# What Does Consulting Do?

Gert Bijnens
National Bank of Belgium

Simon Jäger
Princeton University

Benjamin Schoefer
UC Berkeley

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**This version is an in-progress update. Several parts are preliminary and incomplete. Please do not circulate.** Thank you for considering our submission!

**Abstract**

Which clients take up management and strategy consulting, and how do they fare after? We shed the first direct light on these questions by drawing on business-to-business value-added tax links from Belgium. Consulting take-up is concentrated among large, high-labor-productivity firms. Take-up is U-shaped in TFP and profitability. Event studies reveal positive effects on labor productivity of 3.6% on average over five years, driven by modest employment reductions alongside stable or growing revenue. Average wages rise by 2.7% with no decline in labor's share of value added. Our heterogeneity analysis reveals larger productivity gains for initially less productive firm. Our findings broadly align with predictions from surveyed academic economists and consulting professionals, and are more consistent with the productivity-enhancing view of consulting endorsed by most practitioners though only half of academics. They lend less support to the rent-shifting view favored by many economists.

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# 1 Introduction

Strategy and management consulting aims to shape strategic, operational, and organizational decisions at the highest levels of companies and governments. It has a market size of several hundreds of billions of dollars (Appendix Figure A.2) and engages with top decision-makers within client organizations. Its overall value proposition is that it boosts clients' productivity and profitability by aligning clients' management with best practices through customized advice—essentially by boosting management quality, a key driver of firm and even macroeconomic performance.[1] At the same time, critics argue that consulting often serves to legitimize preordained decisions, facilitates rent extraction by managers or owners, or reallocates value away from workers and the public (see, e.g., Mazzucato and Collington, 2023; McKenna, 2006a). However, there exists to date no broad empirical assessment of their effects on their client firms.[2] The key constraint for research is data and inherent to the opaque industry that is consulting: consulting firms are typically closely held partnerships that do not disclose client lists (Baaji, 2022, pp. 52–53), while client firms rarely, and if so selectively, announce or detail their consulting engagements.

We overcome these measurement challenges by drawing on business-to-business transaction data to create the first comprehensive dataset of major strategy consulting relationships in an entire economy. Our approach draws on administrative value-added tax (VAT) records in Belgium matched with balance sheet data from 2002 to 2023. We focus our analysis on the 14 largest strategy and management consulting firms ("consultancies" going forward) and identify the universe of their transaction links with their client firms in Belgium. The data permit us to provide the first systematic, comprehensive, and detailed account of which firms take up consulting, and what happens when they do.

In a first step, we uncover which firms buy consulting services—describing the firm-level determinants of consulting take-up and spending in an entire economy. We zoom into nontrivial consulting engagements among firms that previously did not enlist consultants. Intuitively, it is possible that the best-performing firms try to push the frontier to stay ahead (the "Matthew principle") or laggards adopt consulting to catch up. To frame the empirical test, we elicited academic experts' and consulting practitioners' priors on which firms hire consultants; the academics

[1] Indeed, existing research links the tremendous productivity differences across firms (Hsieh and Klenow, 2009; Syverson, 2011) with management quality (Walker, 1887; Lucas, 1978; Bloom and Van Reenen, 2007; Bloom, Genakos, Sadun, and Van Reenen, 2012; Bloom, Sadun, and Van Reenen, 2016). While management quality or style can be viewed as an attribute embodied in specific managers (Bertrand and Schoar, 2003; Lazear, Shaw, and Stanton, 2015; Bennedsen, Pérez-González, and Wolfenzon, 2020; Metcalfe, Sollaci, and Syverson, 2023; Acemoglu, He, and Maire, 2022), these qualities are to some degree *malleable*—with consulting as the most prominent catalyst of managerial improvement.

[2] There is important growing evidence for this view from prototype management interventions in randomized control trials in developing countries such as India and Mexico (Bloom, Eifert, Mahajan, McKenzie, and Roberts, 2013; Bruhn, Karlan, and Schoar, 2018; Bloom, Mahajan, McKenzie, and Roberts, 2020) or government-sponsored trainings during or following World War II (Giorcelli, 2019; Bianchi and Giorcelli, 2022). These studies typically do not cover distributional outcomes and effects on other stakeholders, may not speak to the advanced economies in which consultants predominantly operate, and may not be representative of typical client firms. We return to the relationship between our estimates and RCT-based ones, and the role of context and research design, in the conclusion.

split roughly evenly between the two views (35% vs. 44% support) while consultants favor the "catch-up view" over the "Matthew principle" (66% vs. 38% support).

We find that client firms are significantly larger, both in terms of employment and revenue, with take-up sharply concentrated among the largest firms. Consulting engagements are disproportionately concentrated among firms with high labor productivity. For total factor productivity (TFP), we find U-shaped patterns, with both highly productive but also very unproductive large firms taking up consulting. Moreover, we find similar U-shaped patterns for profitability. Conditional on take-up, we observe substantial variation in annual spending on strategy consulting, averaging around EUR 245,000 (median) to EUR 328,000 (mean), corresponding to approximately 1% (median) to 4% (mean) of annual payroll. Most consulting spells in the data are short-lived with the median consulting spell lasting at most one year and the mean consulting spell 1.6 years.

In a second step, we use our panel data to uncover what happens to client firms when they take up consulting. We exploit their sharply episodic nature in difference-in-differences designs. We define consulting events as episodes where a firm's total spending on major strategy consultancies is at least three times its average spending in the prior three years and constitutes at least a EUR 50,000 increase in the event year (and show robustness to other thresholds). We construct a balanced panel for each of the firms with a thus-defined consulting event in a four-year window around the event. On average, treated firms increase their consulting spending by about EUR 600,000 (3% of the wage bill) in the event year.

To assess robustness to the choice of control group and estimator, we employ a sequential set of designs. As a transparent benchmark, we first compare treated firms to all non-consulting firms in a basic two-way fixed effects DiD, which allows direct inspection of pre-trends—including any Ashenfelter's dip or surge leading up to consulting take-up. Second, we refine the control group by matching on event year, industry, and firm size, improving pre-treatment comparability. Third, as our preferred specification to study effects of consulting, we implement synthetic difference-in-differences (SDID; Arkhangelsky et al., 2021), which additionally selects time weights that reweight pre-treatment periods to best approximate treated firms' pre-event trajectory. The overall stability of our estimates across all three approaches lends credibility to a causal interpretation, though we note that in the absence of random assignment, our estimates may naturally also partly reflect dynamic selection into consulting take-up—the inherent trade-off between studying consulting in the wild compared to specific programs in a sharply controlled environment and specific sample of firms (see Footnote 2).

Our difference-in-differences design reveals that consulting engagements significantly reshape the firm. Upon taking up consulting, treated firms experience sustained growth in productivity measures, reflecting either the adoption of efficiency-enhancing technologies and practices or higher product quality and pricing power. Focusing on labor productivity, we can link that effect with a (not statistically significant) reduction in employment against stable or, if anything, slightly

higher revenue and value added. We find an average increase in labor productivity (value added per worker) of 3.6 percent over the five years after the consulting event. In terms of timing, the effect on labor productivity (VA/worker) grows over time, consistent with learning-by-doing or short-run costs of restructuring.

Turning to effects on the workforce, we start with average wages. We find that consulting engagements lead to persistently higher wages at client firms of about 2.7 percent. Importantly, we find no evidence of a decline in income share of labor in value added or revenue. While we cannot rule out negative effects on some workers and compositional effects, including a small increase in dismissals, our evidence directly points away from the hypothesis that consulting-driven productivity gains occur at the obvious expense of workers or through rent shifting. Likewise, in contrast with the rent-shifting view, we find, if anything, small short-run decreases in profitability that then dissipate over time.

The data point to several channels through which a brief consulting spell, typically lasting less than one year, might produce longer-run organizational changes inside the firm. Consulting triggers shifts in input purchases towards services, while reliance on labor outsourcing via temp agencies declines. These internal adjustments occur without a measurable uptick in plant closures, so the restructuring appears to be mostly within existing establishment structures rather than on the extensive margin.

An inherent limitation of our baseline DiD design is the estimation of *average* treatment effects—forcing our consulting events into a monolith. Sometimes consultants may be brought into struggling firms to implement restructuring, sometimes ambitious firms may seek help to grow by entering new markets, and sometimes consultants may facilitate technology transfer. Sometimes weak CEOs bring them in to ratify changes underway anyway. This richness applies to take-up—where we have documented important heterogeneity—and the treatment effects. And heterogeneous treatment effects can reflect both heterogeneous treatments and heterogeneous responses. This richness is also consistent with the predictions and assessment for what consulting does according to experts and academics. Compared to RCTs (reviewed below), where the researcher designs both the treatment and assignment, our events reflect the real-world variety of consulting.

That is, methodologically, by studying a "package" in an event study, our research design echoes therefore the opportunities and challenges in analogous matched event studies on corporate governance and management shifts, such as private equity and leveraged buyouts (e.g., Shleifer and Summers, 1988; Boucly, Sraer, and Thesmar, 2011; Davis, Haltiwanger, Handley, Jarmin, Lerner, and Miranda, 2014).

