is profit shifting, how harmful is tax competition – have largely been answered and new questions concern implementation and efficacy of solutions: How to design rules that truly curb profit shifting? Will major powers cooperate or obstruct? What are the macroeconomic side effects (for investment, growth, inequality) of these tax changes?

We are witnessing a field in transition – from highlighting problems to testing solutions – with researchers and policymakers jointly navigating toward a more stable international tax order. The added perspective of time in our analysis underscores this narrative and shows that, while consensus is emerging on certain fronts (e.g., the need for a multilateral approach), the debate is far from over. The upcoming years, as Pillar Two and related measures are implemented, will be critical for answering whether the international community is indeed progressing toward the viable solutions that the literature increasingly supports.

5. CONCLUSION, POLICY IMPLICATIONS AND FUTURE RESEARCH

In conclusion, addressing BEPS involves a strategy that includes harmonizing tax policies, enhancing enforcement mechanisms, and fostering international

collaboration. Coordinated efforts are important to safeguard national tax bases, ensure fair competition, and promote fiscal stability across the single market. Initiatives like the OECD's global minimum tax represent progress, but their success depends on consistent implementation and international cooperation. By adopting comprehensive and adaptable approaches, policymakers can better manage BEPS, protect revenues, and contribute to the long-term economic health of member states.

The review provides a comprehensive analysis of the macroeconomic impacts of BEPS with some limitations. Excluding non-English studies may limit geographic diversity, particularly in regions with unique BEPS effects. Relying on high-ranking databases might exclude important grey literature such as policy papers or government reports, which offer practical insights into BEPS implementation. Additionally, the focus on macroeconomic variables means firm-level behaviors and tax practices are not explored, which are essential for a complete understanding of BEPS channels.

Future research should investigate the role of supranational coordination in mitigating disparities and enhancing the effectiveness of anti-BEPS measures and the role of effective tax rates on various forms of FDI (real/phantom and immediate/ultimate). By expanding on these areas, future studies can provide valuable insights for refining international tax frameworks and addressing emerging challenges in the global fiscal system.

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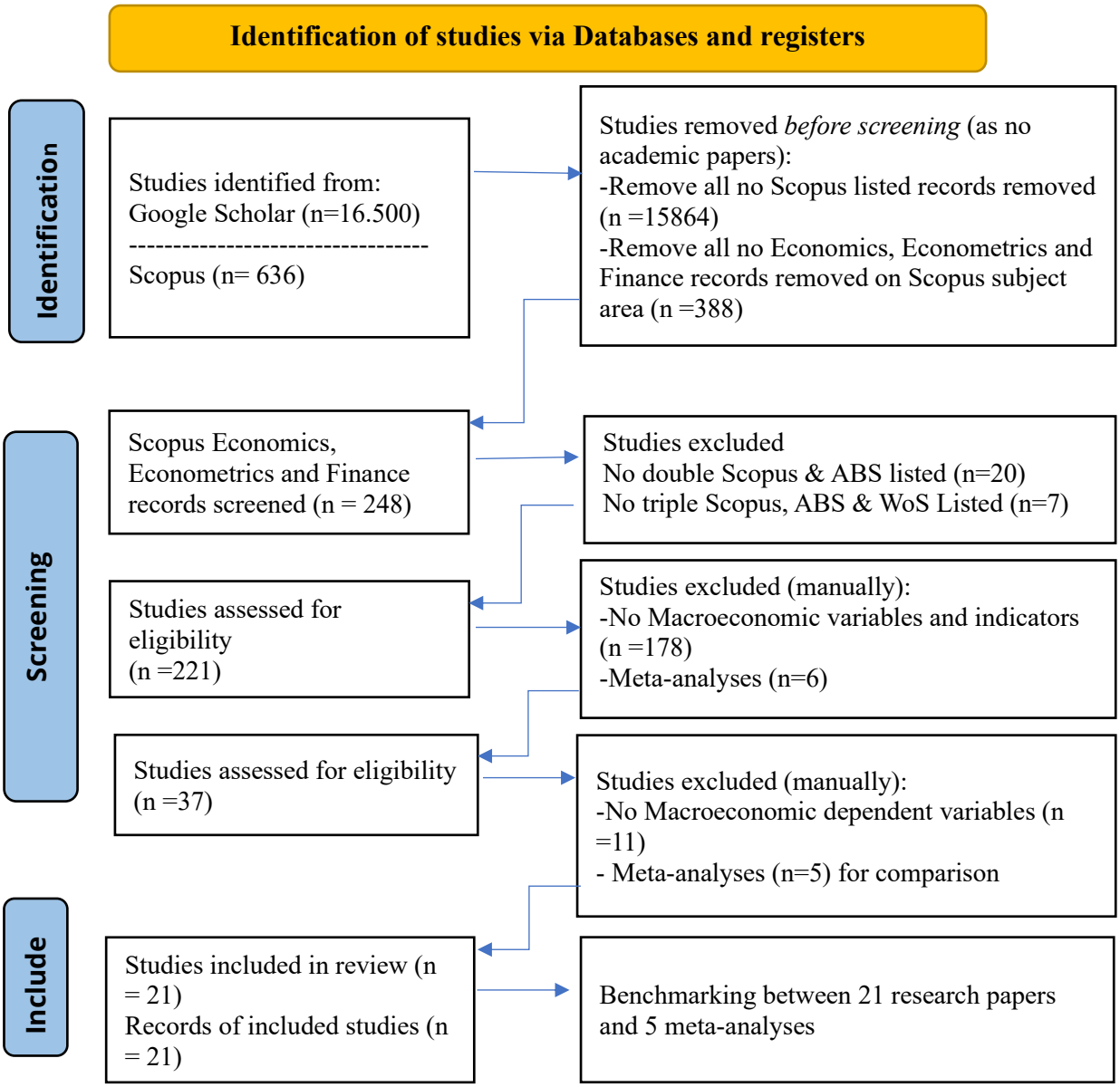
FIGURES AND TABLES

