Hidden Profits, Lost Jobs? Tax Havens and Employment Decisions*

Ronald B. Davies† Margarita Lopez-Forero‡

Benjamin Michallet§ Johannes Scheuerer¶

[PRELIMINARY. PLEASE DO NOT CITE.]

This version: September 15, 2025
Latest version: here

*We thank Annette Alstadsæter, Julie Brun Bjørkheim, Mike Devereux, Nora Strecker, Grégory Verdugo, Malo Mofakhami, Clément Malgouyres, Vincent Vicard, Elsa Contanzo, Mathieu Fert and participants at the 2024 Annual Congress of the IIPF, Venice Summer Institute 2024, EU Tax Observatory, Jönköping International Business School, LMU Munich and Misra Centre for Financial Markets and Economy for constructive comments. Financial support from The Research Council of Norway (Grant 325720) and from a French state grant to the COMUE Université Paris-Saclay (ANR-11-IDEX-0003-02) are gratefully acknowledged. All errors are our own. The ideas and opinions expressed in this paper do not necessarily reflect the ones of Banque de France.

†Corresponding author. University College Dublin, School of Economics; Skatteforsk - Centre for Tax Research. Email: ronald.davies@ucd.ie

‡Banque de France. Email: mariamargarita.lopezforero@banque-france.fr

§Global Impact Metrics. Email: michallet.benjamin@gmail.com

¶Norwegian University of Life Sciences, School of Economics and Business; Skatteforsk - Centre for Tax Research. Email: johannes.scheuerer@nmbu.no

Abstract

While the strategic use of tax haven entities by multinational enterprises (MNEs) has received considerable attention in recent years for its impact on tax revenues, the resulting real economic consequences remain poorly understood. In this paper, we use administrative data for the universe of Norwegian and French firms and workers to study employment responses to enhanced profit-shifting opportunities. We exploit variation in the timing of establishing corporate ownership in a tax haven to show that tax haven use is associated with lower domestic employment levels. To obtain causal identification, we leverage the 2006 European Court of Justice decision on the Cadbury-Schweppes case, which weakened the application of controlled foreign company rules in the European Union. We document a sharp decline in affected MNEs employment by 6% following the court ruling. Heterogeneity analyses reveal that the effects are mainly concentrated among high-skilled and white collar workers in service industries. We propose two complementary mechanisms to rationalize our findings: (i) the reduced cost of opacity enables MNEs to restructure and implement layoffs that would otherwise be more costly, and (ii) increased regulatory scrutiny of "wholly artificial arrangements" compel firms to demonstrate real substance in tax haven jurisdictions, further incentivizing reallocation of activity.

JEL classification: F23, H26, J21

Keywords: Tax Havens, Multinational Firms, Employment, Mass Layoffs, Economic Substance

1 Introduction

Multinational enterprises (MNEs) are often lauded for being among the largest, most productive, and most innovative firms, a reputation that is supported by the available data (see, e.g. Helpman et al. (2004)). At the same time, however, MNEs have attracted significant criticism along several dimensions. Chief among these are accusations of offshoring jobs and engaging in aggressive tax avoidance by shifting profits to tax havens. Despite the prevalence of these two concerns, they are largely unconnected in both the academic and public discourse on foreign direct investment (FDI). In this paper, we contribute by linking tax haven use and employment using firm- and worker-level administrative data for France and Norway. Using the French data, we provide causal evidence indicating that MNEs with the ability to shift profits to tax haven affiliates have 6% lower employment. We do so in a difference-in-differences approach that exploits the 2006 European Court of Justice decision on the Cadbury-Schweppes case which affirmed the ability to use controlled foreign companies (CFCs), a keystone in profit shifting. Although data limitations do not allow us to claim causality for Norway, we use a complementary empirical approach that finds a similar pattern. Further, in both cases we find that these employment differences are primarily found among high-skill occupations.

One potential mechanism for this is that anti-profit shifting regulations require justification for tax-reducing intra-firm payments, payments often linked to intellectual property and intangible assets. Since these activities are high-skill intensive, this provides an incentive to transfer high-skill jobs overseas can justify tax-minimizing intra-firm payments. However, there is evidence that the productive use of intellectual property (IP) is bound to specific workers (see, e.g. the influential work of Leiponen (2005)). Thus, one might expect that, to facilitate profit shifting, MNEs would seek to relocate high-skill workers overseas. Using the Norwegian data, we show that high-skill workers are far more likely to migrate to a tax haven after their firm opens a tax haven affiliate, consistent with a substance requirement motivation for offshoring. In contrast, we find no such pattern among low-skill Norwegian workers.

Although we do not have access to migration histories from France, we find evidence suggesting that the observed employment declines may be linked to a second tax haven attribute, namely, corporate secrecy. Because profit shifting reduces profits in the MNE's French affiliate, even as the MNE's global profits unobservably hold steady, profit shifting gives the appearance of a persistent negative shock. Under French labour law, this would allow the tax-haven using MNE to shed expensive French workers. For non-haven using MNEs, however, this obfuscation is not possible and it would therefore not be permitted

to offshore French jobs. Thus, while any MNE might desire to offshore jobs, the tax and secrecy advantages of tax havens create specific advantages which can increase offshoring, particularly among high-skill occupations.

The policy implications of tax haven-driven offshoring are clear. First, it adds to the real consequences of tax havens (see Alstadsæter et al. (2024) for a recent overview). Furthermore, if some of the "unemployed" high-skill workers move to the tax haven but low-skill workers remain in Norway, this adds a distributional concern to the labour market effects. Furthermore, when losses to corporate tax revenues are matched with declines in personal income tax revenues, haven offshoring adds further impetus to the overarching concerns for the effect of profit shifting for government revenues. With studies such as Wier & Zucman (2022) and Tørsløv et al. (2022*a*) indicating that upwards of 40% of MNE profits are routed to tax haven countries each year, this is no small concern. This then provides additional support to efforts meant to curb aggressive tax planning by multinationals, including as part of the OECD's Base Erosion and Profit Shifting initiative. In addition, if in countries such as France the secrecy of tax havens is a key for potential offshoring, this calls for increased use of country-by-country reporting (CbCR) intended to reveal affiliate activity.[1]

The paper unfolds as follows. Section 2 discusses the existing work on MNEs and offshoring and MNEs and tax havens in order to develop our hypotheses. We discuss the specifics of our data in Section 3 and provide a descriptive comparison of tax haven users and other firms. Section 4 provides our results on the relationship between haven use and employment with potential mechanisms explored in Section 5. Section 6 concludes.

2 Multinationals, Offshoring, and Taxation

In this section, we provide a brief overview of the literature on two aspects of MNEs: offshoring and tax avoidance. We do so to develop hypotheses for our empirical investigation.

From the outset, the work on FDI has included discussion of offshoring. As reviewed by Davies & Markusen (2021), regardless of whether a foreign affiliate is motivated by access to customers (horizontal FDI; Markusen (1984)) or lower-cost intermediate inputs (vertical FDI; Helpman (1984)), FDI represents an activity done in the host economy rather than the parent. It is therefore unsurprising that MNEs are commonly accused of "exporting jobs". While the literature does admit that parental employment can decline following foreign investment (e.g. the early work by Harrison & McMillan (2011)), as reviewed in the survey by Hummels et al. (2018), the pattern of parent country labour market effects can

[1] Tuinsma et al. (2025) estimate that CbCR reduces profit shifting, although the impact for firms with tax haven affiliates are less impacted than others.

depend on the impetus behind FDI. When FDI is horizontal, access to more consumers can raise the return to IP creation and thus spur demand for high-skill workers at home. The same can occur in vertical FDI when the offshored production stages are low-skill intensive compared to those carried out at home. Thus, when home labour is complementary to offshored activities, FDI can increase home demand – at least for some worker types.

This complementarity can also arise even when there is no employment overseas. Klemm & Liu (2019) provide a theoretic treatment of this in a model of profit shifting. Since avoiding tax lowers the user cost-of-capital, this spurs overall investment. Although labour is not included in their model, if capital and labour are complementary, this would then spur labour demand, including in the high-tax country (see Jacob (2022) for further discussion).[2] This prediction is in line with Souillard (2022*a*) who finds an increase in global US employment after the MNE first enters a tax haven. Note that this cost of capital effect does not even require actual production in the tax haven since even a so-called letterbox affiliate – one which does not actually produce anything or have workers – can be used to lower the effective tax rate even when there is no actual reallocation of employment.[3]

This ease of profit shifting, however, is not without costs, most obviously for government revenues. Wier & Zucman (2022) and Tørsløv et al. (2022*a*) estimate that 40% of MNE profits are routed to tax haven countries annually.[4] Unsurprisingly, governments have therefore implemented a variety of policies intended to limit the degree of profit shifting. Among these are CFC rules.[5] Typically, profit shifting is achieved by using an intra-firm transaction to inflate costs in a high-tax country and revenues in a tax haven. Under CFC rules, however, the high-tax country disallows the deduction of those costs, essentially asserting tax jurisdiction over that income earned by the tax haven affiliate.[6]. As described in the survey of Overesch et al. (2024), CFC rules do indeed significantly limit profit shifting.

Nevertheless, this effectiveness was limited in 2006 as a result of a European Court of Justice (ECJ) ruling on the Cadbury-Schweppes case. This case was brought by the UK

[2]Note that this would hold for any tax reduction, not only tax evasion by MNEs.

[3]Davies & Killeen (2018) estimate a deterrent effect of taxes on letterbox affiliates in Europe.

[4]The extent of profit-shifting activities is not homogeneous across MNEs but largely driven by the largest firms. Data from e.g. France (Davies et al. 2018) and South Africa (Wier & Erasmus 2022) shows that the majority of shifted profits is driven by just 5% of MNEs.

[5]CFC rules date back to the US in 1962 and have been increasingly adopted across countries. In France, they were first introduced by the 1980 Finance Law through the Article 209 B of the French Tax Code (see `https://www.senat.fr/rap/l97-351/l97-3515.html`. Norway, where they are referred to as NOKUS (Norsk kontrollert utenladsk selskap), introduced CFC regulations in 1992. Multilateral efforts supporting them include those by the European Union (where Council Directive 2016/1164 mandated member state adoption by 2019) and the OECD (Action 3 of its 2015 BEPS process).

[6]French CFC rules during our period of analysis (1997-2014) established that when a French firm directly or indirectly owns a firm in a tax haven, profits of the French controlled company are essentially consolidated with the parent. Norway operates a "black list" identifying countries where the rules apply (Schmidt 2016).

against the Cadbury-Schweppes group on the charge that two Irish affiliates of the group were solely used to avoid tax. When the national tax authorities invoked the CFC rules, the group appealed on the grounds that this impinged on the EU's freedom of establishment provision.[7] The ECJ decided in favor of Cadbury-Schweppes and stated that CFC rules were not compatible with the freedom of establishment within the European Union.[8] Therefore, this decision limited member States' ability to invoke CFC rules and tax back income earned by affiliates in European tax havens. Schenkelberg (2020) found that this led to a 10% increase in pre-tax earnings in low-tax jurisdictions.

A crucial caveat to the ECJ ruling, however, is that CFC rules do apply to letterbox affiliates. Thus, while profits can be moved to a haven affiliate, they must be tied to real activity. Meeting this substance requirement gives rise to an incentive to offshore jobs to the tax haven not for traditional horizontal and vertical reasons, but rather to justify intra-firm payments. While it has been noted that tax havens overall account for a minor fraction of foreign employees, coordination centers such as Ireland, Netherlands and Singapore do represent significant numbers of employees (see, e.g., Garcia-Bernardo et al. (2022) and Tørsløv et al. (2022*a*)). Thus, it may be easier to meet substance requirements in some havens than others, something reflected in Clausing's 2020 classification of tax havens into high-activity ones (including Ireland, Switzerland, and the Netherlands) and low-activity ones (such as the Cayman Islands, Luxembourg, and Bermuda). Notably, Tørsløv et al. (2022*b*) indicate that most profits are shifted to European high-activity havens.[9] When considered in conjunction with the widely recognized importance of intangible assets for profit shifting (Alstadsæter et al. 2022) – one might suspect that tax-motivated offshoring is particularly fierce in high-skill occupations.

This then leads into the burgeoning literature that documents the real effects of tax haven use (see Alstadsæter et al. (2024) for an overview). While a sizable literature discusses how MNEs avoid taxes (see Heckemeyer & Overesch (2017) and Beer et al. (2020) for surveys) and the resulting fiscal effects (e.g., Crivelli et al. (2016), Alvarez-Martínez et al. (2022), Tørsløv et al. (2022*a*) and Bilicka et al. (2023)) this thread of the literature concentrates

[7]The freedom of establishment is one of the founding principles of Europe (Articles 43 and 48 EC Treaty) and prevails over the member state national rules.

[8]In particular, the ECJ ruled that "[...] a national measure restricting freedom of establishment may be justified where it specifically relates to wholly artificial arrangements aimed at circumventing the application of the legislation of the member State concerned' (paragraphs 51 and 55 of Cadbury Schweppes and Cadbury Schweppes Overseas, Case C196/04 [2006])." The freedom of establishment principle was subsequently referred to other ECJ decisions (e.g. C524/04 [2007], C330/07 [2008] and C182/08 [2009]) and moving away from Centros C212/97 [1997] which limited the freedom of establishment abroad in cases of affiliates without economic activity with the purpose to circumvent national law.