To acknowledge the role of such heterogeneity, we estimate our DiD specifications in subsamples of client firms. We find that initially less productive firms and smaller firms exhibit more positive effects on several measures of economic performance, suggestive of an improvement in allocative efficiency (Hsieh and Klenow, 2009) as well as potentially reconciling the on average

zero point estimate on TFP with underlying heterogeneous treatment effects. We view this analysis as lending support to the idea that both selection of and effects of consulting may reflect the heterogeneity of potential clients and their situations, e.g., with either restructuring or growth objectives. We hope that future research can provide additional and richer heterogeneity analyses of the shape and effects of the consulting engagements our design studies.

The rest of the paper is organized as follows. Section 2 provides a primer on strategy and management consulting firms and presents results of our expert survey. Section 3 describes our data, sample construction, and identification of consultant-client-firm links. We describe the selection into buying consulting services and descriptive results on take-up in Section 4. Section 5 describes our difference-in-differences approach, and Section 6 reports its results. The last section concludes.

## 2 Primer: Consultancies and their Potential Effects

We provide an overview of the consulting sector and hypotheses about their operations, take-up, and effects on client firms.

### 2.1 The Business Model

Strategy and management consulting firms provide a wide array of advisory services to businesses and organizations seeking to improve their performance, adapt to changing market conditions, or solve specific organizational challenges. While the exact offerings vary by firm, these services typically encompass several key domains (see McKenna, 2006a; Kipping and Clark, 2012, for surveys and historical accounts of the consulting industry). Overall, consultants frequently have access to the highest-level decision-makers inside the firm, with CEOs reporting that consultants are in the top three group of outsiders they spend their working time with (Bandiera et al., 2020).

The core services of strategy consulting firms include corporate strategy development, organizational restructuring, and operational improvements (Baaji, 2022). Corporate strategy work involves helping clients define their long-term objectives, identify growth opportunities, refine their business models, and make critical decisions about resource allocation. Organizational consulting focuses on designing optimal corporate structures, improving governance mechanisms, and managing change processes within the organization. Operations consulting, estimated to be around 25-31% of consulting revenues (Poulfelt et al., 2018), includes process optimization, performance management, procurement and supply chain management, and project management services. Many strategy consulting engagements begin with diagnostic work to identify inefficiencies or underperforming areas within the client organization. Over time, the industry has evolved to increasingly include practical implementation support rather than merely receiving strategic recommendations (Christensen, Wang, and van Bever, 2013). Finally, while some consultancies

may specialize in specific client sectors, we select general strategy consultancies (with summary statistics on consulting firms and clients below).

Our custom survey of consulting practitioners (see Section 2.4 below) provides additional insight into the practical workings of the industry. Among our respondents, corporate strategy represents the dominant functional focus (51%). The most common triggers for client engagement include organizational or operating-model redesign (59%) and growth strategy (56%), followed by cost reduction (41%) and operational performance improvement (41%). Post-merger integration also represents a significant driver (34%), highlighting consulting's role in major corporate transitions.

When it comes to measuring success, consulting engagements often employ specific Key Performance Indicators (KPIs), with cost reduction being the most frequently used metric (39% of practitioners), followed by revenue growth (26%) and profit margin improvements (23%). Interestingly, a notable share of engagements proceed without formal KPIs, suggesting that some consulting value may be difficult to quantify or may focus on strategic guidance rather than measurable operational improvements.

Declining prospective clients is reported to be relatively rare; when it happens, it is most often due to conflicts of interest (50%), ethical or reputational concerns (50%), or misaligned expectations over fees/budgets (41%). This means that selection into consulting should largely be thought of as reflecting clients' decision to take it up and buy these services.

### 2.2 Potential Mechanisms for Impact

Our review of the academic literature and expert observers permits us to formulate three broad (and not necessarily mutually exclusive) views of strategy consulting, with associated causal mechanisms and predictions for our research design:

First, consultancies may engage in *transfer of knowledge and best practices* (see, e.g. Bloom et al., 2013; Bruhn, Karlan, and Schoar, 2018). According to this view, the consulting service may permit a client firm to reach higher productivity or cost minimization, improving profits at least in the long run, through actions the client firm would not have taken absent the consulting treatment. This view plausibly shows up as increases in productivity measures and symptoms of restructuring.

Second, consulting services may *lend legitimacy and external validation* of pre-formed managerial decisions (see, e.g., Pfeffer, 1993; McKenna, 2006a), facilitating certain actions that otherwise would not have been taken, or reduce disruption and conflict for an action managers would have needed to take anyway.

Third, consulting services may lead to *rent seeking*, permitting, e.g., managers to reallocate organizational rents from the broader workforce to themselves or to shareholders, or from shareholders to managers (McKenna, 2006b; Mazzucato and Collington, 2023). This view would entail a reduction in wages and a fall in the labor share, for instance (as CEO pay is often paid externally

in Belgian large firms, allowing us to analyze executive pay for a subset of firm).

Consistent with our practitioner survey, which shows that the modal engagement mixes growth (e.g., business unit strategy, revenue-growth KPIs) and efficiency/cost mandates (operations, cost excellence, cost-reduction KPIs), the three views are not mutually exclusive and can plausibly coexist across (and even within) projects. Our research design will study average effects, with heterogeneity analyses providing a tentative lens into the complexity of consulting types and impacts.

### 2.3 Potential Mechanisms for Take-up

Consulting take-up is likely to vary across firms, reflecting the heterogeneous motivations described above. Firm performance offers a natural lens through which to interpret patterns of selection.

On the one hand, firms leading in terms of various performance measures (productivity, profits, size,...) may seek consulting services to cement their competitive position or to pull further ahead. According to this view, already-productive firms should be more likely to select into consulting—akin to a "*Matthew principle*."

On the other hand, laggards may seek help to "*catch up*" to the frontier of organizational and managerial practices, or through adoption of leading technologies. Such activities would require financial capacity or corporate governance to be able or willing to invest in external help.

### 2.4 Expert Surveys

We have implemented an expert survey among practitioners (consultants) and academics (professors) in June and July 2025 to elicit predictions for our research design and to further shed light on the workings of consulting. Appendix C provides details. It also presents a rich collection of illustrative quotes.

**Take-up Patterns** Figure 1 reports our main results on respondents' beliefs about patterns and correlates of consulting take-up. We summarized the "catch-up" view as follows and elicited experts' views on a Likert scale:

> Unproductive firms that are behind take up consulting to catch up with frontier management practices and other productivity-enhancing practices.

We summarized the "Matthew principle" view as follows:

> It is mostly the already productive firms that take up consulting to further pull ahead of their competition.

We find substantial disagreements across groups (Figure 1 Panels (a) and (b)). Academic experts are somewhat equally divided between the catch-up view and the Matthew principle (44% agree or strongly agree vs. 35%, and 26% disagree or strongly disagree). Practitioners paint a more optimistic pattern: a clear majority support the catch-up view over the Matthew principle view (66% vs. 38%).

We also elicited experts' forecasts about the correlates of consulting take-up (Figure 1 Panel (c)). Academics' forecast a positive correlation with firm size (employment) and profitability. We find more disagreement or neutral predictions for revenue, TFP and labor productivity. Consultants largely mirror academics' predictions except that they side more strongly on the positive correlation with revenue (which should be linked with employment).

Figure 1 Panel (c) reports averages and thereby shrouds potential disagreement; Appendix Figure C.5 reports the fraction of respondents who forecast a positive, negative, or neutral correlation and documents more disagreement, in particular on the profitability and productivity measures, perhaps in line with the U-shaped pattern we will later document.

**Effects of Consulting** Regarding effects on client firms, our questionnaire presents the following three views:

- Management and strategy consultants improve firm productivity and permit firms to grow.
- Management and strategy consultants are usually brought in to cut costs and reallocate rents from workers to managers and shareholders.
- Management and strategy consultants usually mainly help implement tough decisions by reducing internal resistance and by lending legitimacy and external validation for choices the firm's management team would like to implement anyway (such as during layoffs, plant closures, or other restructuring).

We report results in Figure 2 Panels (a), (b) and (c). Academics support all three statements, expecting productivity, growth and cost (wage) cutting. The majority of academics expects consultants to facilitate and legitimize tough decisions. Specifically, the third statement, capturing the "legitimacy and external validation" view, receives most support with 64% of respondents agreeing or strongly agreeing, while 20% of respondents disagree or strongly disagree. The first and the second view, capturing the "productivity enhancement" and the "rent shifting" views, respectively, receive both around 50% of support and 13% and 21% of disagreement, respectively.

Consultants largely concur with academics, but overall paint a more optimistic picture of their services. Both groups expect positive impacts on firm growth and productivity, though practitioners are more bullish: 79% of practitioners agree or strongly agree with this view compared to 51% of academics.

Finally, we also elicited quantitative forecasts for the effects of consulting in our research design (Figure 2 Panel (d)). Broadly, the academics expect positive productivity effects and expect cost restructuring to show up in dismissals and separations, while consultants forecast much larger productivity and revenue effects and smaller impacts on dismissals and separations.