Figure 1 – PRISMA flow diagram



Source: Authors elaboration based on PRISMA 2020 statement (Page et al., 2021).

Table 1 – Search keywords

Keywords grouping	Operator	Keywords grouping
«Base Erosion and Profit Shifting”	-	-
“Base Erosion”	and	“Profit Shifting”,
“Base Erosion”	or	“Profit Shifting”
“Tax Avoidance”	and	“Base Erosion”
“Tax Avoidance”	and	“Profit Shifting”

Table 2 – Common dependent variables until and after 2013

A) Until 2013

Common Dependent		
FDI	Ghinamo et al. (2009); Djankov et al. (2010)	de Mooij & Ederveen (2003); de Mooij & Ederveen (2008)
Corporate Tax Rate	Devereux et al. (2008); Ghinamo et al. (2009)	None

B) After 2013

Common Dependent	*Study*	*Meta-analysis*
FDI	Pavel et al. (2021); Damgaard et al. (2024); Driffield et al. (2021)	None
Corporate Tax Base	Cobham & Janský (2018); Crivelli et al. (2016); Clausing (2016)	None
Reported Profits	Garcia-Bernardo & Janský (2024); Clausing (2016); Tørsløv et al. (2023); Vicard (2022)	Beer et al. (2020); Heckemeyer & Overesch (2017)
Corporate Tax Rate	None	Heimberger (2021)
Tax Revenue Losses	Chiari (2023); Janský & Palanský (2019)	None
Investment Metrics (Investment/GDP, Business Density)	von Brasch et al. (2023)	None
Probability of Real FDI	Albori et al. (2024)	None

Source: Authors' elaboration.

Table 3 – Common independent variables until and after 2013

A) Until 2013

Common Independent	*Study*	*Meta-analysis*
Corporate Tax Rate	Devereux et al. (2008); Dharmapala & Hines (2009); Djankov et al. (2010); Ghinamo et al. (2009)	De Mooij & Ederveen (2003); De Mooij & Ederveen (2008)
Weighted Average of Competitor Tax Rates	Devereux et al. (2008)	None (limited meta-analyses before 2013)
Tax Rate Differential	None (less emphasized pre-BEPS)	De Mooij & Ederveen (2003, 2008) briefly discuss tax differentials in FDI models.
Effective Tax Rate	None (more focus on statutory rates pre-BEPS)	De Mooij & Ederveen (2008) mention effective rates in elasticity discussions.
GDP	Ghinamo et al. (2009)	De Mooij & Ederveen (2003) include GDP in FDI gravity models.
FDI	Dharmapala & Hines (2009); Ghinamo et al. (2009)	De Mooij & Ederveen (2003, 2008)

B) After 2013

Common Independent	*Study*	*Meta-analysis*
Corporate Tax Rate	Von Brasch et al. (2023); Pavel et al. (2021); Chiari (2023); Cobham & Janský (2018); Crivelli et al. (2016); Damgaard et al. (2024); Garcia-Bernardo & Janský (2024); Clausing, (2016); Tørsløv et al. (2023); Vicard (2022)	Beer, De Mooij & Liu, (2020); Heckemeyer, & Overesch, (2017); Heimberger, (2021)
Weighted Average of Competitor Tax Rates	Cobham & Janský (2018); Crivelli et al. (2016)	Heimberger, (2021)
Tax Rate Differential	Pavel, Tepperová, & Arltová, (2021); Albori, Anzuini, Ferriani & Rossi (2024); Tørsløv, Wier & Zucman (2023)	Beer et al. (2020); Heckemeyer & Overesch (2017)
Effective Tax Rate	Garcia-Bernardo & Janský (2024); Clausing (2016); Vicard, (2022)	Heckemeyer & Overesch (2017); Heimberger (2021)
GDP	Chiari, (2023); Damgaard et al. (2024); Albori et al. (2024); Janský & Palanský (2019)	Less emphasized in meta-analyses post-2013.
FDI	Driffield, Jones, Kim & Temouri (2021); Janský & Palanský (2019)	Meta-analyses focus more on tax elasticities than FDI directly.