[9]Alstadsæter et al. (2022) use the same data we do and also find that Nowegian haven use is predominantely with European havens.

on how profit shifting distorts aggregate statistics (Guvenen et al. 2022), shapes sales and industry concentration (Martin et al. 2022), impacts productivity growth (Bricongne et al. 2023), and affects product markets (Gauß et al. 2024).

Within this, the work closest to our contribution is that focusing on the labour market implications of tax havens. This includes work on wages and employment. On the first, Souillard (2020) and Alstadsæter et al. (2022) finding evidence that haven-using MNEs pay a pay premium that is heavily concentrated among high-skill employees in the United States and Norway.[10] Similarly, although not focused on havens, Agrawal & Todtenhaupt (2022) examine domestic earnings responses to *foreign* corporate income tax rate cuts. Using administrative data on tax returns and foreign ownership networks of Norwegian firms, they show that MNEs affected by foreign tax reforms increase their average wage payments to domestic workers by 2-3%.

Finally, there is a small body of evidence looking at tax avoidance and employment.[11] Buettner et al. (2018), Bilicka et al. (2022) and Bilicka (2024) reveal that constraints on the interest deductibility (a common conduit for shifted profits) led to lower levels of employment and workforce reallocation in affected MNEs in Germany and the UK. Suárez Serrato (2018) likewise found that the repeal of §936 in the Internal Revenue Code, which made it prevents U.S. multinationals from shifting profits to affiliates in Puerto Rico, resulted in substantial job losses.[12] These studies then suggest that haven use encourages parental employment.

In contrast, Lopez-Forero (2021) uses firm-level data on French MNEs to show that domestic employment declines after the establishment of tax haven affiliate. One potential rationale for this is that Buettner et al. (2018), Bilicka et al. (2022) and Bilicka (2024) consider debit-limiting thin capitalization rules (where no substance requirement exists) whereas Lopez-Forero's empirical design includes the possibility of tax-motivated offshoring. Likewise, the regulatory change of Suárez Serrato (2018) did not have any substance requirement implications. As such, the events of those studies did not involve the same incentive to offshore to facilitate profit shifting that Lopez-Forero (2021) did. As further support for this difference, Souillard (2022*b*) uses data for U.S.-listed MNEs and an approach comparable to Lopez-Forero (2021) that exploits the establishment of a tax haven affiliate. Unlike her

[10]This work stands alongside those using cross-country (e.g., Arulampalam et al. (2012); Clausing (2013)) and single-country designs (e.g., Suárez Serrato & Zidar (2016); Fuest et al. (2018); Ohrn (2023)) to document sizable tax pass-through effects onto wages.

[11]In comparison to the work devoted to wage effects of corporate taxation, that on its employment effects is much smaller (Jacob 2022). Examples using cross-state tax variation for the US include Ljungqvist & Smolyanski (2016), Suárez Serrato & Zidar (2016), and Giroud & Rauh (2019), all of whom find evidence indicating that tax cuts tend to increase employment, a result in line with the cost-of-capital effect discussed above.

[12]Similarly, Williams (2018) finds that offshoring of US manufacturing jobs depends on cross-country corporate tax differentials, particularly when managers have discretion about internal cross-border transactions.

analysis of parental employment, however, he considers the impact this has on global MNE employment and finds that it rises by 4% post-haven entry. These two results can be reconciled if haven use both lowers the cost of capital and involves relocating jobs to the haven affiliate to justify intra-firm payments.

However, due to data constraints, none of these studies differentiate the employment effects across worker types nor do they explore the potential mechanisms underlying them. We contribute by exploiting the granularity of the Norwegian and French administrative data to emphasize the role of worker characteristics in this context. For France, our data begins prior to the Cadbury-Schweppes ruling and we therefore use this substance-requiring policy shock in a difference-in-differences event study that compares MNEs with tax haven affiliates prior to the ruling to those without. Our estimates indicate that for haven-using MNEs, employment fell by around 6% as a result. This would be consistent with Schenkelberg's 2020 finding that the ECJ ruling gave the green light to intra-firm tax haven payments – with the added emphasis on the need for substance. Although the Norwegian starts too late to use the same identification, using a staggered difference-in-differences analysis we find that firms who open a tax haven affiliate see a decline in Norwegian employment of the same magnitude. Furthermore, in both cases, we find that the job losses are most pronounced among high-skill occupations. Thus, using complementary strategies and data from different countries to boost external validity, we find results pointing towards offshoring as a result of haven use.

We then extend our analysis by using migration data for Norwegian workers. Here, the estimates suggest that when a worker's employer begins using a tax haven, there a significant increase in the probability they move to a tax haven. This effect, however, is only among high-skill workers where, relative to other migrants, the probability they move to a tax haven increases by 6.5 percentage points. This thus provides some backing towards MNEs relocating some of their existing high-skill workers rather than simply offshoring their jobs.

Although the French data does not permit us to track workers' international movements, the French situation does allow us to examine the potential role of a second key characteristic of a tax haven: the secrecy it provides.[13] As discussed in detail by Lopez-Forero (2021) Under French regulation, if the number of redundancies reaches ten or more in a thirty-day period, the company must initiate a mass layoff procedure (*Plan de sauvegarde de l'emploi (PSE)* in French).[14] Under this regulation, rather than laying off workers, firm must either redeploy

[13]According to Hines & Rice (1994*b*), tax havens have four key characteristics: a low tax rate, a good communication infrastructure, legislation enabling business and banking secrecy, and self-promotion as an offshore financial center.

[14]Krautheim & Schmidt-Eisenlohr (2016), Souillard (2022*c*), and Alstadsæter et al. (2022) all examine similar issues with a focus on wages rather than employment.

workers within itself or face fines and even criminal penalties.[15] That said, if the firm can prove in court that its situation is dire, these penalties can be avoided. Note that this means not only a decline in profits, but requires a fall in sales over at least a year to justify the layoffs. If sales are simply offshored, then even though French sales have fallen, the need threshold will not be met and the obligation stands. When activity is offshored to a haven, however, the obfuscation that country provides can conceal the shift in sales and thus permit the MNE to shed expensive French workers. This is indeed what we find in the data.

Thus, by combining data from the two countries, we are able to address both causality and the mechanisms behind the link between job offshoring and tax haven use in a way that would be impossible using only one of the datasets. Furthermore, by linking the observed patterns to factors specific to tax haven investment as opposed to FDI overall, we are able to connect two of the most significant criticisms regarding the increasing economic power of MNEs. In the next section, we describe our data before moving on to the results.

3 Data

In this section, we provide an overview of the two datasets we use. While we cannot merge such administrative data across countries, we use both because each brings advantages that allow us to develop a more complete picture of haven-motivated offshoring. Our overarching identification strategy is to compare firms with tax haven affiliates to those without such investments. Importantly, due to the unobserved nature of profit shifting, we do not claim to measure the impact of the profit-shifting act itself. That said, the analysis of e.g. Davies et al. (2018), Tørsløv et al. (2022*b*), and others indicates that the large majority of profit shifting revolves around tax haven affiliates. Thus, because profit shifting itself is largely unobservable, we follow Souillard (2022*a*), Alstadsæter et al. (2022), and the vast majority of the literature and compare haven users with non-users. We draw our list of tax haven countries from Tørsløv et al. (2022*b*), which make few additions to the blacklist put forward by Hines & Rice (1994*a*).[16]

[15] Note that this applies only to firms of 50 or more employees and thus applies to the French MNEs in our data.

[16] This list comprises Andorra, Anguilla, Antigua & Barbuda, Aruba, Bahamas, Bahrain, Barbados, Belgium, Belize, Bermuda, Bonaire, British Virgin Islands, Cayman Islands, Cook Islands, Curacao, Cyprus, Dominica, Gibraltar, Grenada, Guernsey, Hong Kong, Ireland, Isle of Man, Jersey, Jordan, Lebanon, Liberia, Liechtenstein, Luxembourg, Macao, Maldives, Malta, Marshall Islands, Mauritius, Monaco, Montserrat, Nauru, Netherlands, Netherlands Antilles, Niue, Panama, Puerto Rico, Samoa, San Marino, Seychelles, St. Kitts and Nevis, St. Lucia, St. Martin, St. Vincent and the Grenadines, Singapore, Switzerland, Tonga, Turks and Caicos Islands, and Vanuata.

3.1 French Data

We use two firm-level administrative data of firms in France: the FICUS and FARE bases, which are made available by the French national statistical institute (INSEE) and the public finances directorate (DGFiP). These bases are drawn from fiscal files and no firm size threshold is applied to determine inclusion. Hence, there is full coverage of French firms given that every firm is subject to compulsory reporting with fiscal authorities.[17] The FICUS-FARE base contains annual balance sheet information for each firm. In addition, a unique firm identifier is associated to each firm (siren number) which is used to link it to other French databases (LIFI and DADS) which we use in order to get yearly information on the firms' bilateral international trade, bilateral presence in a foreign country (including in a tax haven), and detailed composition of the firms' workforce and wage bill in France.

The LIFI database is the "financial linkages base" (*Liaisons Financières*) which comes from the INSEE. Specifically, it provides information about the composition of economic groups through firms' ownership relations (foreign and domestic) of companies residing in Metropolitan France and French overseas departments. Although the base has a good coverage, it is not exhaustive in the sense that it is constructed by applying different thresholds. To be precise, it includes firms verifying at least one of the following conditions: having more than 500 employees, holding equity securities above 1.2 million euro, having a turnover of more than 60 million euro, being the parent of a group, and/or being held by foreign capital in the previous year. The survey is complemented with additional administrative sources (DIANE) in order to ensure a better coverage of smaller groups. The relevant information extracted from this base is the position of the firm within the group (parent, subsidiary), the list of subsidiaries abroad as well as their nationalities, the nationality of the French firm's parent (if foreign-owned), and the amount of direct participation of the main shareholders. From this, we retain those MNEs in France which are either French-owned or owned by a parent firm in a tax haven. We then generate a treatment dummy which equals one if the firm either has an affiliate in a tax haven or is owned by a tax haven parent prior to 2006 (the year of the ECJ judgement). Thus, our French sample is comprised of MNEs operating in France with treated firms being those exposed to tax havens prior the ECJ ruling and control firms being French-owned MNEs which are not exposed.[18]

Finally, the DADS database (*Déclaration annuelle de données sociales*), which is provided by the INSEE, is based on mandatory annual reports filled by all firms with employees. It contains annual hours paid in a firm as well as the number of workers employed by different

[17] Excepting one person firms and firms in the financial and agriculture sectors.

[18] Note that by excluding, e.g. a German-owned MNE in France, we avoid the possibility of a French affiliate that is indirectly linked to a tax haven.

socio-professional occupation types. From these data we can thus construct the annual number of firm employees by socio-professional category (*Professions et Catégories sociales*, PCS). Specifically, the French data are grouped into four occupational categories: (i) higher intellectual professionals (PCS code 3), (ii) intermediate professions (PCS code 4), (iii) white collars (PCS code 5) and (iv) blue collars (PCS codes 6).

To clean the data, we drop observations that reported negative values of employment, value added, or capital stocks. In order to have a clean control group, we also omitted those MNEs who entered then left tax havens. Table 1 reports the main descriptive statistics by firm type for the remaining 19,048 firms between 2001 and 2014. It can be seen from Table 1 that treated firms (those having a pre-ruling presence in a European tax haven) are much bigger both in terms of sales, value added, employment, and the total number of affiliates which indicates the need to use regression analysis to disentangle the relationship between tax havens and employment.[19] In addition, this table displays average numbers of the different types of workers in the sample.

Table 1: Main descriptive statistics by type of firm

	Treated firms	Control firms	All
Value added	31,190	8,403	12,364
Total sales	89,988	32,931	42,850
Employees	433	129	182
Affiliates	3.3	0.8	1.2
MNE Low wage country	0.016	0.0083	0.0096
Export intensity	0.17	0.19	0.19
Higher intellectual professionals (PCS 3)	93	28	39
Intermediate professions (PCS 4)	116	32	47
White collars (PCS 5)	95	42	51
Blue collars (PCS 6)	186	70	90
Number of firms	3,299	15,749	19,048
Observations	45,325	215,399	260,724

Note: Sales and VA in thousand euro.

Source: FICUS-FARE et LIFI.

[19] In Appendix **??** we trim the data by dropping observations in the bottom and top 1% of the distribution for sales, value added, and the number of foreign affiliates, an approach that makes the control and treatment groups more comparable given the firm size differences between them. Table **??** in the Appendix shows that by removing 9,681 observations, the groups become much more alike. Nevertheless, as the estimates there show, the overall results remain robust.

3.2 Norwegian Data

The analysis for Norway relies on administrative data from Statistics Norway (SSB) covering the universe of Norwegian firms and employees. Every resident in Norway is assigned a unique personal identifier that is present in all registers, allowing us to track individuals across datasets and over time using encrypted IDs. The same holds for corporations.

We obtain information on employment records for the working age population in Norway from two sources, the *Employer and Employee Registry* and *A-ordningen*.[20] These databases are constructed from mandatory employers' reports to the Norwegian Tax Authorities, Norwegian Labour and Welfare Administration (NAV), and SSB and provide a detailed overview of individual Norwegian employment conditions. This includes information on annual wages, bonus payments, contracted working hours, work location, an indicator for full-/part-time employment, and occupation. We keep employer-employee relationships for employees in full-time positions and complement this with information on union membership and educational background from the central population register.