We will compare experts' predictions with our empirical estimates at the very end of our paper, in Section 6.7, which is organized around Figure 2 Panel (d).

**Heterogeneity Patterns** We converged on streamlined questionnaires regarding average effects and selection patterns. But we shied away from higher-dimensional questions on heterogeneous treatment effects. Nevertheless, several respondents of both groups believe that consulting as such cannot be summarized into one size fits all perspective (consistent with the multiplicity of views above that may hold simultaneously). We recorded such views through open-text boxes and in Appendix C.

We hope that our empirical analysis of take-up and selection into consulting engagements (Section 4), their effects (Section 6), and in particular our heterogeneity analyses (Section 6.8) will do some justice to the rich heterogeneity in take-up and treatment effects, while an important limitation of our DiD analysis remains its primary focus on average effects.

# 3 Data: Universe of Business-to-Business Transaction Data

We detail our datasets, the identification of consulting spells, and our sample selection. We describe the variables in Appendix B.

## 3.1 Datasets

We merge confidential and anonymized firm-level datasets provided by the National Bank of Belgium (NBB) (see also Bernard, Dhyne, Magerman, Manova, and Moxnes, 2022; Baqaee, Burstein, Duprez, and Farhi, 2023) covering 2002 to 2023.

**B2B Transactions Dataset** Our key dataset is information on domestic firm-to-firm transactions derived from VAT (value added tax) customer listings. VAT-liable firms in Belgium must submit annual listings detailing the total invoiced sales (above a small regulatory minimum threshold, 250 EUR as of today) to each of their Belgian corporate customers. These listings are consolidated into the B2B Transactions Dataset at the NBB. Each record indicates the total annual (ex-VAT) value of goods or services firm $i$ sold to firm $j$. These flows are highly reliable as they are subject to financial penalties for late or erroneous filings. Since 2002, these forms must be filed electronically—typically automatically through accounting software—with the tax authority.

This dataset allows us to precisely measure the uptake and use of consulting services, and linking those transactions to supplier firms (consultancies) and their client firms. We detail the definition and identification of strategy consulting spells below.

**Central Balance Sheet Office (Annual Accounts)** Most incorporated Belgian non-financial firms file annual accounts with the Central Balance Sheet Office at the NBB.[3] The accounts contain detailed financial information such as total sales, intermediate inputs, labor costs, balance sheet items, and value added. Larger firms (i.e., in particular our client firms) submit extensive reports each year—including a "social balance sheet" that contains, e.g., dismissals or workforce composition information; smaller ones may file abbreviated versions, omitting certain variables (incl. revenue and input costs). For these variables, we draw on measures from VAT declarations (see below).

**VAT Declarations** Beyond the annual customer listings, VAT declarations also include quarterly or monthly filings of total sales and purchased inputs for all VAT-liable entities. VAT returns are mandatory. We use these data to supplement missing or incomplete financial items for smaller firms (see above).

**Crossroads Bank of Enterprises (CBE)** This administrative registry (by the Federal Public Service Economy) provides firm-level identifiers, legal form, year of establishment, sector (NACE), and location of headquarter and establishments.

### 3.2 Sample and Variable Construction

We create a panel of non-financial firms from 2002 to 2023 with both firm-level accounting variables and spending on consulting. We exclude firms with fewer than 10 full time equivalent workers, firms in finance, government, and non-market services (NACE sectors 12, 13, and above 82). We also exclude predominantly government-owned firms such as the national railway, postal services, and water, gas, and electricity distribution companies. For the DiD design, our analysis sample is balanced (i.e., we remove firms that lack annual accounts from four years before to four years after the take-up events for treated and matched control firms).

Appendix B details our main variables. We winsorize observations within calendar year at the 2.5% level. For the DiD design, the winsorization is done separately within the treated and the control groups. We convert all nominal amounts to 2020 euros using the GDP deflator.

[3] A small number of legal forms——used almost exclusively by microenterprises or non-profit organizations——are exempt from filing.

### 3.3 Identifying Management Consulting Firms

By capturing the universe of client invoices in Belgian clients, our comprehensive B2B transaction data allows us to systematically identify the complete map of where, when, and how consulting engagements occur—overcoming a longstanding empirical challenge: client lists are typically confidential, and many engagements remain undisclosed by either party.

Drawing on industry rankings and public directories, we pinpoint the 14 major strategy and management consultancies that focus on high-level organizational and strategic advice. We then link these consultancies to the corresponding legal entities and VAT numbers recorded in the CBE database.[4]

Our set of consultancies includes the usual prominent as well as smaller providers specializing in management and strategy consulting. In addition, it contains arms of the "Big Four" mixed-service accounting and consulting firms (Deloitte, EY, KPMG, and PwC).[5] While providers in the latter group derive a substantial share of their revenues from audit, assurance, and tax advisory services, they also operate substantial strategy and management consulting practices. To isolate this consulting-side activity of these firms, we restrict their Belgian VAT registrations to entities classified under consulting industry (rather than accounting or auditing) codes. This approach aims to ensure that these "Big Four" links likely reflect genuine strategy and management consulting engagements, comparable to those of the specialized management and strategy consultancies in our sample. Moreover, in our event studies, we will study sharp increases in the take-up of these services, further consistent with episodic management and strategy consulting engagements rather than ongoing support.

### 3.4 Timing of Measurement of Consulting Engagements

Our event-study design requires accurate dating of consulting engagements. A natural concern is that client payments may trail the underlying work with a long lag, blurring the true service date. Interviews with industry practitioners indicate that consultancies invoice at high frequency—typically monthly—to keep working-capital needs low and to help clients monitor outlays in real time. Balance-sheet data for the consultancies in our sample corroborate this practice: the average accounts-receivable-to-sales ratio is about 1:6, which under standard accrual accounting corresponds to a collection period of roughly two months.[6] Taken together, practitioner testimony and accounting evidence imply that the B2B data date consulting services with a high degree of

[4] We consolidate 39 Belgian VAT numbers affiliated with our target set of firms. These VAT numbers also include foreign branches of multinational consulting firms that registered in Belgium for VAT purposes. Hence, for prominent multinational consulting companies, our strategy covers both domestic and international consulting links to Belgian clients.

[5] In a prior version of the paper, we relied exclusively on the specialized consultancies without the inclusion of the Big Four, and found similar effects both in the event studies and the take-up patterns.

[6] A transaction is added to accounts receivable already when the service is rendered, not when the invoice occurs.

precision.

# 4 Mapping Take-Up and the Network of Consulting and Client Firms

We start by providing the first comprehensive *description* of the consulting industry's client portfolio and the nature of these engagements. This lens answers basic open questions in the literature summarized in Section 2 above, such as: do struggling firms on average take up consulting? Or is it, on average, productive firms that buy consulting?

## 4.1 Distribution of Firm-Level Expenditures on Strategy Consulting and Duration of Consulting Engagements

We start by describing the nature of consulting engagements themselves. Figure 3 plots the distribution of annual spending on total consulting services (summing across our 14 strategy and management consultancies) among client firms (i.e., those with positive spending in a given year).

Panel (a) plots spending in EUR. The median is EUR 34,662 and mean is EUR 304,501. When we restrict to nontrivial consulting engagements with at least EUR 50,000 annual expenditure (which will be our preferred definition for the event study below), we find a median of EUR 221,130 and a mean of EUR 679,262.

Panel (b) plots consulting spending normalized by client annual payroll, revealing a median and mean of 1.3% and 3.5% for consulting expenditure relative to annual payroll (for the nontrivial engagements, and 0.3% and 1.7%, respectively, for a threshold of EUR 0). This reflects a positive relationship between consulting spending and firm size, as we document below.

In Panel (c), we report on the distribution of suppliers among our 14 management and strategy consultancies conditional on the annual expenditure being above EUR 50,000 (EUR 0), and find a median and mean of 1.0 and 1.7 (1.0 and 1.3, respectively). Hence, one should think of consultancy engagements as largely reflecting one primary supplier.

In Panel (d), we finally report the distribution of consulting spell lengths. We define a consulting spell as a sequence of consecutive years with an initial significant consulting spending in a given client firm (at least EUR 50,000), and count it to end once the level reaches zero (durations would shrink to a mean of 1.66 if we stopped counting the spell once it falls below EUR 50,000). Consulting spells are short-lived: the median and mean spell lengths are only 1 and 1.6 years (where we note that our annual transaction data cannot record durations below a year). Two thirds of spells are concluded within a year.

All in all, the data document that consulting spells come with large spending concentrated in short amounts of time and among one primary supplier—reflecting short-lived episodic engagements that will also lend themselves to an event study in the second half of the paper.

### 4.2 Extensive Margin of Take-up: Which Firms Hire Consultants?

We now study which client firms take up consulting—whether and how much. Appendix B details the variables considered as predictors and correlates of consulting take-up.

Overall, we find that consulting client firms systematically differ from non-clients. They are very large, and have high labor productivity. For TFP, we find a U-shaped pattern. Broadly, these patterns are consistent with the experts' predictions in Figure 1.