Source: Authors' elaboration.

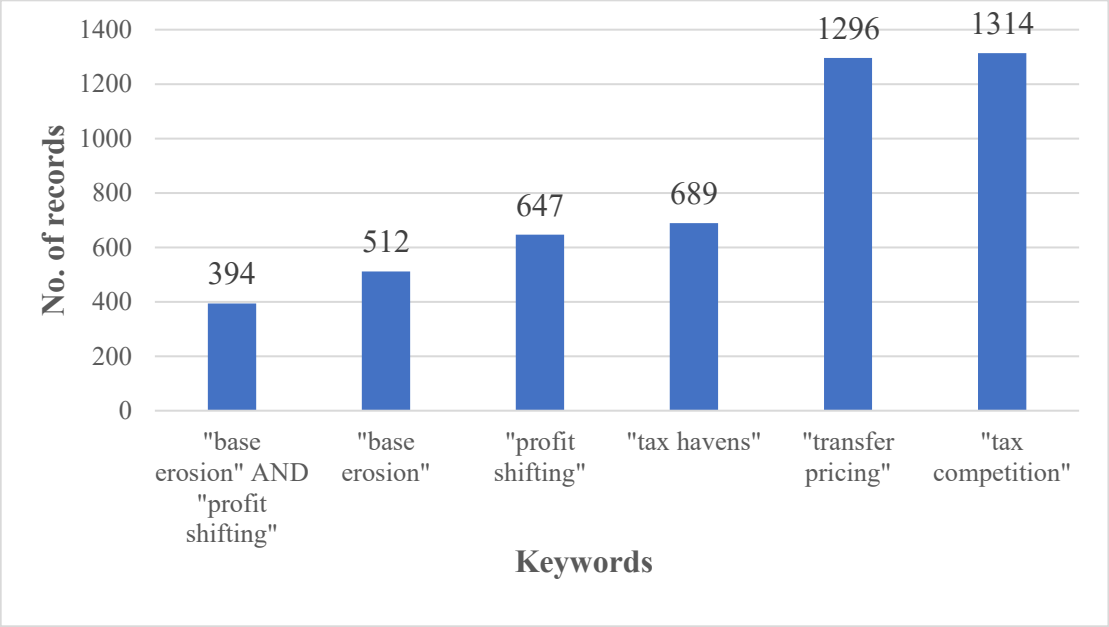
Table 4 – Evolution of International Tax Research based on country-level data

Topics	*Typical in studies until 2013*	*Emerging in studies after 2013*
Effects of taxation on FDI	Effects of taxation on immediate FDI.	Effects of taxation are distinguished between immediate and ultimate FDI, real and phantom FDI.
Tax revenue losses	Not quantified.	Explicit estimates.
Profit shifting	Stock of offshore wealth.	Phantom FDI.

Source: Authors' elaboration.

Appendix

Appendix Figure – No. of records per keyword/phrase



Source: Authors' elaboration, Scopus database (June 2025).

Appendix Table – BEPS research papers analyzing country-level data

Study	Sample
Devereux et al. (2008)	21 OECD countries, 1982-1999.
Dharmapala and Hines (2009)	208 countries (tax haven analysis) and 55 countries (FDI analysis), 2004.
Djankov et al. (2010)	85 countries, 2004.
Ghinamo et al. (2010)	OECD countries, 1983-2003.
Zucman (2013)	Worldwide, 2001-2008.
Clausing (2016)	Location of US MNCs, 1983-2012.
Crivelli et al. (2016)	173 countries, 1980-2013.
Alstadsæter et al. (2018)	Worldwide, 2001-2015.
Cobham and Janský (2018)	173 countries, 1980-2013.
Janský and Palanský (2019)	112 countries, 2009-2016.
Driffield et al. (2021)	Industry-level FDI flows from South Korea, 1980-2017.
Pavel et al. (2021)	10 EU post-socialist countries, time period not mentioned.
Vicard (2022)	Country analysis: 76 countries, 2001-2015. Country pairs analysis: 30 declaring countries (maximum of 151 partner countries), 2006-2016.
Erokhin (2023)	16 host countries and 35 home countries, 2011-2020
Santacreu (2023)	61 countries, 1995-2012.
Tørsløv et al. (2023)	OECD countries, 7 developing non-OECD countries, tax havens, 2015.
von Brasch et al. (2023)	55 countries, 1990-2020.
Albori et al. (2024)	110 countries, 2009-2019.
Chiari (2024)	152 countries, 1980-2019.
Damgaard et al. (2024)	116 countries, 2013-2017.
Garcia-Bernardo and Janský (2024)	38 OECD countries, 2017.

Source: Authors' elaboration.