A key feature in our analysis is the distinction of workers by education and occupation. We use the Norwegian Standard Classification of Education (NUS2000) to group workers into low-skill (up to lower secondary education), medium-skill (upper and post-secondary, non-tertiary education), and high-skill (tertiary education).[21] Occupation codes follow the Standard Classification of Occupations (STYRK-08) and are available up to the 4-digit level.[22] The granularity of the data thus allows us to go far beyond the conventional blue vs. white collar distinction of workers. We define three occupational categories: low-occupation (elementary occupations, plant and machine operators and assemblers, craft and related trades workers), medium-occupation (service and sales workers, clerical support workers), and high-occupation (managers, professionals, technicians and associate professionals).

Corporations in Norway submit annual income tax returns with detailed balance sheet and profit information. These statements include asset types, turnover, costs, municipality and industrial affiliation, among others, and provide the main firm-level variables used in the analysis. We complement the accounting data with two other transaction-level datasets. The foreign trade register informs about firms' international trade activities by 8-digit product category, transaction value and partner country. We categorize firms as exporters (importers) if their total export (import) sales in a given year are positive. Second, we use information on cross-border bank transfers from the currency register. With this dataset at hand, we are

[20]Due to a change in data collection in 2015, worker-level information from 2015 onward are drawn from the *A-ordningen* registry. For more information, see https://www.ssb.no/data-til-forskning/utlan-av-data-til-forskere/variabellister/a-ordningen.

[21]For more details on NUS2000, see https://www.ssb.no/en/klass/klassifikasjoner/36.

[22]For more details on STYRK-08, see https://www.ssb.no/en/klass/klassifikasjoner/7/koder.

able to infer the amount that a firm sends to countries with particularly tax-friendly environments.[23] Accordingly, as an additional measure of international exposure, we aggregate the amount of outward bank transfers by firm-year.

Data that permit the study of tax haven usage by MNEs must contain information on firms' foreign networks of affiliates. We assemble these information from three sources. First, we utilize the shareholder register which comprises all owners of Norwegian corporations together with their location and the exact direct ownership shares at year-end. Second, we identify the location and ownership shares of Norwegian-owned affiliates abroad from the Outward Foreign Direct Investment (OFDI) database. The OFDI information are based on annual mandatory surveys conducted by SSB of all Norwegian firms that directly control at least 20% of a foreign subsidiary. To further increase the coverage of overseas affiliates under Norwegian control, we make use of a third dataset, the Foreign Affiliate Statistics (FATS). FATS is an annual survey on the activities of foreign subsidiaries of the largest companies in Norway. Notably, only economically active affiliates that are majority-owned from Norway are included in the sample. The advantage of this dataset is that it traces both direct and indirect ownership links via other foreign entities. While the size of the sampling survey has steadily increased since its start in 2008, the largest units have been covered throughout.

We aggregate individual ownership shares at the firm-country-year level and, as is standard in the international economics literature, define a firm as an MNE if it is majority-owned from outside of Norway or controls itself a foreign entity with majority direct or indirect ownership. In this context, note that the measurement of profit shifting is inherently difficult and firms' use of tax havens may be motivated by other reasons than pure tax avoidance considerations.[24] Yet, foreign ownership is critical for MNEs to involve in legal cross-border tax planning and thus appropriately reflects the ability to shift profits. Davies et al. (2018) use French transaction-level data to show that few MNEs engage in profit shifting, in particular those with ownership linkages to tax havens. This is echoed in Godar (2021) and Alstadsæter et al. (2022) who provide evidence that establishing ownership presence in a tax haven significantly lowers the subsequent corporate profitability of German and Norwegian affiliates, respectively, a pattern consistent with profit-shifting behavior.

The ownership data exploited in this paper possess several important advantages over other commercial datasets that are frequently used in the profit-shifting literature, such as the ORBIS and AMADEUS databases by *Bureau van Dijk*. Most critically, as elucidated in Tørsløv et al. (2022*a*) and Fuest et al. (2022), ORBIS and AMADEUS only have limited coverage of subsidiaries in many countries, especially in tax havens. Contrasting ORBIS with

[23]See Alstadsæter et al. (2022) for a detailed description of these data.

[24]See Riedel (2018), among others, for a discussion and the characteristics of tax haven countries.

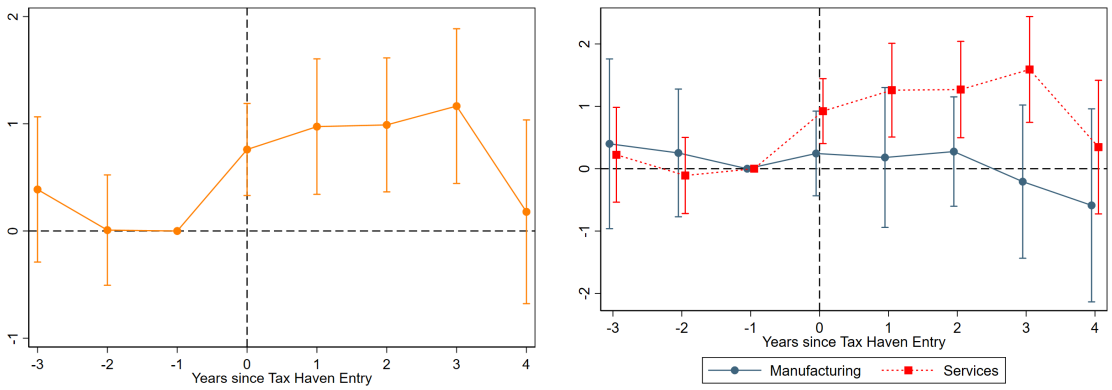
recently available country-by-country reports for Germany, Fuest et al. (2022) demonstrate that the incomplete picture is sizeable: ORBIS accounts for only 26% of German MNEs' affiliates in European tax havens and does not cover affiliates in tax havens outside of Europe at all. Hence, relying on ORBIS data in profit shifting regressions leads to severely biased estimates due to systematic measurement errors. The Norwegian administrative data overcome this issue and provide exhaustive information on the location of affiliated foreign companies based on mandatory annual surveys.

We restrict the analysis sample of Norway in several ways. First, given that information on international bank transfers and outward FDI is available only from 2008 onward, the study period spans the years 2008 to 2018. Second, due to their unique treatment in the Norwegian tax code, we exclude firms in the agriculture, forestry, fishing, mining and oil extraction industries. Third, we limit the analysis to economically active firms (in terms of positive turnover and total assets) with at least four employees and some positive amount of international exposure. Specifically, we focus on firms with positive exports, imports, bank transfers and/or foreign ownership links in at least one year in the sample. As is well documented in the international economics literature, firms that engage in foreign activities tend to be larger, more productive, and more profitable than purely domestic firms (see, e.g., Alfaro & Chen (2018) and Setzler & Tintelnot (2021)). Narrowing in on those firms with the highest potential for profit shifting in terms of size and global reach thereby allows for a cleaner comparison of treatment and control groups.

Imposing these restrictions yields an analysis sample of 36,147 firms and 315,352 firm-year observations. 239 out of 2,499 MNEs in Norway established ownership presence in a tax haven between 2008 and 2018. The majority of tax haven users operates in non-manufacturing industries (79%), partly reflecting the importance of intangible assets in these sectors. To provide supportive evidence that corporate ownership entry in a tax haven (at least partly) reflects profit-shifting activities, we aggregate the value of bank transactions to tax haven destinations by firm-year and examine its dynamic responses to tax haven entry in Figure 1. We find a strong and persistent increase in the value of transactions to tax havens by on average 100% after gaining the first tax haven affiliate. This effect is mainly driven by service firms and suggestive of profit-shifting behavior.

In addition to the firm characteristics, the Norwegian data provides information on workers which is not available elsewhere, including in the French data. In particular, these data track movements of workers. As such, we are able to tell whether a given Norwegian worker switches firms, becomes unemployed, or emigrates from Norway. Furthermore, if they emigrate from Norway, we observe the destination country. Thus, the Norwegian employer-employee data allows us to see what happens to a worker who leaves a newly haven-using

Figure 1: Bank Transfers to Tax Havens and Tax Haven Entry



(a) All Firms (b) By Sector

Notes: This Figure presents dynamic effects of establishing majority-ownership presence in a tax haven on cross-border bank transfers to tax havens; estimated using OLS. The outcome variable is the logarithmic value of aggregate tax haven transactions by firm-year. Panel (a) provides results for all firms, Panel (b) by sectoral affiliation. Manufacturing firms are defined as those in industries 10-33 using the Standard Industrial Classification 2007 (SIC 2007). The specifications control for firm fixed effects and sector-year fixed effects Standard errors are clustered at the firm level. Point estimates and 90% confidence intervals depicted.

firm.

4 Tax Haven Use and Employment

In this section, we present our estimates of the relationship between MNEs' use of tax havens and employment. We begin with the French results because, by virtue of their earlier start date, we can use the Cadbury-Schweppes ruling for identification, thus pointint towards a causal impact of haven use. Although we are unable to do so for Norway, those data provide further support for the haven use and employment link. In addition, these data allow us to compare MNEs with haven affiliates to firms that simply do business with tax havens, thereby establishing the importance of affiliate ownership in our estimates.

4.1 France: Identification Strategy and Results

We examine the impact of the 2006 European Court of Justice (ECJ) ruling in the Cadbury Schweppes case on employment outcomes in France, focusing on four distinct occupational categories: higher intellectual professions (PCS 3), intermediate professions (PCS 4), white-collar workers (PCS 5), and blue-collar workers (PCS 6). Specifically, we investigate whether the weakening of anti-tax avoidance regulations—resulting from this ruling—has measurable

effects on employment levels, and, if so, how these effects differ across occupational groups.

Within a two-way fixed effects framework, we begin by estimating the *average effect over the sample period* of the Cadbury-Schweppes judgement. We then proceed to analyze the *dynamic effects* surrounding the ruling by implementing an event-study design, which enables us to examine the validity of the parallel trends assumption by inspecting potential pre-treatment dynamics. Our identification strategy relies on the assumption that the treated multinational enterprises (MNEs) could not have anticipated the European Court of Justice (ECJ) decision, implying that the ruling constitutes an exogenous shock from the perspective of the firm. The 2006 Cadbury Schweppes judgment thus provides a quasi-natural experiment, granting a regulatory advantage to MNEs with operations in European tax havens relative to those without such presence.

We treat the ruling as an exogenous shift that effectively relaxed the stringent conditions previously imposed by CFC rules on European MNEs seeking to establish subsidiaries in EU member states offering more favorable tax regimes and lower transparency requirements. Since CFC rules apply exclusively to European firms operating in European tax havens, we investigate whether employment in France changed after 2006 for European MNEs—with either a French or non-French European parent—that (i) have a presence in France (and are therefore recorded in the LIFI administrative database) and (ii) had established operations in a European tax haven prior to the ECJ ruling, relative to other MNEs included in the database with tax haven subsidiaries.

The difference-in-difference design assesses, therefore, the differential employment effect as registered in France after the ruling between firms with pre-ruling presence in a European tax haven ("the treated group") and non-haven MNEs ("control group"):

$$log(Employment_{it}) = \alpha + \beta \mathbb{1}[ECJ]_i \times \mathbb{1}[Post\,2005]_t + \gamma X_{it}^{'} + \delta_i + \zeta_{st} + \epsilon_{it} \qquad (1)$$

where $Employment_{it}$ alternatively represents the firm i's total number of workers or the number of each 1-digit category of workers (all in logarithms) in year t. $\mathbb{1}[Treated\ \ ECJ_i]$ is a dummy variable equal to one for treated firms, i.e. for those that were present in a European tax haven before the ECJ decision. $\mathbb{1}[Post\ \ 2005]$ equals one from 2006 onward, after the court's decision took place. $X_{it}^{'}$ is a vector of time-varying firm characteristics, including a dummy indicating whether the firm becomes an MNE during the sample period, a dummy indicating whether the firm has a new presence in a low-wage country (lwc), the MNE's number of foreign affiliates and its export intensity as measured by the total annual export value over total sales. δ_i and ζ_{st} are firm- and sector-year fixed effects, controlling for unobservable firm heterogeneity and sectoral time-varying heterogeneity, respectively. Finally, ϵ_{it} is the error term. We cluster standard errors at the firm level.

We moreover estimate the event study equivalent of Equation 1. An event study design allows decomposing the average post-ruling effect on employment and assessing the dynamic effects of the weakening in the CFC rules. Crucially, it allows us to inspect the existence of a common pre-trend between treated and control firms and assessing whether the two groups evolved in parallel before the ruling. Formally, we focus on the impact of the $Event_i$, which represents the date of the ECJ judgement on the Cadbury-Schweppes case, as follows:

$$log(Employment_{it}) = \sum_{j=2}^{J} \sigma_j \, \mathbb{1}[Lag\ j]_{it} + \sum_{k=1}^{K} \eta_t \, \mathbb{1}[Lead\ k]_{it} \; + \alpha \, X_{it}^{'} + \; \delta_i + \zeta_{st} + \epsilon_{it}, \quad (2)$$

where the set of dummy variables $Lag\ \ j$ and $Lead\ \ k$ denote the distance to the $Event_i$ of interest, which is the first entry into a tax haven, and are defined as:

$$\begin{aligned}
(Lag\ J)_{it} \; &= \; \mathbb{1}[\, t \; \leq \; Event_i \; - \; J] \\
(Lag\ j)_{it} \; &= \; \mathbb{1}[\, t \; = Event_i - j] \; for \; j \; \in \{1, ..., J-1\} \\
(Lead\ k)_{it} \; &= \; \mathbb{1}[\, t \; = Event_i \; + \; k] \; for \; k \; \in \{1, ..., K-1\} \\
(Lead\ K)_{it} \; &= \; \mathbb{1}[\, t \; \geq \; Event_i \; + \; K].
\end{aligned}$$

The terminal lags and leads in this specification capture all periods beyond $J = 7$ and $K = 4$, respectively.The reference period with respect to which we compare the effect of the ECJ ruling is $j = 1$, which is the year before the event. We include the same time-varying firm controls as in the static version. Under the conditional common trend assumption, the coefficients on the years before the ECJ decision should not be significantly different from zero. This would support the validity of our identification strategy and strengthen the causal interpretation of the post-ruling estimates.