**Approaches to Measuring Take-up and Heterogeneity** Table 1 starts our descriptive analysis with basic summary statistics in our full panel dataset, focusing on all firms in Column (1), clients—"ever-buyers" from the 14 consultancies described above in Section 3.3— in Column (4), and never-client firmsin Column (2). In addition, in Column (4), we zoom into the client firms serving as a treatment group in our upcoming DiD design, reporting on their characteristics in the year before take-up.

Figure 4 plots the difference in characteristics (means) between these clients compared to non-clients—simply studying firms that have consulting in year $t$ to those that do not. We do so for several definitions of take-up and samples. Anticipating our preferred event study threshold, we highlight the minimum threshold of at least EUR 50,000 spending for nontrivial engagements, but additionally shows results for: (i) the same EUR 50,000 threshold conditional on spending less than EUR 5,000 in the prior year, (ii) exact event-study definition used in Section 6 (which requires a threefold increase relative to the three-year average, and (iii) any positive consulting spending, i.e., a threshold of EUR 0 the year prior. Patterns are very similar across all definitions of take-up. We take out year fixed effects (and found little effects of including sector-year effects instead).

Finally, "inverting the axes," Figure 5 presents firm-level binned scatter plots of the take-up indicator against lagged firm characteristics, again including year fixed effects, for several key variables. This specification permits a direct inspection of the shape of selection patterns, given that several of our hypothesis (e.g., the "Matthew principle" view, would show up as U-shaped patterns and hence may wash out in group averages.

**Results** Figure 4 documents that consulting services are predominantly taken up by firms that are larger, in terms of revenue, value added, employment, and the capital stock. Figure 5 documents a distinct hockey stick pattern for take-up by size, with a mostly flat gradient of take-up at a low level close to zero, and a sharp increase in the probability of take-up among the largest firms.

A central question is whether already-productive firms take up consulting or whether laggards bring in consultants to catch up. For labor productivity, measured as log revenue per worker, strongly predicts consulting take-up. For total factor productivity (TFPr, constructed as in Ackerberg, Caves, and Frazer, 2015), we find that client firms have, on average, higher TFP. In addition, we find some evidence that the average hides a mildly U-shaped pattern with take-up with the

firms with the lowest and highest TFP levels having higher take-up of consulting services.

Turning to measures of profitability and leverage, we find some evidence for a U-shaped pattern for profitability akin to that of TFP. We find less take-up with higher leverage. We find mixed evidence for selection patterns by markups and ROCE (return on capital employed, in percentage points), though with wide confidence intervals due to the dispersed nature of financial outcomes (despite winsorization for this set of outcomes).

Finally, we show that consulting clients are much more likely to be in the service sector and less likely to operate in utilities/construction or retail/wholesale, with no higher prevalence in the manufacturing or logistics sectors.

### 4.3 Intensive Margin: Transaction Volume of Consulting Services

As a complement, we also study the $(t-1)$ predictors of *intensive-margin* of consulting purchases: the amount of spending on consulting services (2020 EUR, ln) conditional on take-up. Appendix Figure A.3 reports the results, including year fixed effects. Size emerges as the clearest predictor of transaction volume, with larger firms having larger consulting spending also conditional on take-up (but less than one to one).

### 4.4 Comparison with Academic Experts' and Practitioners' Predictions

We conclude the discussion of take-up with a broad assessment of our findings against experts' forecasts (recapping Figure 1), picking up from Section 2.4. Broadly, both academics and consultants got the directions right, but our empirical patterns suggested rich patterns such as for profitability and TFP, which were (mildly) U-shaped. Experts correctly predicted the strong size gradient of take-up (although academics missed the revenue gradient). A pattern that was missed by both groups was the strong positive relationship with labor productivity. We revisit the take-up patterns again in our final discussion of experts' views on treatment effects and their heterogeneity in Sections and 6.7 and 6.8.

## 5 Effects of Consulting: Difference-in-Differences Designs

We present three difference-in-differences designs estimating the effect of consulting take-up on firm outcomes, each comparing the treatment group against a progressively more comparable control group. We define events as sharp increases in consulting expenditure at client firms.

### 5.1 Event Definition: Initiation of Major Consulting Engagement in Client Firms

We identify our event, the initiation of a major consulting engagement, as large jumps in a client firm's annual spending on consulting services—supplied by the specific management and strategy

consultancies identified in Section 3.3. Let $c_{i,t}$ be firm $i$'s spending on consulting services in year $t$. Firm $i$ has a consulting event in year $t$ if its $c_{i,t}$ spending is at least three times the average of $c_{i,t}$ over the past three years and, in absolute terms, exceeds EUR 50,000 (2020 EUR) in year $t$:

$$\text{ConsultingSpike}_{i,t} = \mathbb{1}\left(c_{i,t} \geq 3 \times \frac{1}{3}\sum_{k=1}^{3} c_{i,t-k}\right) \times \mathbb{1}\left(c_{i,t} \geq 50{,}000 \text{ EUR}\right). \quad (1)$$

With this definition, we focus on the initiation of sizable new consulting engagements rather than incremental or low-level spending. First-stage analyses on any consulting spending will transparently validate the episodic and sharp nature of these events. We will also show robustness to different event definitions: EUR 25,000 and EUR 100,000.

We then restrict our sample of consulting events to each firm's first such consulting event within our full sample period (2002-2023).[7] We keep the firm regardless of whether or not it experiences a consulting event again after the first consulting event. Moreover, while we will find that, on average, spending on consulting onsets as defined in Equation (1) will trace out a spike, our definition in principle permits persistent increases or even accelerating growth in this variable. To preview, we will also impose a balanced panel restriction of four years before and after the event.

Our baseline restrictions lead to a sample of 798 firms that initiate a major consulting engagement in our sample window. We report summary statistics on treated firms that experience such a consulting event in Table 1 Column (4). Similar to the overall sample of client firms and consistent with our analysis of take-up patterns in Section 4 above, the table shows that treated firms are substantially larger and have higher labor productivity compared to non-client firms; but they are broadly similar to the overall sample of client firms that ever buy consulting services in our sample window—mirroring the descriptive results on take-up in Section 4 that had not imposed those requirements on the event (in particular the restriction of the minimum volume; recall the size-volume correlation depicted in Appendix Figure A.3).

### 5.2 Characterizing Consulting Events

Before turning to control groups or our DiD designs, we present results the treatment pattern itself—i.e., how consulting spending evolves around the event and the informal "treatment intensity" in our design. We do so in Figure 6. Since our control firms are never-clients (see Section 5.3 below), we can characterize the events right away.

In Panel (a), we present effects on aggregate consulting spending. The overall spending on consulting increases to about EUR 600,000 in the event year, subsequently declines to about EUR

[7] The pre-period condition in Equation (1) means that 2006 is the first year in which a firm in our data can have a consulting event (with 2002-05 still serving as a pre-period for outcome variables).

300,000 in the following year, and then settles in a bit below EUR 200,000 starting two years after the event.

Panel (b) complements Panel (a) by normalizing consulting spending by the client's total wage bill. It shows that consulting engagements are on average significant, at about 3% relative to the wage bill in the event year, and then decline to an average of about 1% in the subsequent year, and continue to fade out.

In Panel (c), we show the effect on take-up at the extensive margin, i.e., a firm-level indicator for having *any* positive level of consulting spending (without any restriction on volume) in a given year. At event time 0, firms that do take-up consulting see a large spike in this outcome of about 90 percentage points. We also find that the event is lumpy and transitory, and then quickly revert to zero purchases after the initial project. Already one year after the consulting event, fewer than 40% of treated firms still buy consulting services. The fraction falls to 20% in the year after and further declines in the subsequent years.

Moreover, in unreported results, we have also checked that these effects are essentially fully accounted for by a single main supplier (consultancy) that "causes" the initial jump, rather than a combination of multiple suppliers, and verified that an alternative control group selected solely based on the absence of the treatment definition would exhibit a similar DiD effect on consulting as in Figure 6 (as our control group pool of firms are defined to have zero consulting expenditure in the sample period on the top 14 focal consultancies).[8]

Overall, we view these "first stage" results as substantively interesting in their own right, rather than as a mere stepping stone towards the main firm-level outcomes. They confirm the intuitive but so far untested view of management consulting: that it is largely episodic, with consultants usually spending no more than a year with the client firm, and then largely permanently ceasing interactions (aligning with the anecdotal evidence cited on p. 198 in Bloom et al., 2020).[9]

Our analysis of consulting spending around events also implies that any long-lasting effects of these episodic consulting events would plausibly stem from persistent changes in organizations or manager behavior and practices, rather than from sustained input from consultants.

### 5.3 Three Approaches to Control Group Construction and DiD Designs

To implement a DiD design, we describe three approaches for constructing a control group for the sample of treated firms and events. Our pool of potential control firms consists of firms that *never* purchase consulting services from any of our focal consultancies during the sample period. We

[8]We also note that our design that is focused on external consulting spending does not account for a potential presence of internal consultants inside, e.g., large firms, although our heterogeneity analysis in Section 6.8 splits up firms by size. To our knowledge, there exists no reliable evidence on the scope and responsibilities of such units.

[9]We note that by defining events as large increases in consulting expenditure, our research design drops a small share of firms that have persistent consulting relationships, which we have found are extremely large and often times stem from quasi-public entities.

require both treated and control firms to be observed over the full event window from $t-4$ to $t+4$, yielding a balanced panel of 798 treated firms.

**Approach 1: Unmatched DiD.** As a transparent benchmark, we compare treated firms to all eligible never-consulting firms in a standard two-way fixed effects (TWFE) event study, with no restrictions on control firm characteristics except matching on event year. This design imposes no ex ante alignment between groups (which our previous analysis already showed to be substantially heterogeneous) and permits the reader an unmatched opportunity to directly inspect raw pre-trends, including search for an Ashenfelter's dip or surge in the years leading up to take-up. We consider a balanced panel of treated and control firms without a treatment event and estimate the DiD in event time, sidestepping contamination issues discussed in the event-study literature (see, e.g., Sun and Abraham, 2021).

To implement the DiD estimation, we estimate the following TWFE event-study regression:

$$Y_{it} = \alpha + \sum_{\tau=-4,\,\tau\neq-1}^{4} \beta_\tau I_\tau + \sum_{\tau=-4,\,\tau\neq-1}^{4} \delta_\tau I_\tau \,\text{ConsultingEvent}_i + \eta_i + \theta_t + \varepsilon_{it}, \tag{2}$$

where $\text{ConsultingEvent}_i$ is the treatment indicator as defined above in Equation (1), $I_\tau$ the event-time indicator ($\tau = 0$ marks the consulting event or a placebo-consulting event in the control group), $\eta_i$ firm fixed effects, and $\theta_t$ calendar-year fixed effects.[10] The $\beta_\tau$ absorb common event-time dynamics in the control group; the $\delta_\tau$ trace dynamic treatment effects relative to $\tau = -1$. Control firms receive weight $\tilde{w}_i = N^{\text{cell}}_{\text{treated}}/N^{\text{cell}}_{\text{control}}$, equalizing the total weight of treated and control firms within each cell; treated firms receive weight 1. We also report a pooled post-period coefficient $\delta^{\text{Post}}$, the average treatment effect over $\tau = 0$ to $\tau = 4$. Standard errors are clustered at the firm level.

**Approach 2: Matched DiD** To improve pre-period comparability and compare apples to apples, we then restrict the control pool with a simple coarse matching on the basis of cells: event year × broad sector × employment quartile (of the treated firm distribution within each sector).[11] Within each cell, we further require control firms to those with employment between 50% of the smallest and 200% of the largest treated firm in that cell. That is, each treated firm is associated with a treatment group cell, which are matched to these control firms (reweighted to match the treat group's volume). We then run the same TWFE event-study regression as in Approach 1 on this

[10] With a slight abuse of notation, we use "$t$" as shorthand for the event year $\tau = 0$ and "$t-1$" for the year preceding it throughout the results.

[11] The five broad sectors are: primary and manufacturing, utilities and construction, retail and wholesale, logistics and transportation, and services.

matched sample.[12] Our cell-level matching method is in the spirit of the specification employed in the literature on firm-level effects of leveraged buyouts using matched DiD designs (Davis et al., 2014, 2025).[13]

**Approach 3: Synthetic DiD** Our preferred and most demanding specification implements synthetic difference-in-differences (SDID; Arkhangelsky et al., 2021), using the matched control pool from Approach 2 as the donor pool. SDID endogenously selects both unit weights $\omega_i$—reweighting control firms to best approximate the pre-event outcome trajectory of treated firms—and time weights $\lambda_t$—reweighting pre-treatment periods to emphasize those most predictive of the treatment period. For treated firms in adoption cell $a$ (defined analogous to the matching cells for the matched DiD design, i.e., cells defined by event year × broad sector × employment quartile), the cell-specific SDID estimator for the pooled post-period effect is:

$$\hat{\delta}_a^{\text{sdid}} = \frac{1}{T_{tr}^a} \sum_{\tau \geq a} \left( \bar{Y}_\tau^a - \textstyle\sum_i \omega_i Y_{i,\tau} \right) - \sum_{\tau < a} \lambda_\tau \left( \bar{Y}_\tau^a - \textstyle\sum_i \omega_i Y_{i,\tau} \right), \tag{3}$$

where $\bar{Y}_\tau^a$ is the average outcome among treated firms in cell $a$, $T_{tr}^a$ is the number of post-treatment periods for that cell, and $\omega_i$ and $\lambda_\tau$ are the optimal weights from Arkhangelsky et al. (2021). We implement the design using the `sdid_event` package (Ciccia, 2024), which disaggregates $\hat{\tau}_a^{\text{sdid}}$ into dynamic treatment effect estimates for each period $\tau$ relative to the consulting event:

$$\hat{\delta}_{a,\tau}^{\text{sdid}} = \bar{Y}_{a-1+\tau}^a - \textstyle\sum_i \omega_i Y_{i,\,a-1+\tau} - \displaystyle\sum_{t<a} \lambda_t \left( \bar{Y}_t^a - \textstyle\sum_i \omega_i Y_{i,t} \right). \tag{4}$$

These cell-specific dynamic effects are aggregated across cells into overall event-time estimates $\hat{\tau}_\tau^{\text{sdid}}$, weighting by the number of treated firms per cell (Ciccia, 2024). We report both the dynamic profile $\hat{\delta}_\tau^{\text{sdid}}$ and the pooled post-period ATT. This effect is the analog of the $\hat{\delta}^{\text{Post}}$ in the matched and unmatched DiD specifications.

For inference, we use a bootstrap procedure following Clarke et al. (2024): for each of 100 draws, we recompute the cell-specific SDID estimates, aggregate them into event-time estimates $\hat{\tau}_\tau^{\text{sdid}}$ using the same cell-size weights as the point estimates, and use the standard deviation across draws as the standard error.

**Discussion** The unmatched and matched DiD designs (Approaches 1 and 2) allow for a direct inspection of pre-trends and reveals any dynamic selection patterns prior to consulting take-

[12] The two approaches differ only in the composition of the control pool: Approach 1 uses all eligible never-consulting firms grouped into cells by event year and broad sector (no matching on sector in Approach 1), while Approach 2 restricts to the matched control pool described above.

[13] One important difference is that our matched DiD design does not control for changes in the outcome variable in the pre-period as the specification in Davis et al. (2014, 2025) does. This enables us to inspect pre-trends for the matched DiD specification.

up. The SDiD design (Approach 3) further aligns pre-event trajectories via endogenously chosen unit and time weights, at the cost of precluding the pre-event coefficients from serving as an independent test of parallel trends—or, substantively put, a lens into dynamic selection into consulting take-up.

However, a residual caveat applies across all three designs, even Approach 3: in the absence of random assignment into consulting, our estimates may partly reflect dynamic selection in addition to causal effects.[14]

# 6 Effects of Consulting: Results **Note: The update of this section is in progress. Several parts are preliminary and incomplete. Please read with caution.)**

We now present DiD estimates of the effects of consulting on firm outcomes. We do so in Figures 7—13. Figure 7 summarizes the results for a broad set of outcome variables in the form of the pooled treatment effect for the post-period. Supplementing this summary of estimates, Figures 9—13 plot the group-specific time series as well as the associated year-specific DiD coefficients for our core outcome variables. As in Figure 6, we pair level time series of the four groups with the year-specific regression-based treatment effects (see Equation (2))—echoing the regression specification by normalizing all levels at 1 in the pre-event year. Again, Appendix B details the outcome variables. All figures report results for the three different control groups (unmatched, matched, synthetic), and associated DiD effects.

**Robustness to Alternative Spending Thresholds** In Figure 8, we also show robustness to different event definitions: EUR 25,000 and EUR 100,000. Below, we focus on the baseline event definition of EUR 50,000, and note here that we find essentially the same the results, so that we do not revisit this important robustness check.

**Heterogeneity** While we focus on average treatment effects in this section, in the end, in Section 6.8, we will conduct split-sample heterogeneity checks to trace out the important question of heterogeneous treatment effects.

[14]The relevant counterfactual is therefore what would happen to the treatment firms absent consulting. Thought experiments that might yield such a counterfactual include rejection by consulting firms unrelated to expected performance. For instance, in our expert survey of consulting professionals, consultancies appear to sometimes reject potential clients because of conflict of interests (i.e., they may have a previous or ongoing relationship with a competitor, see Figure C.4). While such situations based on rejected applicants may make for intriguing identification opportunities, we are not aware of a possibility to obtain such variation at a systematic level for the purchase of consulting services. In the context of a government investment subsidy program, Pop, Iootty, Bruhn, and Ortega (2021) compare matched control firms and rejected applicants and document mild divergence in post-trends, although of quantitatively very limited magnitude compared to treatment effects. Such checks are rare and we are not aware of levers in the context of management training programs or consulting specifically. We hope that future work will add to the literature strong causal identification among typical clients and in advanced economies.