Static employment effects. The results for the static specification are displayed in Table 2. The key finding is that the ECJ ruling had a statistically significant and economically meaningful negative impact on employment in firms with a pre-existing presence in a European tax haven. Specifically, employment in the French establishments of these firms declined on average by 6% following the decision (column (1)). These findings are consistent with those of Lopez-Forero (2021), who document that MNE entry into tax havens is asso-

Table 2: Employment Effects of the ECJ Decision

	ln number workers (1)	ln PCS 3 (2)	ln PCS 4 (3)	ln PCS 5 (4)	ln PCS 6 (5)
ECJ-treat × *post*2005	-0.06^a	-0.05^a	-0.03^a	-0.05^a	-0.02^c
	(0.00)	(0.01)	(0.01)	(0.01)	(0.01)
1[MNE]=1	0.07^a	0.06^a	0.06^a	0.05^a	0.04^a
	(0.00)	(0.00)	(0.00)	(0.00)	(0.00)
1[MNE lwc]=1	0.02	0.03	0.03	0.00	0.05^b
	(0.02)	(0.02)	(0.02)	(0.02)	(0.02)
Num. affiliates	-0.00^a	0.00	-0.00	-0.00	-0.00
	(0.00)	(0.00)	(0.00)	(0.00)	(0.00)
Export intensity	0.11^a	0.06^a	0.07^a	0.05^a	0.11^a
	(0.01)	(0.01)	(0.01)	(0.01)	(0.01)
N	260,662	223,907	223,078	218,974	178,476
Adjusted R^2	0.919	0.895	0.864	0.862	0.904
Firm FE	YES	YES	YES	YES	YES
Sector-Year FE	YES	YES	YES	YES	YES

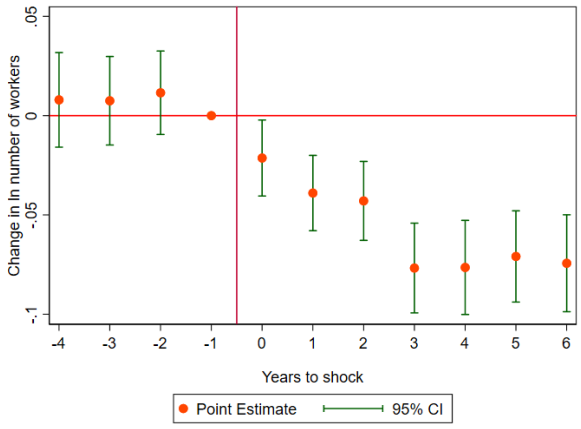
Note: Occupational categories are defined as follows: higher intellectual professionals (PCS 3), intermediate professions (PCS 4), white collars (PCS 5) and blue collars (PCS 6).
Robust standard errors in parentheses
^{c} $p < 0.10$, ^{b} $p < 0.05$, ^{a} $p < 0.01$

ciated with sharp reductions in the local wage bill in France, driven by corresponding job losses and an increase in mass layoff procedures. Moreover, the overall effect is highly heterogeneous across occupational categories. The decline in employment is most pronounced among higher intellectual professionals (PCS 3) and white-collar workers (PCS 5), both experiencing an average reduction of 5%. A statistically significant, though somewhat smaller, decline of 3% is observed for intermediate professionals (PCS 4). In contrast, the effect on blue-collar workers is less pronounced, amounting to a 2% decline, and is weaker both in magnitude and statistical significance. Table 3 reveals that the effects are more pronounced among MNEs operating in the service sectors as compared to manufacturing.

Dynamic employment effects. The main results from the event study design are depicted in Figures 2 through 4, which display the estimated dynamic treatment effects on the total number of employees as well as on disaggregated occupational categories. These results reinforce the findings from the static specification, confirming a large and persistent

negative impact of the weakening of controlled foreign corporation (CFC) rules—triggered by the ECJ's Cadbury-Schweppes ruling—on employment in affected firms. Figure 2 plots the estimated coefficients of year dummies reflecting the distance to 2006, the year of the ECJ judgement on the Cadbury-Schweppes case, both before and after the ruling. Even if there is no reason to believe that treated firms anticipated the ECJ decision, the absence of statistically significant pre-treatment coefficients across all specifications supports the common trends assumption and suggests that treated and control firms followed similar employment trajectories prior to the policy change. For overall firm employment, Figure 2 shows that the ECJ ruling induced a sharp and enduring decline in employment among treated firms. Specifically, the total number of employees fell by approximately 6% relative to control firms, a gap that remains stable and statistically significant for at least seven years following the ruling. Figure 4 distinguishes between manufacturing and service firms, showing negative effects on firm-level employment in both categories that are slightly more pronounced among service firms.

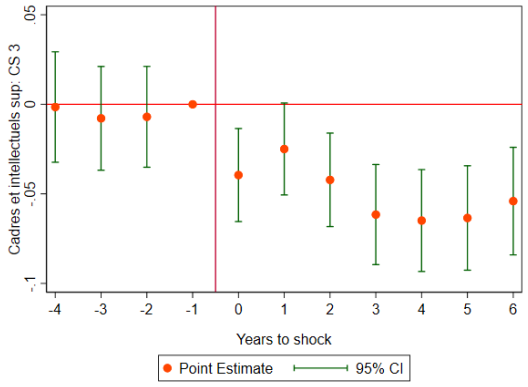
Figure 2: Number of Workers



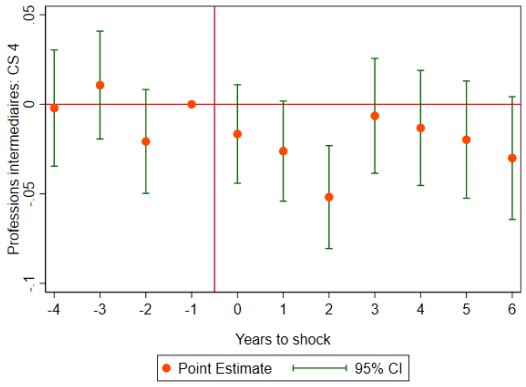
Notes: Plot of estimated coefficients of year dummies indicating the distance to the event of interest: ECJ 2006 judgment on Cadbury Schweppes case.

Figure 3: Effect on Different Employment Categories

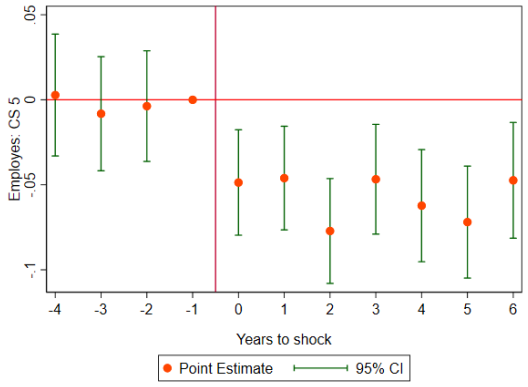
(a) PCS 3
Higher intellectual professionals



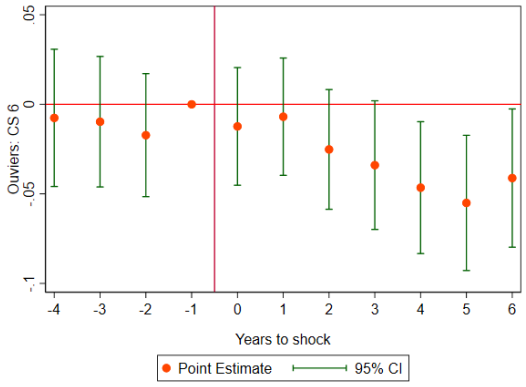
(b) PCS 4
Intermediate professions



(c) PCS 5
White collars



(d) PCS 6
Blue collars



Notes: Plot of estimated coefficients of year dummies indicating the distance to the event of interest: ECJ 2006 judgment on Cadbury Schweppes case.

Next, when we decompose the effect by employment categories, our estimation results reveal heterogeneous impacts across workers. Figure 4 plots the estimation results for the four different categories, "PCS 3 - higher intellectual professionals", "PCS 4 - Intermediate professions", "PCS 5 - White collars" and "PCS 6 - Blue collars". Estimates for higher intellectual professionals and for white collars respectively, show that the bulk of the effect is concentrated among these two employment categories. In both cases the effect is large (around -4%), sustained over time and statistically significant (at the 1 percent level and at the 5 percent level for higher intellectuals and for white collars, respectively) seven years after the policy change. While we do find clear declines in employment levels of higher-intellectual professionals across all MNEs affected by the ECJ decision, Figures 5 and 6 illustrate that

statistically significant effects on white-collar workers predominantly occur in service-sector MNEs.

The fact that the effect is strongly concentrated among high skilled workers (PCS 3) and white collars (PCS 5) – the latter being essentially administrative employees, can be related to two non-mutually exclusive explanations.[25]. First, the 2006 ECJ ruling stated that member states can restrict the European freedom of establishment only in cases where *"wholly artificial arrangement"* are aim at circumventing a national legislation. Even though the concept of *"wholly artificial arrangement"* is not defined in law, the ECJ decision certainly increased the need of demonstrating that the presence in the tax havens is not driven by the sole purpose of tax and regulatory avoidance in the case of letterboxes.[26]. These two categories of employees, may be easier to locate in offshore virtual offices as remote work can be more feasible, contributing to the firm's substance requirements while not needing a constant physical presence. Second, as the ECJ ruling restricted the application of national CFC rules, it certainly allowed European MNEs to aggressively make use of the freedom of establishment principle in order to circumvent costly national regulations, such as mass layoff legislation in France. These results align with the findings in Lopez-Forero (2021), and we refer to it as the opacity channel, which will be explained in detail in Section 5.

[25]More specifically, this employment category is composed of administrative, commercial, personal services, surveillance and security employees.

[26]Consulting companies advertise offshore virtual presence in order to comply with substance requirements. For instance, Confidus Solutions offers offshore services, where "the need for staff and physical premises may be met by the elegant and cost-effective solution of virtual office services". See: https://www.confiduss.com/en/services/incorporation/location/tax-haven/]

Table 3: Employment Effects of the ECJ Decision by Sectors

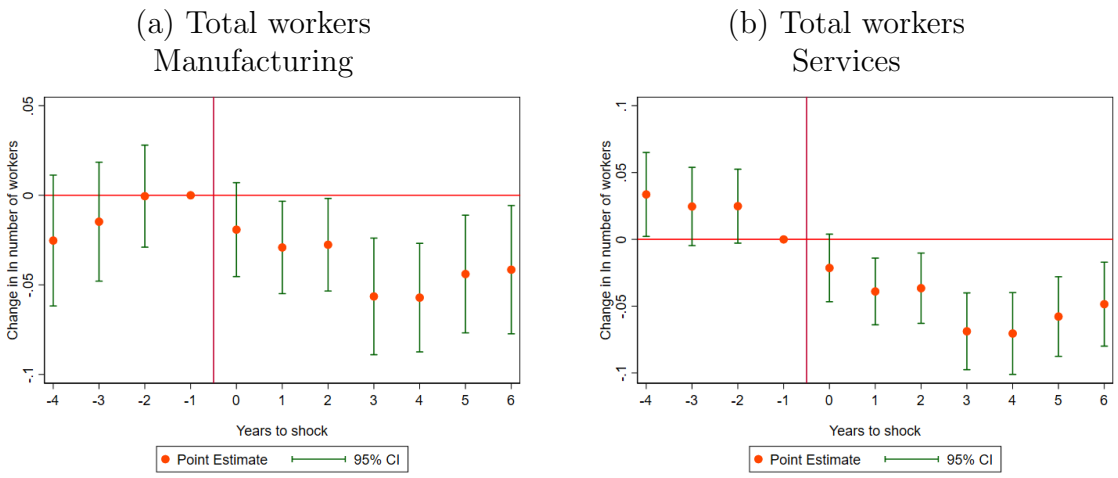
	Manufacturing				
	(1)	(2)	(3)	(4)	(5)
	ln num. workers	lncs3	lncs4	lncs5	lncs6
CJE-treated=1 × *post* − 2005 =1	-0.03[a]	-0.04[a]	-0.01	-0.04[a]	-0.03[b]
	(0.01)	(0.01)	(0.01)	(0.01)	(0.01)
1[MNE]=1	0.06[a]	0.07[a]	0.06[a]	0.04[a]	0.07[a]
	(0.01)	(0.01)	(0.01)	(0.01)	(0.01)
1[MNE lwc]=1	0.05[a]	0.07[a]	0.05[b]	0.00	0.09[a]
	(0.02)	(0.02)	(0.03)	(0.03)	(0.04)
Num. affiliates	-0.00[a]	-0.00	-0.00[c]	-0.00[c]	-0.00[a]
	(0.00)	(0.00)	(0.00)	(0.00)	(0.00)
Export intensity	0.21[a]	0.12[a]	0.21[a]	0.08[a]	0.27[a]
	(0.02)	(0.02)	(0.03)	(0.02)	(0.03)
N	74,919	74,919	74,919	74,919	74,919
Adjusted R^2	0.931	0.912	0.892	0.845	0.868
Firm FE	YES	YES	YES	YES	YES
Sector-Year FE	YES	YES	YES	YES	YES
	Services				
	(1)	(2)	(3)	(4)	(5)
	ln num. workers	lncs3	lncs4	lncs5	lncs6
CJE-treated=1 × *post* − 2005 =1	-0.08[a]	-0.04[a]	-0.04[a]	-0.05[a]	0.01
	(0.01)	(0.01)	(0.01)	(0.01)	(0.01)
1[MNE]=1	0.08[a]	0.07[a]	0.06[a]	0.05[a]	0.03[a]
	(0.00)	(0.00)	(0.00)	(0.00)	(0.00)
1[MNE lwc]=1	0.00	0.06[b]	0.06[b]	0.02	0.04
	(0.02)	(0.02)	(0.03)	(0.02)	(0.03)
Num. affiliates	-0.00[a]	0.00[b]	-0.00	0.00	-0.00
	(0.00)	(0.00)	(0.00)	(0.00)	(0.00)
Export intensity	0.07[a]	0.05[a]	0.02[c]	0.03[a]	0.06[a]
	(0.01)	(0.01)	(0.01)	(0.01)	(0.01)
N	185,733	185,733	185,733	185,733	185,733
Adjusted R^2	0.904	0.878	0.825	0.857	0.870
Firm FE	YES	YES	YES	YES	YES
Sector-Year FE	YES	YES	YES	YES	YES

intermediate professions (PCS 4), white collars (PCS 5) and blue collars (PCS 6).