**Comparison to Expert Predictions** We also highlight the expert predictions from Figure 2 as a benchmark for our results. Statistical precision aside, directionally, these forecasts can be viewed as being broadly and at least on average consistent with our empirical estimates. We reiterate that our difference-in-differences effects can be interpreted as reflecting both causal effects and dynamic selection.

### 6.1 Preliminaries: Pre-trends and Pathways into Consulting Take-up

A substantive question in its own right, and a standard methodological check for DiD designs, is the inspection of pre-trends leading up to the event. By construction, the design based on the synthetic control group will preclude such assessments by aligning pre-trends by force (weighting). However, the two less demanding specifications—drawing on unmatched and the coarse cell-based matched control groups—permit exactly those checks.

We preview that the four groups yield essentially indistinguishable pre-event trajectories overall. This property motivates a standard DiD design and implies that our DiD estimates will be largely robust to the specific approach to the control group.

In addition, these broadly parallel pre-trends also shed direct descriptive light on the pathways into consulting. Here, this result indicates that, on average, consulting events are not systematically occurring in, e.g., struggling or the best preforming firms. Relatedly, turning to dynamic selection, one may have expected an "Ashenfelter's dip" in performance-related outcomes right before the event if firms seek help when facing sudden crises—for which none of our outcomes lend support.[15]

### 6.2 Effects on Productivity

We start by studying effects on productivity measures directly, reporting results in Figure 9 and Figure 7 Panel (a). Labor productivity increases when consultancies get enlisted by the client firm, both when measured as revenue and value added per worker, with average increases of 0.058 (SE 0.024) and 0.036 (SE 0.018), respectively, in the five years after consulting take-up. For TFP, our design reveals more mixed but intriguing patterns, with TFP dipping in the event period (perhaps mechanically due to the intermediate input spending on consultants) and turning positive albeit without statistical precision in the subsequent periods. Looking at point estimates, TFP accounts only for about half of the increase in revenue and value-added labor productivity.

Overall, the evidence suggests positive productivity effects—which could either stem from making existing operations more productive or scaling up or down in more efficient ways, channels and additional outcomes we can indirectly study next. Productivity effects also grow over time

[15] In fact, while we do not generally find such pattern, some scale outcomes (e.g., revenue and employment) even suggests that firms grow somewhat more leading up to the event, rather than less, compared to control firms—thereby, if anything, tracing out a mild Ashenfelter's "surge" rather than dip.

for all three measures, consistent with some short-term costs of restructuring or learning-by-doing leading to greater productivity gains over time.

Our findings also raise the question as to the origin of the productivity effects. With TFP effects remaining limited but labor productivity rising, our results leave room for input ratios as a potential driver of the effects in a simple growth decomposition. We tackle those results next. However, our preferred explanation will rely on heterogeneity, which we investigate in Section 6.8 at the end of this section.

### 6.3 Effects on Firm Size

We now turn to firm scale—focusing on revenue and employment in Figure 10 and with a full set of results in Figure 7 Panel (b). Shifts in these outcomes can be viewed as alternative, basic measures of firm productivity (or shifts in costs). At the same time, we may expect relatively large confidence intervals for these dispersed outcomes. Overall, we find that input and output measures do not seem to change dramatically on average, with confidence intervals generally including zero and ruling out effects larger than 10% in magnitude across the board for all measures.

We detect a negative point estimate for employment of about 2.5%, with positive (about 1%) increases in revenue and value added. Together, these average effects point towards a positive labor productivity effect. It is tempting to recognize that the significant and larger productivity effects documented above reflect within-firm ratios of output to employment, suggesting that these effects are concentrated in particular (and perhaps smaller) firms, although we cannot definitively connect the firm-level and group-level average effects. Moreover, in unreported results, we found positive effects on the quantity of intermediate inputs (in particular services) used, which we pick up again in Section 6.6. However, we preview that a promising reconciliation of the productivity effect may rely on heterogeneity (Section 6.8).

We also find no evidence for consultancies closing down existing establishments, as we study as an outcome variable the number of establishments (as well as participations, i.e., partial or full ownership of the firm in other firms). These margins also suggest the absence of an effect or a dynamic correlation with mergers and acquisitions stemming from consulting take-up.

### 6.4 Effects on Profitability and Financials

Figure 7 Panel (c) and Figure 11 report effects on profitability and financials such as leverage. We do not find strong effects on profitability (operating profit divided by revenue), although absolute profit levels may shift up due to an increase in revenue (this measure is in percentage points rather than logs to accommodate negative levels). Markups (in logs) do not appear to shift. Leverage appears more volatile, and ROCE (return on capital employed, in percentage points) has wide confidence intervals with a negative point estimate. Overall, we conclude that consulting does

not seem to have dramatic and visible effects on those outcomes, but note the wide confidence intervals.

### 6.5 Effects on Worker Outcomes: Labor Share and Wage

We now turn to labor outcomes in Figure 7 Panel (d) and Figure 12. Our primary focus is on average wages (Panels (a) and (b)) and the labor share (Panels (c) and (e)).

We find a striking *increase* in the average wage. This increase, of about 2-4 percent, ramps up gradually—similar to the effect on labor productivity—but appears persistent, with stabilization at the end of the analysis period. We caveat that this effect may reflect compositional shifts (if higher-paid employees are retained or hired), which we dissect in more detail in the next section. In fact, comparing the pooled DiD effect on labor productivity measures with that on wages, we cannot rule out that nearly the full productivity boost passes through into wages, suggestive of rent sharing patterns. However, such a unit pass-through would appear to be quantitatively large compared to existing estimates of about 0.1 (see, e.g. Card, Cardoso, Heining, and Kline, 2018; Jäger, Schoefer, Young, and Zweimüller, 2020). An alternative explanation for both the wage and productivity effect may reflect compositional shifts in the workforce (towards more skilled workers), which the next and final section studies.

As for the labor share (the ratio of the wage bill to revenue), we find evidence for a small but statically insignificant dip early on—consistent with the employment reduction and increase in labor productivity, but the effect is small in magnitude and confidence intervals include zero at all horizons. However, a zero effect on the labor income share would be consistent with workers' wages absorbing the productivity boost (through rent sharing or with worker quality accounting for both).

Together, these two results are in contrast to a view by which external managers may engage in compensation and personnel policy changes that lead to cost cutting in the labor domain, or to a reallocation of rents from workers to managers or shareholders.[16]

### 6.6 Firm Organization, Skill Demand, and Outsourcing

While we can rule out substantial shifts in the in-house labor intensity of the client firms, which speaks against strong effects on labor-substituting automation decisions, we now use our firm-level data to further check on effects that indicate restructuring, particularly in personnel decisions and organizational structure. That is, we close our empirical analysis by studying whether consulting leads to changes in the organizational and skill structure in treated firms. Potential differences

[16]Note that Belgian firms' executives are typically compensated through so-called management companies, i.e., as independent contractors, and are thus not on the payroll. The average wage effect we document is thus plausibly not driven by shifts in managerial compensation.

in organizational or skill structure could help provide an explanation for how short-lived consulting engagements (with a median duration ≤ one year) translate into persistent and growing productivity increases.

Figure 13 presents those results for a subset of core outcomes, and in Figure 7 Panel (e) reports pooled DiD effects for a broader set of outcomes related to firm (re-)organization.

Regarding skill composition, our data (the "social balance sheet" in the annual reports) permit us to check on several outcomes. If anything, we find that the share of managers increases. We see also a reallocation from blue- to white-collar share in the workforce, but these results are statistically insignificant. While these effects are small and not precisely estimated, they leave the door open to some of the wage effects reflecting compositional effects. In fact, it is also possible that some of the labor productivity effects reflects a shift towards higher-skilled labor.

We find an overall intriguing pattern of reorganization on the labor side. We see no change in separations but a small increase in dismissals. We also find an increase in the share of intermediate inputs that are services—which is, in fact, not reflective of the consulting services as such (as we exclude those from this measure and as the effect occurs in the medium run).[17] As a result, it seems that the client firms become somewhat more reliant on external services but not at the expense of in-house labor (but capital or perhaps the labor costs stay stable due to higher wages)—consistent with labor-intermediate substitution in the context of firm growth (Mertens and Schoefer, 2024). As one important, complementary finding, we find a negative effect on the share of hours by temp agency workers. This result seems to rule out the idea that consultants lead firms to outsource more, at least on this observable margin, or seek that margin of labor-cost savings given potential pay differentials (Drenik et al., 2023).

We also reiterate that we had already documented that take-up of consulting services did not lead to a (net) closure of establishments in treated firms. We also note here that shedding additional light on restructuring of the C-suite (e.g., CEO turnover or exchange of directors) as such or management practices per se would be an interesting outcome if amenable to measurement by proxy in our data.

### 6.7 Comparison of Estimated Effects with Experts' and Practitioners' Predictions

We next compare our findings with experts' forecasts in Figure 2 Panel (d). Our experts are separated into academics and consulting professionals. In broad terms, the signs of the estimated treatment effects match the average priors of both groups. Academic experts were generally more conservative in terms of the predicted magnitudes.

The confidence intervals of the estimates include both the academic experts' and practitioners' average predictions in the large majority of outcomes. As one exception, consulting practitioners

[17] In unreported results, we have also found positive effects on the quantity of intermediate inputs.

were, on average, too optimistic about the effects on revenue and TFP.[18] In contrast, consulting practitioners were more accurate in their predictions of the effect on average wages and the dismissal rate, both cases in which academic experts' predictions were too pessimistic (i.e., predicting smaller or null wage effects and higher dismissal rates).

Beyond forecast accuracy, our results also speak to competing theoretical views of the effects of consulting. Both respondent groups placed substantial prior weight on a productivity-enhancing view of consulting, with an overwhelming majority (79%) of consultants and a narrow majority (52%) of academic experts supporting this view. The estimates reveal a pattern of modest labor-productivity growth coupled with higher wages, which offers qualified support for that view. By contrast, the data provide no evidence for the rent-shifting view. While only a small share of the consultants (10%) endorsed the rent shifting view, about half of the academic experts (45%) did; yet we observe neither a decline in wages nor in the labor share, implying that rent shifting does not drive the consulting effects in our setting. While the forecasts overall captured the broad direction of effects, the divergence and intra-group disagreement about different views of consulting as well as the systematic differences in accuracy across outcomes highlight the importance of empirical validation. They may also reflect heterogeneity, with consulting potentially having different effects depending on the client firm and its situation. We investigate heterogeneous treatment effects in the next and final empirical section.

### 6.8 Heterogeneity Analysis

We conclude our empirical analysis with checks on heterogeneous treatment effects. Intuitively, this final analysis connects the evidence for considerable heterogeneity in take-up (Section 4) with the difference-in-differences analysis (Sections 5 and 6). For this method, we implement the matching and difference-in-differences method exactly as described in Section 5 but do so in subsamples. Specifically, we split the sample of treated firms into half by the median of a given continuous variable (such as size) and then create a separate synthetic control group for these subsamples. We then report subsample-specific treatment effect estimates. Selection of heterogeneity and outcome variables is informally informed by our previous analyses, the expert surveys, and our initial research question. The heterogeneity variables along which we split the variables are size (revenue), labor productivity (revenue per worker), TFP, and the profit margin. These pre-treatment characteristics are measured as of period $t-1$. We report the pooled post-period DiD treatment effects for our baseline specification (firm FEs and year FEs).

We report results of this heterogeneity analysis in Figure 14. Overall, we find larger effects on firm size as measured by revenue for firms that are initially smaller, less productive and less

[18] In the practitioner survey, we denoted TFP by "operational efficiency" as the term of total factor productivity is an economics term of art. We did note in an explanatory footnote: "By operational efficiency, we mean what economists refer to as total factor productivity, meaning the amount of revenue they generate with a given amount of workers, capital, and goods and services purchased from other firms."

profitable. Strikingly, point estimates are negative for the initially large firms, which points to reorganization and moderate shrinking following consulting in those firms. That being said, establishment counts appear to if anything increase in those firms, suggesting that such reorganization is not at the extensive margin. For employment as a size measure, we find more mixed results, suggesting that the gains in revenue are due to an increase in labor productivity (or other inputs), and consistent with the similar estimates for the dismissal and separation rates in the groups.

Consistent with this picture, we also find larger labor productivity effects for those initially smaller, less productive, less profitable firms, broadly across the value added and revenue based measures. Focusing on point estimates, TFP effects are also larger for the initially "low performing" group, although we note that our TFP measure is revenue based and hence also inherits price effects from, e.g., quality changes or quantity effects. From a misallocation perspective (Hsieh and Klenow, 2009), more positive effects on TFP and labor productivity among initially low-scoring firms on those perspective would indicate an improvement in allocative efficiency. However, overall, the heterogeneity may help resolve the overall zero TFP point estimate in the light of positive labor productivity effects.

Strikingly, we do not find evidence for the wage effects to significantly differ across the firm groups, which remain positive and similarly sized throughout. Hence, our evidence does not leave large room for the idea that heterogeneity in the selection into treatment or heterogeneity in the treatment effect of consulting leaves pockets of firms where consulting leads to large wage cuts, at least in terms of average wages.

We have also ruled out a natural concern with the heterogeneity analyses: while our design relies on a coarse classification by median and crosses different outcome and sorting variable, mean reversion may still play a role in these findings. To assess the importance of this concern, we have conducted two simple robustness checks: first, we conducted the sorting by median four years rather than one year before the treatment, and we implemented identical restrictions in the pool of potential control units. We have found extremely similar results for these alternative versions of the heterogeneity analyses.

Again, we caution that our DiD results reflect a mixture of causal effects and dynamic selection, a consideration that extends to the interpretation of the heterogeneity analysis.

# 7 Conclusion

We have studied which client firms take up management and strategy consulting services and what happens when they do, research areas where evidence remains limited, particularly in advanced economies and among typical client firms. We unlock access to this opaque industry by leveraging business-to-business transaction data based on the universe of Belgian value-added tax records

from 2002 to 2023. These data permit us to comprehensively map and analyze the links between strategy consulting and client firms. We have provided the first representative and systematic descriptive evidence on the volume and episodic nature those spells, as well as which client characteristics correlate with take-up. Large firms appear to take up consulting, but selection by TFP is nuanced, suggesting a U-shaped pattern.

In an attempt to trace effects of consulting on client firms, we have exploited the sharply episodic nature of consulting engagements, enabling us to estimate effects in difference-in-differences designs against matched control groups. This research design has revealed that consulting events are associated with labor productivity growth, appearing to stem from mild reductions in employment against mildly growing revenue and value added. We find positive effects on average wages, no effect on the labor share, and a reduction in a proxy for outsourcing and if anything a shift towards managerial labor. We find a mild increase in dismissals, against an overall modest or insignificant employment effect, consistent with some restructuring activities that overall increase productivity.

Hence, overall, our findings point towards consulting being associated with positive or neutral outcomes for firms and, arguably and in a more complex picture, workers. On average, our results are more in line with a productivity-enhancing view of consulting and do not support, at least on average and based on our firm-level outcomes, a view of consulting as a rent-shifting device. We do not find strong profitability effects—perhaps in part because the moderate productivity effects are "eaten up" by wage boosts (although we cannot rule out compositional effects driving both margins). Moreover, in heterogeneity analyses, we had found patterns consistent with larger productivity boosts for initially less productive firms, consistent with an improvement in allocative efficiency of inputs across heterogeneous firms—effects that our baseline design pooling all firms masked. These patterns are broadly consistent with a combination of views about consulting and with the multiplicity of potential channels that the consulting professionals we surveyed had forecast. We acknowledge that our heterogeneity analyses are coarse and our research design leaves as an open question the rich variety of consulting engagements and their heterogeneous responses.

Our findings on the effects of consulting complement existing evidence from India and Mexico (Bloom et al., 2012, 2020; Bruhn, Karlan, and Schoar, 2018). Similar to those studies, our evidence on the dynamic effects of consulting points to positive productivity effects—arguably, this finding is not trivial as the nature of consulting may differ from the environments in the emerging economies and the high management-quality and high-TFP baseline setting in Belgium. As in Bloom et al. (2020), our evidence also suggests persistent and perhaps growing effects of consulting interventions on firm productivity over time. However, it appears that we find overall more limited effects. Bloom et al. (2013) find a 17% productivity boost in Indian manufacturing plants and Bruhn, Karlan, and Schoar (2018) documents about a 27% increase in productivity-related outcomes in the context of Mexico. Our results are considerably smaller, even when considering the upper bounds

of the confidence intervals (although productivity measures are not identical). Juxtaposing those studies, a tempting conclusion emerges that would be consistent with the idea that rhymes with our introduction and is summarized in Figure 15: perhaps in a high-productivity economy with large and already-productive firms being the typical clients, consulting may not help firms harvest the low-hanging fruits present in developing countries. Instead, consulting operates more on the margins, boosting moderately productivity without large expansionary consequences. Given the disparate methods used, our interpretations remain speculative but, we believe, plausible. Our heterogeneity analysis further supports this perspective.

We close our paper with a discussion of the limitations of our study and the questions we leave open. First, more work remains to be done on the side of workers—heterogeneous effects on different skill groups, managers vs. employees, or insiders vs. outsiders. Second, an open question is the effect on other stakeholders besides workers, such as shareholders and owners, customers, or other suppliers to the firm. Third, we reiterate that our research design selects matched control firms but does not draw on a randomized control trial, so that our DiD findings likely reflect a mix of dynamic selection and causal effects—even conditional on the surprisingly parallel pre-trends we found across specifications. Fourth, it would be interesting to shed direct light on restructuring of client firms' C-suite structure (e.g., CEO turnover or exchange of directors) or management quality or practices as such. Fifth, due to selection, the limited time horizon of our DiD study, and evidence for heterogeneous treatment effects, we have shied away from an explicit "return on investment" calculation for consulting. Fifth, as noted throughout, our design inherently focuses on average treatment effects and lumps together consulting as a monolith, not doing full justice to the many different things consulting may do depending on the client, needs, and consultancy. We hope future research builds on these findings to further illuminate what consulting does—and for whom.