Robust standard errors in parentheses

[c] $p < 0.10$, [b] $p < 0.05$, [a] $p < 0.01$

Figure 4: Effect on Total Employment by Sector



Notes: Plot of estimated coefficients of year dummies indicating the distance to the event of interest: ECJ 2006 judgment on Cadbury Schweppes case.

4.2 Norway: Identification Strategy and Results

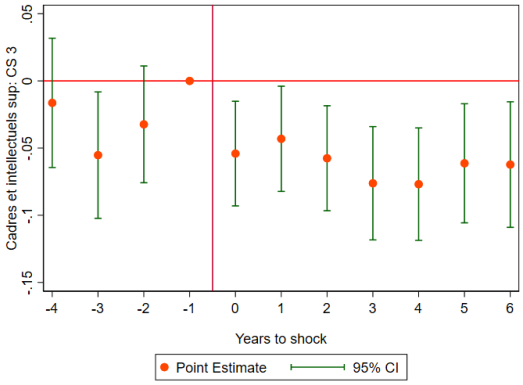
We provide support for our findings using rich administrative data on firms and workers in Norway. In the Norwegian context, we are unable to exploit the Cadbury Schweppes court judgement as a quasi-natural experiment due to the later start date of our outward FDI data. Instead, we adopt an alternative approach and capture profit-shifting opportunities through the establishment of a first affiliate in a tax haven jurisdiction. Specifically, to assess the impact of MNEs' use of tax havens on employment, we rely on a two-way fixed effects (TWFE) specification of the following form:

$$log(Employment_{it}) = \alpha + \beta \mathbb{1}[Tax\ Haven]_{it-1} + \gamma X'_{it-1} + \delta_i + \zeta_{st} + \varepsilon_{it} \tag{3}$$

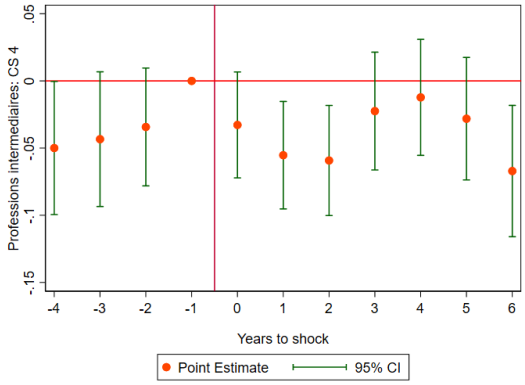
where the dependent variable $Employment_{it}$ denotes the number of workers of firm in Norway in year t. To analyze heterogenous responses across worker groups, this is disaggregated into educational or occupational categories. $\mathbb{1}[Tax\ Haven]_{it-1}$ is a binary variable equal to one if firm i is present in a tax haven (with a parent company or subsidiary) with majority ownership in year $t-1$. X'_{it-1} is a vector of lagged firm-level characteristics, including total fixed assets and turnover (both in logs). Additionally, we control for four measures of a firm's international engagement: the number of foreign affiliates and dummy variables indicating export, import and MNE status. With this set of controls, we are able to disentangle the effect of gaining a the first tax haven affiliate from gaining *any* new foreign affiliate. δ_i and ζ_{st} are firm- and two-digit sector-year fixed effects, respectively, that absorb time-invariant

Figure 5: Effect on Different Employment Categories in Manufacturing

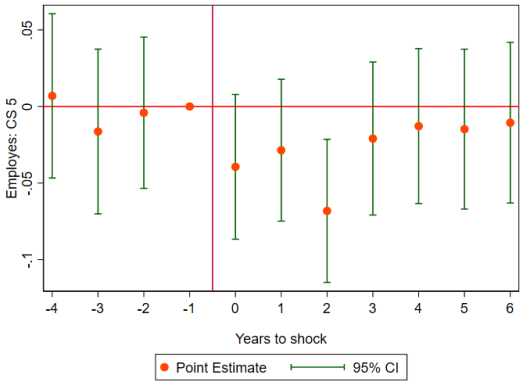
(a) PCS 3
Higher intellectual professionals



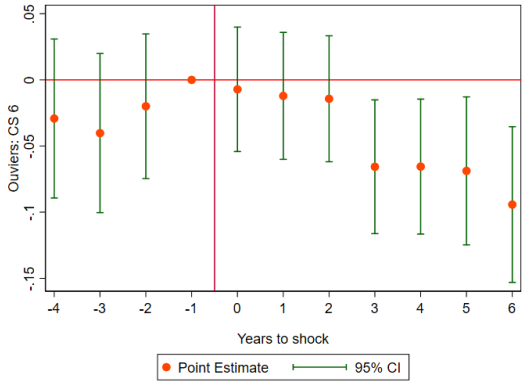
(b) PCS 4
Intermediate professions



(c) PCS 5
White collars



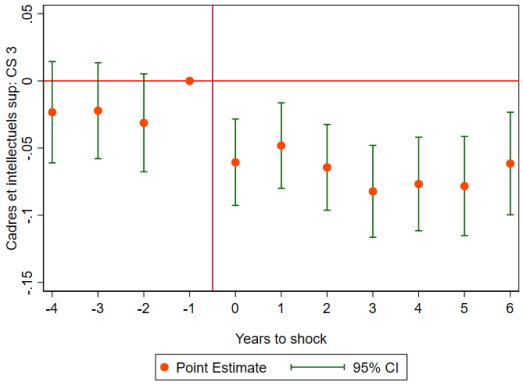
(d) PCS 6
Blue collars



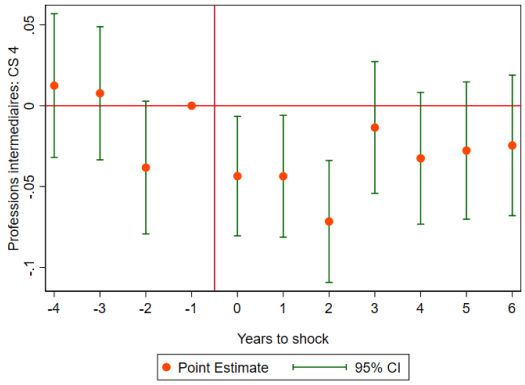
Notes: Plot of estimated coefficients of year dummies indicating the distance to the event of interest: ECJ 2006 judgment on Cadbury Schweppes case.

Figure 6: Effect on Different Employment Categories in Services

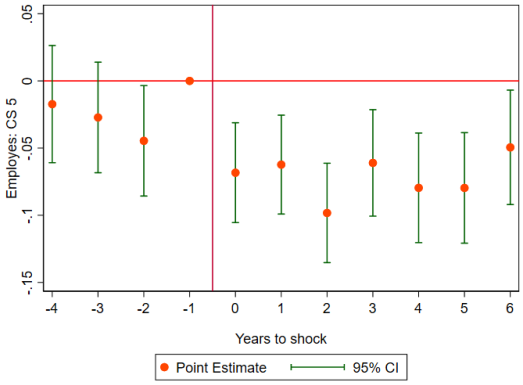
(a) PCS 3
Higher intellectual professionals



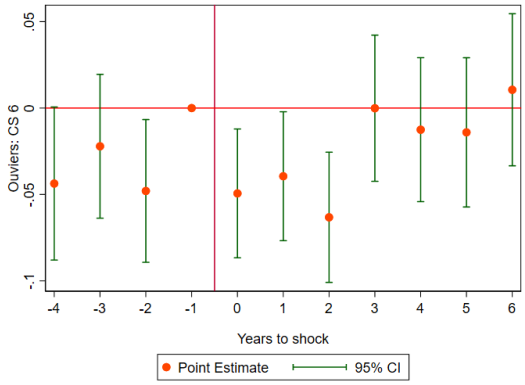
(b) PCS 4
Intermediate professions



(c) PCS 5
White collars



(d) PCS 6
Blue collars



Notes: Plot of estimated coefficients of year dummies indicating the distance to the event of interest: ECJ 2006 judgment on Cadbury Schweppes case.

differences across firms and differential time trends in employment across industries. ϵ_{it} is the error term. Since treatment is assigned to firms, we cluster standard errors at the firm level (Abadie et al. 2022).

The coefficient of interest, β, captures the average effect of tax haven use on domestic employment. Given the constellation of fixed effects, it is identified by firms establishing their first presence in a tax haven jurisdiction during the sample period. The identifying assumption for moving towards a causal interpretation of the parameter estimate is that, in the absence of treatment, employment in tax haven-affiliated and non-affiliated firms would have evolved along similar trends. It is conceivable that firms hire workers with specific expertise that facilitate setting up entities in a tax haven and facilitate profit shifting. Corresponding anticipation effects would violate the common trends assumption. While the inclusion of lagged explanatory variables in equation 3 addresses this concern, we provide further supportive evidence by showing that employment levels moved in parallel to tax haven entry.

Static employment effects. We start by estimating the impact of tax haven use on overall firm employment. As elucidated, identification stems from within-firm variation of switching into treatment, i.e. firms establishing their first tax haven affiliate over time. The baseline results for equation 3 are reported in Table 4, with the dependent variable being the logarithm of the total number of employees by firm-year. Column (1) displays parameter estimates for the whole sample of firms. The coefficient of the tax haven dummy is estimated to be negative and statistically significant, indicating that ownership entry in a tax haven is on average associated with 5.9% lower employment. Columns (2) and (3) differentiate between manufacturing and service industries. While the tax haven effect turns out statistically insignificant for manufacturing firms, we find a strong negative effect of 7.6% in the service sectors. Note that this is in contrast to the positive growth tendencies displayed by large, non-tax haven affiliated multinationals (see the positive coefficients for MNE status and general measures of firm size).

The magnitude of the estimates is comparable to the semi-elasticity of 6%-8% that we find in the French data. As spelled out in the theoretical motivation, there are several mechanisms that may drive this pattern. First, tax havens provide opacity that allows firms to bypass costly regulations at home. Second, expanding abroad opens the possibility of offshoring. The potential for tax-motivated offshoring and general equilibrium effects of profit-shifting opportunities have been shown by Bilicka et al. (2022) and Williams (2018).

Theoretical reasoning moreover suggests that employment effects of strategic tax haven use may not be homogeneous across workers groups but accrue to specific groups only. Table 5 provides the regression results of Equation 3 distinguishing by education (Panels A

Table 4: Tax Haven Presence and Firm Employment, All Workers

	(1)	(2)	(3)
	All Firms	Manuf.	Services
Tax Haven	–0.059**	–0.038	–0.076**
	(0.027)	(0.051)	(0.031)
MNE	0.031**	0.000	0.042***
	(0.013)	(0.027)	(0.015)
Numb. Foreign Affiliates	–0.004	–0.002	–0.004
	(0.003)	(0.005)	(0.004)
log(Turnover)	0.334***	0.305***	0.336***
	(0.005)	(0.012)	(0.005)
log(Total Fixed Assets)	0.034***	0.039***	0.033***
	(0.001)	(0.004)	(0.001)
Exporter	0.014***	0.011**	0.015***
	(0.002)	(0.005)	(0.003)
Importer	0.012***	0.005	0.013***
	(0.002)	(0.007)	(0.002)
N	273,877	34,831	238,877
R^2	0.945	0.965	0.941
Firm FE	YES	YES	YES
Sector-Year FE	YES	YES	YES

Notes: The outcome variable is the logarithmic total number of employees by firm-year. Standard errors in parentheses are clustered at the firm level. All explanatory variables are lagged by one year. Manufacturing firms are defined as those in industries 10-33 using the Standard Industrial Classification 2007 (SIC 2007). */**/*** indicates significance at the 10/5/1% levels.

- C) and occupation (Panels D - F). In columns (1) - (3), we employ a standard TWFE estimation and again categorize firms by sectoral affiliation. Additionally, we account for the possibility of zeros in the dependent variable and apply a Pseudo-Poisson Maximum Likelihood (PPML) estimator as proposed by Silva & Tenreyro (2006).[27] The corresponding estimates are displayed in columns (4) - (6). For visibility purposes, we confine the presentation to the tax haven variable of interest. The results reveal substantial heterogeneity across specifications. For high-skill employees, we find a negative and marginally significant effect on employment in service firms (Panel A). This effect is even more pronounced for employees classified as medium skill, but loses statical significance with PPML estimation

[27] 23% of firm-year observations take the value zero for high-skill employees, 2% for medium-skill employees, and 15% for low-skill employees; regarding occupation, this amounts to 15% for high-occupation employees, 13% for medium-occupation employees, and 37% for low-occupation employees. Note that while dependent variables enter PPML estimation in level form, the parameter estimates can be interpreted as (semi-)elasticities.

(Panel B). Employment responses for low-skill employees appear negligible and remain statistically insignificant throughout (Panel C). When grouping workers according to their rank in the occupation distribution, we find that establishing ownership linkages to tax havens is related to a notably decline in domestic employment in the highest occupation categories by around 8% (Panel D). Again, this effect is governed by tax haven firms in service industries and becomes larger in magnitude when applying the PPML estimator. For workers in other occupation groups we do not discern robust employment consequences (Panels E and F). Overall, the results are in line with our findings from France and point to a changing workforce composition in response to tax haven entry. We further provide a series of sensitivity tests to show that our results are robust to alternative choices of control groups. Specifically, when restricting our sample to only MNEs (Table 7) or firms that have international bank transfers to tax havens during the years 2008 and 2018 (Table 8), we also find negative employment effects for the highest occupation groups.

Dynamic employment effects. To alleviate concerns that firms systematically change their hiring decisions ahead of expanding to tax havens, rendering it difficult to draw any causal conclusions, we estimate a dynamic version of the TWFE model formulated in equation 3. To obtain unbiased estimates in any difference-in-differences setting, the common trends assumption needs to hold. In the present case, the common trends assumption implies that employment in tax haven-using and non-using firms would have evolved in parallel absent ownership entry in a tax haven. While this identifying assumption is not directly testable, visual inspection of trends in pre-treatment periods is a commonly used practice for evaluation. Dynamic treatment effects are provided in Figure 7. Panel (a) presents the results for the whole sample, while Panel (b) separates between firms in manufacturing and service industries. The insignificant pre-treatment coefficients indicate that employment trends emerged in parallel prior to tax haven entry. Subsequently, employment in firms that establish a tax haven ownership connection gradually declines after the year of treatment. The point estimates for both manufacturing and service firms are negative, but considerably larger and statistically significant only for the latter group.

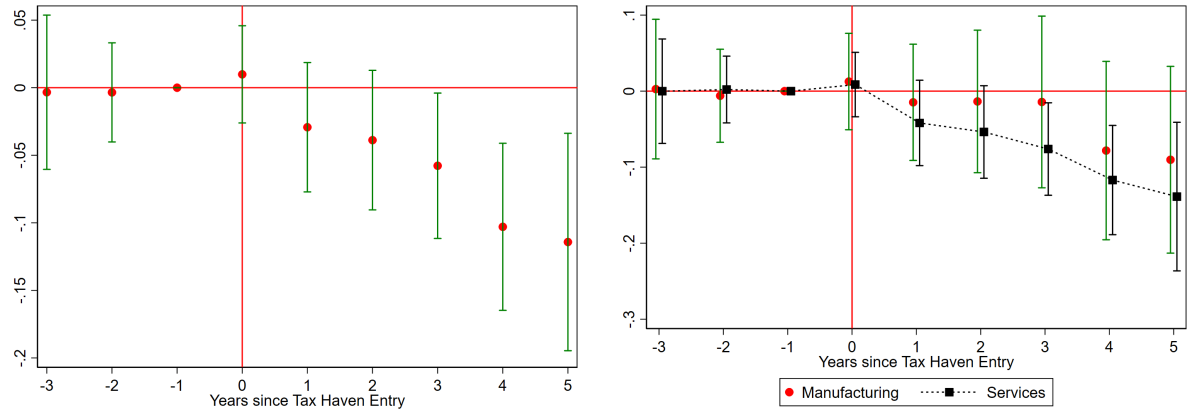
Figure 8 differentiates workers by skill levels. Again, we do not find an indication of diverging employment trends prior to treatment, lending support to the common trend assumption. We document a relative drop in employment post entry for high-skill and middle employees for tax haven using firms. Low-skill employees do not appear to be affected. Figure 9 repeats this exercise for workers in different occupations. As is the case using our French data, the estimates highlight that tax-haven use is associated with a subsequent decline in employment for high-occupation employees, predominantly in service sectors. We

Table 5: Tax Haven Presence and Firm Employment, By Education and Occupation

	(1) OLS	(2) OLS	(3) OLS	(4) PPML	(5) PPML	(6) PPML
	All Firms	Manuf.	Services	All Firms	Manuf.	Services
Panel A: High-Skill Employees						
Tax Haven	–0.040	0.026	–0.072*	–0.093	–0.093	–0.101*
	(0.032)	(0.052)	(0.039)	(0.047)	(0.075)	(0.063)
N	212,188	27,016	185,024	247,712	31,509	215,933
(Pseudo) R^2	0.924	0.936	0.922	0.911	0.918	0.9103
Panel B: Medium-Skill Employees						
Tax Haven	-0.081***	–0.085	–0.082**	–0.054	–0.095*	-0.047
	(0.030)	(0.055)	(0.034)	(0.059)	(0.053)	(0.090)
N	268,255	34,6528	233,433	272,137	34,793	237,175
(Pseudo) R^2	0.923	0.953	0.917	0.913	0.921	0.911
Panel C: Low-Skill Employees						
Tax Haven	–0.042	–0.079	–0.046	0.016	–0.065	0.081
	(0.043)	(0.064)	(0.053)	(0.098)	(0.054)	(0.136)
N	232,121	32,0206	199,936	259,146	34,035	224,852
(Pseudo) R^2	0.883	0.912	0.878	0.876	0.838	0.881
Panel D: High-Occupation Employees						
Tax Haven	–0.055*	0.003	–0.078**	–0.134***	–0.114	–0.202***
	(0.032)	(0.058)	(0.038)	(0.045)	(0.067)	(0.058)
N	240,100	31,734	208,203	260,351	33,558	226,563
(Pseudo) R^2	0.940	0.946	0.939	0.916	0.936	0.912
Panel E: Medium-Occupation Employees						
Tax Haven	–0.043	–0.095	–0.024	–0.094	–0.067	–0.102
	(0.044)	(0.068)	(0.054)	(0.131)	(0.059)	(0.149)
N	210,098	24,765	185,179	242,258	29,685	212,251
(Pseudo) R^2	0.922	0.908	0.923	0.929	0.798	0.933
Panel F: Low-Occupation Employees						
Tax Haven	–0.047	–0.087	–0.106	0.059	–0.124**	0.417
	(0.076)	(0.077)	(0.106)	(0.097)	(0.058)	(0.267)
N	173,464	33,316	139,995	207,658	34,16	173,212
(Pseudo) R^2	0.926	0.937	0.921	0.906	0.910	0.902
Controls	YES	YES	YES	YES	YES	YES
Firm FE	YES	YES	YES	YES	YES	YES
Sector-Year FE	YES	YES	YES	YES	YES	YES

Notes: This Table reports the estimated effects of tax haven use on employment for different worker groups using OLS (columns (1) - (3)) and PPML (columns (4) - (6)). The outcome variables are the firm-year-level total number of employees by education (Panels A - C) and occupation (Panels D - F) in logarithms (columns (1) - (3)) and levels (columns (4) - (6)). Standard errors in parentheses are clustered at the firm level. All explanatory variables are lagged by one year. Manufacturing firms are defined as those in industries 10-33 using the Standard Industrial Classification 2007 (SIC 2007). */**/*** indicates significance at the 10/5/1% levels.

Figure 7: Employment Dynamics Before and After Tax Haven Entry, All Workers



(a) All Firms

(b) By Sector

Notes: This Figure presents dynamic effects of establishing majority-ownership presence in a tax haven on firm-level employment growth; estimated with OLS. The outcome variable is the logarithmic number of employees by firm-year. Panel (a) provides results for all firms, Panel (b) by sectoral affiliation. Manufacturing firms are defined as those in industries 10-33 using the Standard Industrial Classification 2007 (SIC 2007). The specifications control for firm fixed effects, sector-year fixed effects and the firm-level variables described in the main text. Standard errors are clustered at the firm level. Point estimates and 90% confidence intervals depicted.

do not detect any statistically significant effects for workers in lower occupations.

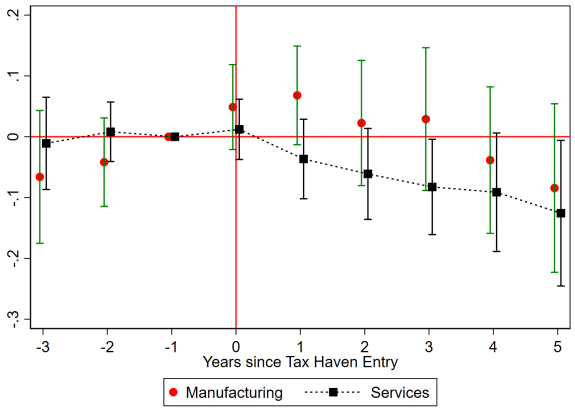
5 Mechanisms

To unveil the underlying mechanisms of our results, we make use of the richness of our available data sources for both Norway and France.

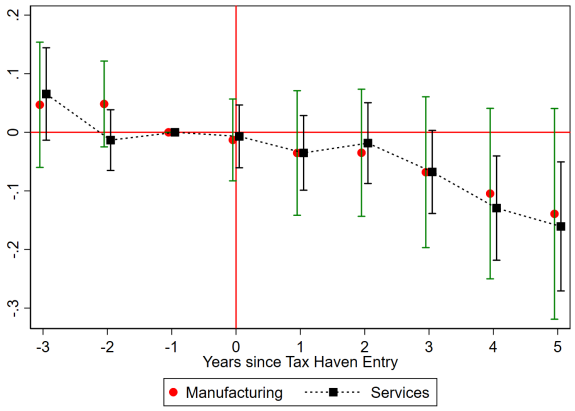
5.1 Substance Requirements

The granularity of the Norwegian micro data allows us to link firm operations with detailed employment- and migration histories. Hence, we are able to track individuals across time as well as across firms and countries. To examine whether MNEs actually relocate some employees to facilitate profit shifting and meet substance requirements in certain low-tax jurisdictions, we correlate an individual's decision to migrate to a tax haven with her employer's tax haven affiliation. The results are reported in Table 6. We find a positive and significant association between haven usage and subsequent movement to the tax haven. Notably, this effect is driven by high-skilled employees (Column (2)). Restricting our sample to migrants only, we find that high-skilled employees are on average 6% more likely to move

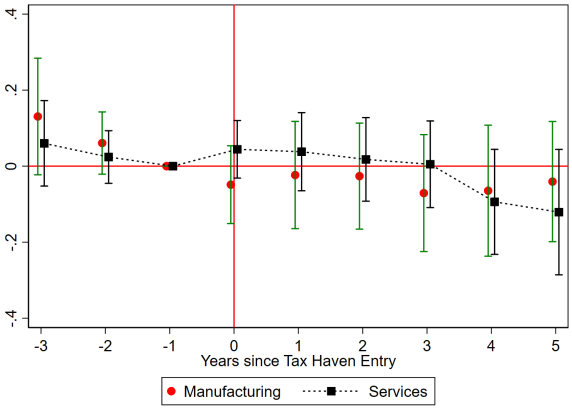
Figure 8: Employment Dynamics Before and After Tax Haven Entry, By Education



(a) High-Skill Employees



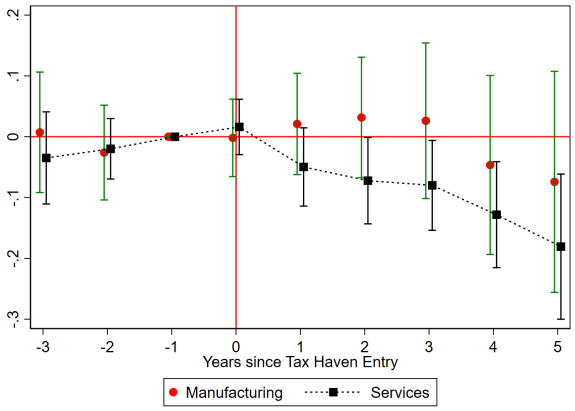
(b) Medium-Skill Employees



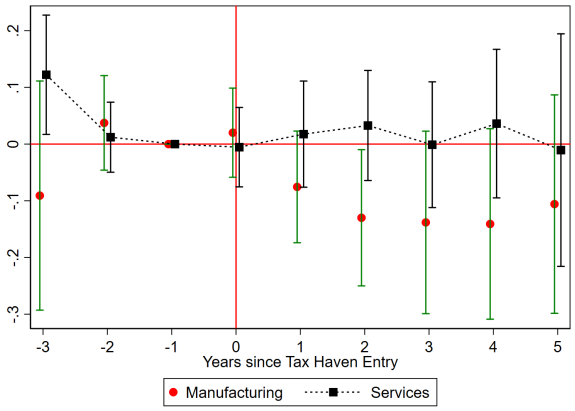
(c) Low-Skill Employees

Notes: This Figure presents dynamic effects of establishing majority-ownership presence in a tax haven on firm-level employment; estimated with OLS-TWFE. The outcome variables are the logarithmic number of employees by firm-year and education group as classified in the main text. Panel (a) provides results for high-skill employees, Panel (b) for medium-skill employees, and Panel (c) for low-skill employees. Manufacturing firms are defined as those in industries 10-33 using the Standard Industrial Classification 2007 (SIC 2007). The specifications control for firm fixed effects, industry-year fixed effects and the firm-level variables described in the main text. Standard errors are clustered at the firm level. Point estimates and 90% confidence intervals depicted.

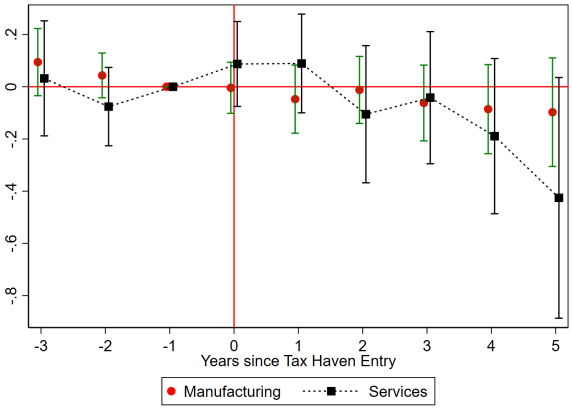
Figure 9: Employment Dynamics Before and After Tax Haven Entry, By Occupation



(a) High-Occupation Employees



(b) Medium-Occupation Employees



(c) Low-Occupation Employees

Notes: This Figure presents dynamic effects of establishing majority-ownership presence in a tax haven on firm-level employment; estimated with OLS-TWFE. The outcome variables are the logarithmic number of employees by firm-year and occupation group as classified in the main text. Panel (a) provides results for high-occupation employees, Panel (b) for medium-occupation employees, and Panel (c) for low-occupation employees. Manufacturing firms are defined as those in industries 10-33 using the Standard Industrial Classification 2007 (SIC 2007). The specifications control for firm fixed effects, industry-year fixed effects and the firm-level variables described in the main text. Standard errors are clustered at the firm level. Point estimates and 90% confidence intervals depicted.

to a tax haven when they worked for a tax haven using firm. Although we do not assert a causal relationship, this lends support for our hypothesis that MNEs have an incentive to reshuffle workforce to low-tax locations in order to justify its outsized payments to tax havens and display economic activity.

Table 6: Tax Haven Migration and Firms' Tax Haven Use, Norway

	(1)	(2)	(3)	(4)
	All Workers	All Workers	Migrants Only	Migrants Only
Tax Haven	0.0004**	–0.0001*	0.0469***	0.0060
	(0.0002)	(0.0001)	(0.0132)	(0.0117)
Tax Haven x High Skill		0.0015***		0.0647***
		(0.0003)		(0.0197)
N	8,468,552	8,460,984	98,580	97,381
R^2	0.0000	0.0001	0.0014	0.0019

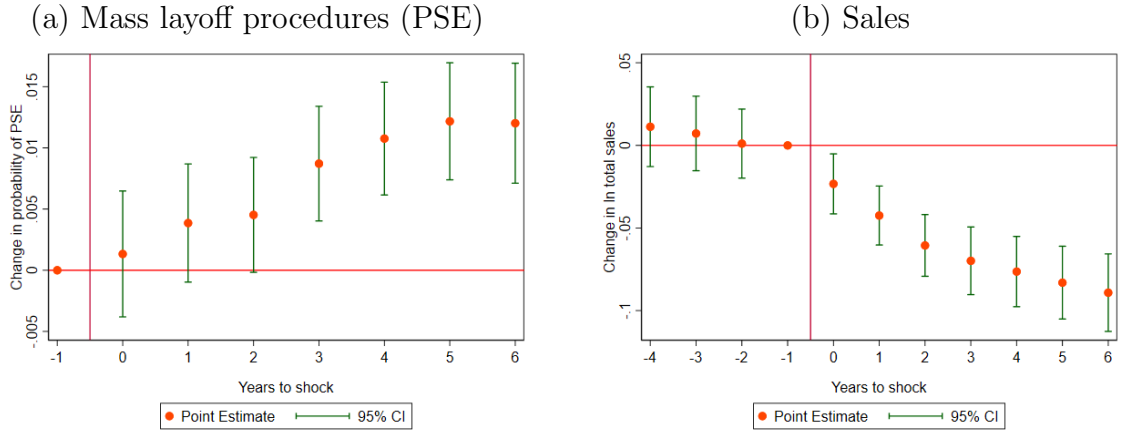
Notes: The dependent variable is an indicator equal to one if the employee migrates to a tax haven country (as defined by Tørsløv et al. (2023)) during 2008 and 2018. High-skilled workers are defined as those with tertiary education according to the Norwegian Standard Classification of Education. 1,354 individuals employed by firms in the sample migrated to a tax haven during 2008-2018, 39,636 individuals migrated to a non-haven. Standard errors clustered at the firm level in parentheses. Year fixed effects included. */**/*** indicates significance at the 10/5/1% levels.

5.2 Secrecy

While our French data sources do not allow us to trace individual workers, they offer certain advantages over our Norwegian data. First, as mentioned earlier, it allows exploiting the exogenous 2006 ECJ ruling and assess a causal effect. Second, French data includes information on company collective agreements, allowing us to track the number of mass layoff procedures carried out by a given firm in a given year. This is crucial, as the opacity channel we identify is directly linked to regulations governing mass layoff procedures or a *Plan de Sauvegarde de l'emploi* (PSE) in French. As previously argued in Lopez-Forero (2021), in the context of corporate restructuring, where mass layoffs in France have to be accepted by a judge and are particularly expensive, MNEs may seek to make use of their affiliates in OFCs in order to justify mass layoffs and to reduce the costs that it entails -once it is accepted by the judge. The intuition behind this argument is that mass layoff procedures, are only accepted by the judge if the firm is in bad economic health and this can be justified in cases where the firm suffers a sustained decline in its sales. In this case, OFCs' opacity enables

artificially reducing sales at home, as well as reducing profit, which in turn, reduces the cost of the mass layoff procedure. We bring evidence in this direction by inspecting the effect of the ruling on different variables that can be an indicator of the usage of tax havens to carry out mass layoffs in France, as in Lopez-Forero (2021). These results are displayed in Figure 10 where we show that the ECJ decision had also a negative impact on the firms' total sales (Panel (b)) and a positive impact on the probability of carrying out the legal procedure that entails a mass layoff in France, the PSE (Panel (a)).

Figure 10: Sales and Mass Layoff Procedures (PSE)



Notes: Plot of estimated coefficients of year dummies indicating the distance to the event of interest: ECJ 2006 judgment on Cadbury Schweppes case.

6 Conclusion

In light of various tax scandals and data leaks documenting the extensive use of offshore financial centres for tax purposes, the last decade has produced a thriving research agenda on the global scale of tax non-compliance. In particular, given its relevance for domestic revenue collection, the taxation of multinational corporations has been put to the fore of political debates. While the prior literature has mainly focused on quantifying revenue losses associated with MNEs' tax-saving strategies, little is known about the real behavioral consequences of corporate tax avoidance. This paper contributes to filling this gap and demonstrates the facilitated profit-shifting opportunities systematically alter firms' employment decisions.

Using rich administrative data sources from France and Norway that combine worker records with information on firms' balance sheets and international activities, we estimate difference-in-differences models to study employment responses to MNE usage of tax haven entities. Our findings suggest that establishing ownership presence in a tax haven country

is associated with a gradual decline in domestic employment levels, primarily in service industries. This is corroborated by exploiting a court judgment that weakened European anti-tax avoidance rules for causal identification. In particular, we provide robust evidence that the negative effects are pronounced for employees in the highest occupations.

Policy implications of our results are at least twofold. First, opacity in offshore financial centers can allow firms to circumvent national rules that go beyond the fiscal sphere and which translate into higher costs for firms, such as strong employment protection regulation. Second, the "substance requirements", in the global negotiations of international corporate taxation such as the BEPS at the OECD and BEFIT in Europe, stipulate that MNEs need to demonstrate a minimum level of genuine economic activity in order to avoid being considered as engaging in harmful tax practices. These requirements can provide incentives for firms to relocate some workers in tax havens - without corresponding economic activity - in order to meet employment premises in tax havens.

As the literature exploring the wider implications of tax havens is still in its infancy, numerous unanswered questions remain. A significant hindrance to conducting a comprehensive analysis of the real effects of MNEs' tax haven activities has been the limited availability of suitable micro-level data. While its fallout on tax collection has prompted policy responses from national governments and international organizations, an understanding of the broader nature of tax avoidance is crucial to help design more targeted and effective countermeasures. This paper sheds light on the potentially adverse labor maarket effects of tax haven use for high-tax locations and emphasizes the need to look beyond financial implications when assessing overall welfare effects. More research in this direction is warranted to unveil the various ways in which tax havens shape domestic market structures.

References

Abadie, A., Athey, S., Imbens, G. W. & Wooldridge, J. M. (2022), 'When Should You Adjust Standard Errors for Clustering?', *The Quarterly Journal of Economics* **138**(1), 1–35.

Agrawal, D. R. & Todtenhaupt, M. (2022), Are Domestic Workers Affected by Foreign Tax Cuts?, SSRN Working Paper 4256605.

Alfaro, L. & Chen, M. X. (2018), 'Selection and Market Reallocation: Productivity Gains from Multinational Production', *American Economic Journal: Economic Policy* **10**(2), 1–38.

Alstadsæter, A., Bjørkheim, J. B., Davies, R. B. & Scheuerer, J. (2022), 'Pennies from haven: Wages and profit shifting'.

Alstadsæter, A., Bjørkheim, J. B., Davies, R. B. & Scheuerer, J. (2022), Pennies from Haven: Wages and Profit Shifting, CESifo Working Paper Series 9590.

Alstadsæter, A., Davies, R. B., Parenti, M. & Toubal, F. (2024), The Real Effects of Tax Havens, *in* A. Lejour & D. Schindler, eds, 'Research Handbook on Tax Havens', Edward Elgar Publishing, Cheltenham.

Alvarez-Martínez, M. T., Barrios, S., d'Andria, D., Gesualdo, M., Nicodeme, G. & Pycroft, J. (2022), 'How large is the corporate tax base erosion and profit shifting? A general equilibrium approach', *Economic Systems Research* **34**(2), 167–198.

Arulampalam, W., Devereux, M. P. & Maffini, G. (2012), 'The direct incidence of corporate income tax on wages', *European Economic Review* **56**(6), 1038–1054.

Beer, S., de Mooij, R. & Liu, L. (2020), 'International corporate tax avoidance: A review of the channels, magnitudes, and blind spots', *Journal of Economic Surveys* **34**(3), 660–688.

Bilicka, K. (2024), 'Labor market consequences of antitax avoidance policies', *International Tax and Public Finance* .

Bilicka, K., Dubinina, E. & Janský, P. (2023), Fiscal Consequences of Corporate Tax Avoidance, CESifo Working Paper Series 10415.

Bilicka, K., Qi, Y. & Xing, J. (2022), 'Real responses to anti-tax avoidance: Evidence from the UK Worldwide Debt Cap', *Journal of Public Economics* **214**, 104742.

Bricongne, J.-C., Delpeuch, S. & Lopez-Forero, M. (2023), 'Productivity slowdown and tax havens: Where is measured value creation?', *Journal of International Economics* **143**, 103757.

Buettner, T., Overesch, M. & Wamser, G. (2018), 'Anti profit-shifting rules and foreign direct investment', *International Tax and Public Finance* **25**(3), 553–580.

Clausing, K. A. (2013), 'Who Pays the Corporate Tax in a Global Economy?', *National Tax Journal* **66**(1), 151–184.

Clausing, K. A. (2020), 'Five lessons on profit shifting from us country-by-country data', *Tax Notes Federal* **169**(6), 925–940.

Crivelli, E., de Mooij, R. & Keen, M. (2016), 'Base Erosion, Profit Shifting and Developing Countries', *FinanzArchiv: Public Finance Analysis* **72**(3), 268–301.

Davies, R. B. & Killeen, N. (2018), 'Location decisions of non-bank financial foreign direct investment: Firm-level evidence from europe', *Review of International Economics* **26**(2), 378–403.

Davies, R. B. & Markusen, J. R. (2021), 'What do multinationals do? the structure of multinational firms' international activities', *The World Economy* **44**(12), 3444–3481. **URL:** *https://doi.org/10.1111/twec.13199*

Davies, R. B., Martin, J., Parenti, M. & Toubal, F. (2018), 'Knocking on tax haven's door: Multinational firms and transfer pricing', *The Review of Economics and Statistics* **100**(1), 120–134.

Fuest, C., Hugger, F. & Neumeier, F. (2022), 'Corporate profit shifting and the role of tax havens: Evidence from German country-by-country reporting data', *Journal of Economic Behavior & Organization* **194**, 454–477.

Fuest, C., Peichl, A. & Siegloch, S. (2018), 'Do Higher Corporate Taxes Reduce Wages? Micro Evidence from Germany', *American Economic Review* **108**(2), 393–418.

Garcia-Bernardo, J., Janský, P. & Zucman, G. (2022), Did the Tax Cuts and Jobs Act Reduce Profit Shifting by US Multinational Companies?, Working Paper 30086, National Bureau of Economic Research.

Gauß, P., Kortenhaus, M., Riedel, N. & Simmler, M. (2024), 'Leveling the playing field: Constraints on multinational profit shifting and the performance of national firms', *Journal of Public Economics* **234**, 105116.

Giroud, X. & Rauh, J. (2019), 'State Taxation and the Reallocation of Business Activity: Evidence from Establishment-Level Data', *Journal of Political Economy* **127**(3), 1262–1316.

Godar, S. (2021), 'Tax-Haven Investors and Corporate Profitability - Evidence of Profit Shifting by German Affiliates of Multinational Firms', *FinanzArchiv: Public Finance Analysis* **77**(4), 345–375.

Guvenen, F., Mataloni, Raymond J., J., Rassier, D. G. & Ruhl, K. J. (2022), 'Offshore Profit Shifting and Aggregate Measurement: Balance of Payments, Foreign Investment, Productivity, and the Labor Share', *American Economic Review* **112**(6), 1848–84.

Harrison, A. E. & McMillan, M. S. (2011), 'Offshoring jobs? multinationals and u.s. manufacturing employment', *The Review of Economics and Statistics* **93**(3), 857–875.

Heckemeyer, J. H. & Overesch, M. (2017), 'Multinationals' profit response to tax differentials: Effect size and shifting channels', *Canadian Journal of Economics/Revue canadienne d'économique* **50**(4), 965–994.

Helpman, E. (1984), 'A simple theory of international trade with multinational corporations', *Journal of Political Economy* **92**(3), 451–471.

Helpman, E., Melitz, M. J. & Yeaple, S. R. (2004), 'Export versus fdi with heterogeneous firms', *American Economic Review* **94**(1), 300–316.
URL: *https://www.aeaweb.org/articles?id=10.1257/000282804322970814*

Hines, J. R. & Rice, E. M. (1994*a*), 'Fiscal Paradise: Foreign Tax Havens and American Business', *The Quarterly Journal of Economics* **109**(1), 149–182.

Hines, J. & Rice, E. M. (1994*b*), 'Fiscal paradise: Foreign tax havens and american business', *The Quarterly Journal of Economics* **109**(1), 149–182.
URL: *https://EconPapers.repec.org/RePEc:oup:qjecon:v:109:y:1994:i:1:p:149-182.*

Hummels, D., Munch, J. R. & Xiang, C. (2018), 'Offshoring and labor markets', *Journal of Economic Literature* **56**(3), 981–1028.

Jacob, M. (2022), 'Real Effects of Corporate Taxation: A Review', *European Accounting Review* **31**(1), 269–296.

Klemm, A. D. & Liu, L. (2019), The Impact of Profit Shifting on Economic Activity and Tax Competition, IMF Working Papers 287.

Krautheim, S. & Schmidt-Eisenlohr, T. (2016), 'Wages and international tax competition', *Review of International Economics* **24**(5), 893–923.

Leiponen, A. (2005), 'Skills and innovation', *International Journal of Industrial Organization* **23**(5), 303–323.

Ljungqvist, A. & Smolyanski, M. (2016), To Cut or Not To Cut? On the Impact of Corporate Taxes on Employment and Income, FEDS Working Paper 2016-6.

Lopez-Forero, M. (2021), 'Aggregate inequalities and tax havens: Things are not always what they seem', *Mimeo* .

Markusen, J. R. (1984), 'Multinationals, multi-plant economies, and the gains from trade', *Journal of International Economics* **16**(3–4), 205–226.

Martin, J., Parenti, M. & Toubal, F. (2022), Corporate tax avoidance and sales: Micro evidence and aggregate implications, CEPR Discussion Paper 15060.

Ohrn, E. (2023), 'Corporate tax breaks and executive compensation', *American Economic Journal: Economic Policy* **15**(3), 215–55.

Overesch, M., Schindler, D. & Wamser, G. (2024), Design and consequences of CFC and GILTI rules: a review and potential lessons for the global minimum tax , *in* A. Lejour & D. Schindler, eds, 'Research Handbook on Tax Havens', Edward Elgar Publishing, Cheltenham.

Riedel, N. (2018), 'Quantifying International Tax Avoidance: A Review of the Academic Literature', *Review of Economics* **69**(2), 169–181.

Schenkelberg, S. (2020), 'The Cadbury Schweppes judgment and its implications on profit shifting activities within Europe', *International Tax and Public Finance* **27**(1), 1–31.
URL: *https://ideas.repec.org/a/kap/itaxpf/v27y2020i1d10.1007*$_s$*10797 − 019 − 09553 − w.html*

Schmidt, P. K. (2016), 'Taxation of controlled foreign companies in context of the oecd/g20 project on base erosion and profit shifting as well as the eu proposal for the anti-tax avoidance directive: An interim nordic assessment', *Nordic Tax Journal* **2**, 87–112.

Setzler, B. & Tintelnot, F. (2021), 'The Effects of Foreign Multinationals on Workers and Firms in the United States', *The Quarterly Journal of Economics* **136**(3), 1943–1991.

Silva, J. S. & Tenreyro, S. (2006), 'The log of gravity', *The Review of Economics and statistics* **88**(4), 641–658.

Souillard, B. (2020), Profit shifting, employee pay, and inequalities: Evidence from us-listed companies.

Souillard, B. (2022*a*), 'Corporate tax cuts and firm employment: A match made in haven?', *Economics Letters* **219**, 110835.

Souillard, B. (2022*b*), 'Corporate tax cuts and firm employment: A match made in haven?', *Economics Letters* **219**, 110835.

Souillard, B. (2022*c*), 'Profit shifting, employee pay, and inequalities: Evidence from us-listed companies'.

Suárez Serrato, J. C. (2018), Unintended Consequences of Eliminating Tax Havens, Working Paper 24850, National Bureau of Economic Research.

Suárez Serrato, J. C. & Zidar, O. (2016), 'Who Benefits from State Corporate Tax Cuts? A Local Labor Markets Approach with Heterogeneous Firms', *The American Economic Review* **106**(9), 2582–2624.

Tuinsma, T., Witte, K. D., Janský, P., Palanský, M. & Titl, V. (2025), 'Effects of corporate transparency on tax avoidance: evidence from country-by-country reporting', *International Tax and Public Finance* . E-pub ahead of print, 1 Feb 2025.

Tørsløv, T., Wier, L. & Zucman, G. (2022*a*), 'The Missing Profits of Nations', *The Review of Economic Studies* .

Tørsløv, T., Wier, L. & Zucman, G. (2022*b*), 'The Missing Profits of Nations', *The Review of Economic Studies* . rdac049.
URL: *https://doi.org/10.1093/restud/rdac049*

Wier, L. & Erasmus, H. (2022), 'The Dominant Role of Large Firms in Profit Shifting', *IMF Economic Review* pp. 1–26.

Wier, L. S. & Zucman, G. (2022), Global Profit Shifting, 1975-2019, Working Paper 30673, National Bureau of Economic Research.

Williams, B. M. (2018), 'Multinational Tax Incentives and Offshored U.S. Jobs', *The Accounting Review* **93**(5), 293–324.

Table 7: Tax Haven Presence and Firm Employment, By Education and Occupation (MNEs)

	(1) OLS	(2) OLS	(3) OLS	(4) PPML	(5) PPML	(6) PPML
	All Firms	Manuf.	Services	All Firms	Manuf.	Services
Panel A: High-Skill Employees						
Tax Haven	–0.023	0.009	–0.038	–0.027	–0.033	–0.046
	(0.020)	(0.033)	(0.023)	(0.028)	(0.039)	(0.036)
N	19,064	3,354	15,680	19,238	3,370	15,838
(Pseudo) R^2	0.966	0.976	0.964	.	.	.
Panel B: Medium-Skill Employees						
Tax Haven	–0.029	–0.044	–0.026	0.018	–0.013	0.018
	(0.019)	(0.035)	(0.022)	(0.046)	(0.035)	(0.075)
N	19,776	3,454	16,295	19,853	3,455	16,371
(Pseudo) R^2	0.967	0.982	0.961	.	.	.
Panel C: Low-Skill Employees						
Tax Haven	–0.016	–0.008	–0.028	0.071	0.003	0.105
	(0.028)	(0.038)	(0.035)	(0.100)	(0.041)	(0.160)
N	16,062	3,147	12,892	16,569	3,180	13,364
(Pseudo) R^2	0.956	0.967	0.952	.	.	.
Panel D: High-Occupation Employees						
Tax Haven	–0.030*	0.012	–0.044**	–0.047*	–0.048	–0.077**
	(0.018)	(0.033)	(0.021)	(0.026)	(0.036)	(0.034)
N	19,840	3,440	16,374	19,898	3,446	16,426
(Pseudo) R^2	0.966	0.980	0.963	.	.	.
Panel E: Medium-Occupation Employees						
Tax Haven	0.010	–0.021	0.020	0.072	0.017	0.084
	(0.027)	(0.040)	(0.033)	(0.112)	(0.042)	(0.127)
N	16,767	3,081	13,663	17,179	3,128	14,027
(Pseudo) R^2	0.954	0.959	0.953	.	.	.
Panel F: Low-Occupation Employees						
Tax Haven	0.030	–0.031	0.019	0.021	0.004	0.219
	(0.042)	(0.037)	(0.060)	(0.062)	(0.035)	(0.170)
N	9,385	3,071	6,298	9,950	3,098	6,836
(Pseudo) R^2	0.965	0.975	0.953	.	.	.
Controls	YES	YES	YES	YES	YES	YES
Firm FE	YES	YES	YES	YES	YES	YES
Sector-Year FE	YES	YES	YES	YES	YES	YES

Notes: This Table reports the estimated effects of tax haven use on employment for different worker groups using OLS (Columns (1) - (3)) and PPML (Columns (4) - (6)). The regression sample is restricted to MNEs with foreign ownership presence of at least 50% in at least one year during the sample period. The outcome variables are the firm-year-level total number of employees by education (Panels A - C) and occupation (Panels D - F) in logarithms (columns (1) - (3)) and levels (columns (4) - (6)). Standard errors in parentheses are clustered at the firm level. All explanatory variables are lagged by one year. Manufacturing firms are defined as those in industries 10-33 using the Standard Industrial Classification 2007 (SIC 2007). */**/*** indicates significance at the 10/5/1% levels.

Table 8: Tax Haven Presence and Firm Employment, By Education and Occupation (Firms with Bank Transfers to Tax Havens)

	(1) OLS	(2) OLS	(3) OLS	(4) PPML	(5) PPML	(6) PPML
	All Firms	Manuf.	Services	All Firms	Manuf.	Services
Panel A: High-Skill Employees						
Tax Haven	–0.031	–0.005	–0.047*	–0.051*	–0.054	–0.064**
	(0.020)	(0.032)	(0.025)	(0.027)	(0.044)	(0.033)
N	110,310	18,664	91,547	112,681	19,035	93,543
(Pseudo) R^2	0.951	0.956	0.950	.	.	.
Panel B: Medium-Skill Employees						
Tax Haven	–0.048**	–0.054	–0.050**	–0.031	–0.033	–0.059
	(0.020)	(0.037)	(0.022)	(0.036)	(0.029)	(0.054)
N	127,637	22,102	105,434	128,202	22,122	105,978
(Pseudo) R^2	0.954	0.970	0.949	.	.	.
Panel C: Low-Skill Employees						
Tax Haven	–0.031	–0.037	–0.041	–0.012	–0.013	–0.006
	(0.030)	(0.039)	(0.038)	(0.064)	(0.034)	(0.098)
N	106,648	20,279	86,268	109,777	20,574	89,104
(Pseudo) R^2	0.926	0.942	0.922	.	.	.
Panel D: High-Occupation Employees						
Tax Haven	-0.040**	-0.005	-0.053**	-0.060**	-0.063	-0.085***
	(0.018)	(0.033)	(0.022)	(0.025)	(0.041)	(0.030)
N	121,977	21,061	100,820	122,924	21,207	101,622
(Pseudo) R^2	0.963	0.967	0.962	.	.	.
Panel E: Medium-Occupation Employees						
Tax Haven	–0.017	–0.046	–0.010	–0.053	–0.002	–0.073
	(0.028)	(0.042)	(0.033)	(0.070)	(0.031)	(0.085)
N	103,226	16,965	86,170	106,110	17,534	88,479
(Pseudo) R^2	0.944	0.938	0.944	.	.	.
Panel F: Low-Occupation Employees						
Tax Haven	–0.012	–0.045	–0.054	0.008	–0.025	0.118
	(0.045)	(0.038)	(0.054)	(0.043)	(0.033)	(0.120)
N	76,095	20,961	55,050	79,077	21,094	57,889
(Pseudo) R^2	0.953	0.962	0.948	.	.	.
Controls	YES	YES	YES	YES	YES	YES
Firm FE	YES	YES	YES	YES	YES	YES
Sector-Year FE	YES	YES	YES	YES	YES	YES

Notes: This Table reports the estimated effects of tax haven use on employment for different worker groups using OLS (Columns (1) - (3)) and PPML (Columns (4) - (6)). The regression sample is restricted to firms with international bank transfers to tax havens, as defined by **?**, in at least one year during the sample period. The outcome variables are the firm-year-level total number of employees by education (Panels A - C) and occupation (Panels D - F) in logarithms (columns (1) - (3)) and levels (columns (4) - (6)). Standard errors in parentheses are clustered at the firm level. All explanatory variables are lagged by one year. Manufacturing firms are defined as those in industries 10-33 using the Standard Industrial Classification 2007 (SIC 2007). */**/*** indicates significance at the 10/5/1% levels.