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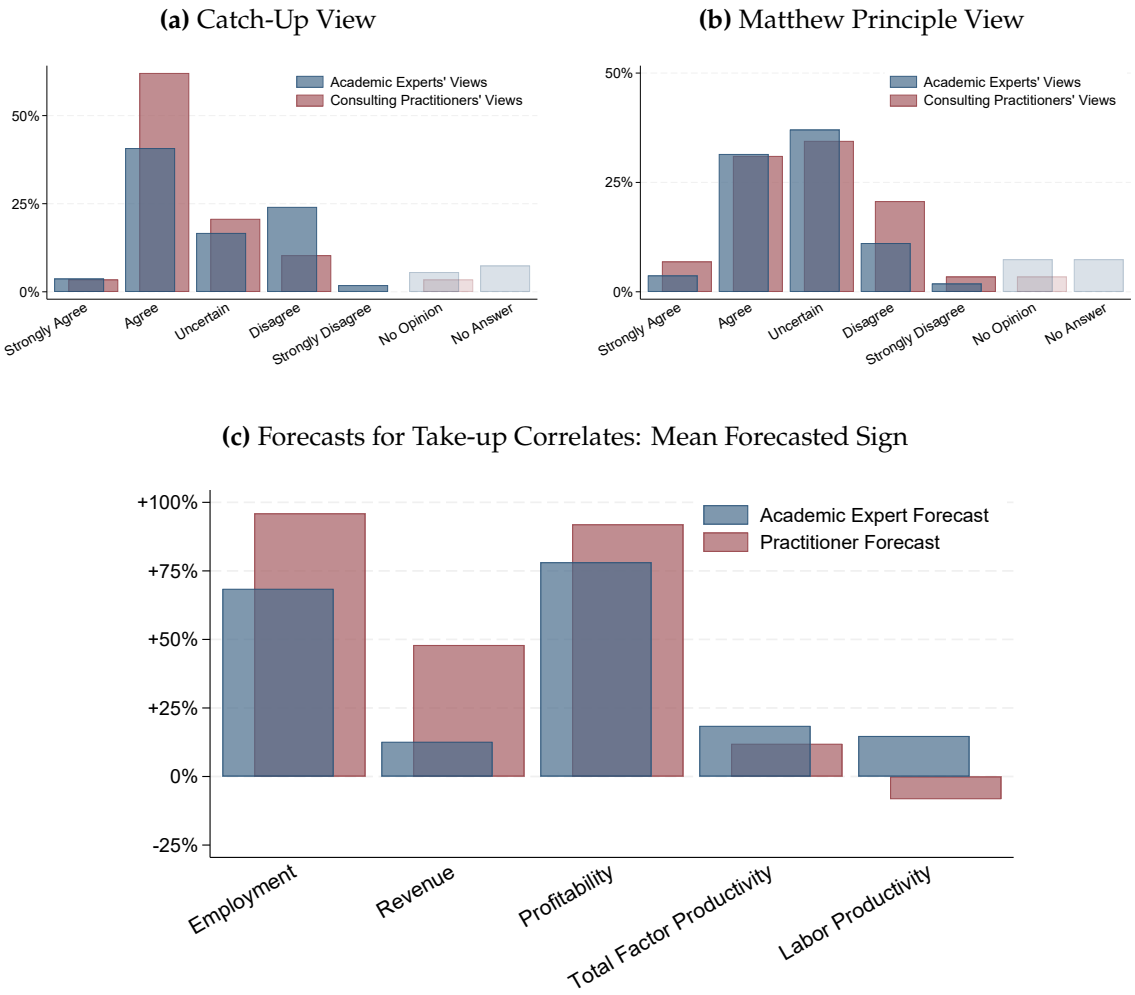
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# Figures

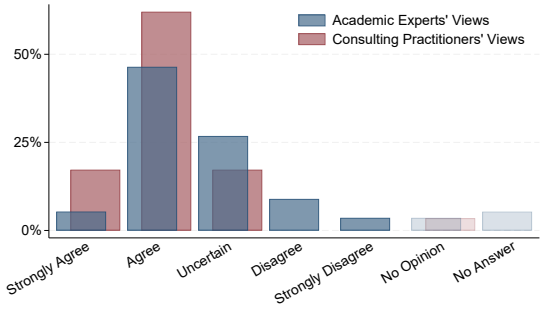
**Figure 1:** Expert Survey Results Among Academic Experts and Consulting Practitioners: Take-up Patterns and Correlates



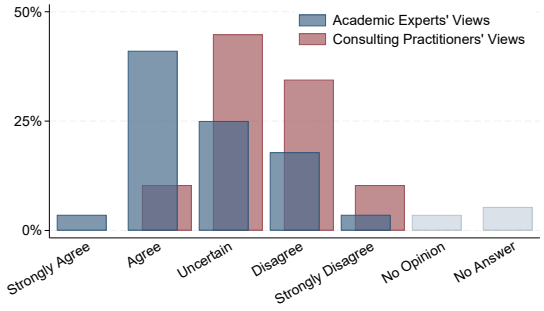

*Note*: The figure reports results of our expert survey of academic economists and our practitioner survey of consultant. Panels (a) and (b) report respondents' qualitative views on which type of firm is most likely to take up consulting: the catch-up view states that "Unproductive firms that are 'behind' hire consultants to catch up with frontier management practices and other productivity-enhancing practices," while the Matthew principle view states that "It is mostly the already productive firms that hire consultants to further pull ahead of their competition." Panel (c) reports forecasts of take-up correlates in our sample of Belgian firms as an adjusted mean forecasted sign: each respondent forecasting a positive correlation is recorded as 1, neutral as 0 and negative as -1. The questionnaire describes the research designs, context, sample, and datasets at a high level. See Section 2.4 and Appendix C.1 for more details.

**Figure 2:** Expert Survey Results Among Academic Experts and Consulting Practitioners: Effects of Consulting

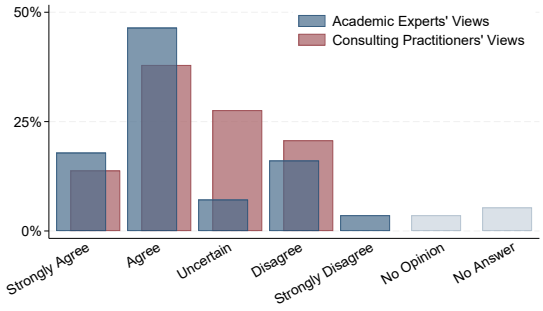
**(a)** Productivity and Growth View



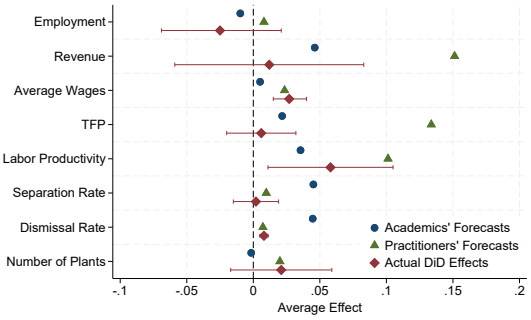

**(b)** Rent-Shifting View




**(c)** External Validation and Legitimacy View



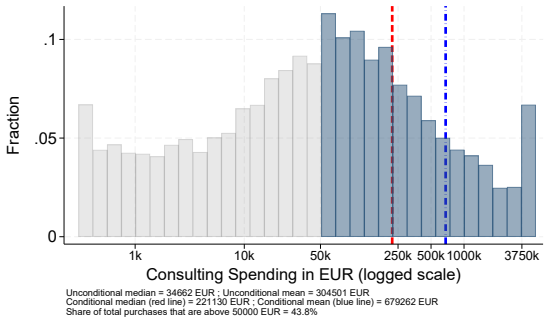

**(d)** Quantitative Forecasts for Effects of Consulting in Our Sample



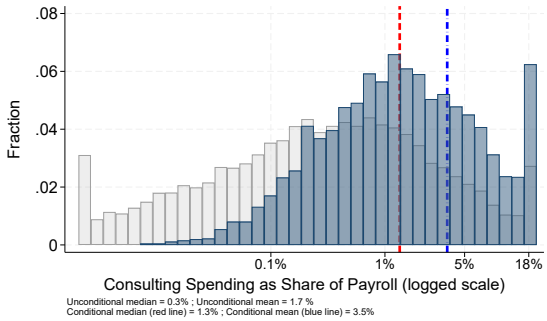

*Note*: The figure reports results of our expert survey of academic economists and our practitioner survey of consultant. Panels (a), (b) and (c) report respondents' general views of the effects of consulting on client firms: the productivity and growth view states that "Management and strategy consultants improve firm productivity and permit firms to grow;" the rent shifting view states that "Management and strategy consultants are usually brought in to cut costs and reallocate rents from workers to managers and shareholders, e.g., by lowering wages;" while the external validation and legitimacy view holds that "Management and strategy consultants usually mainly help implement tough decisions by reducing internal resistance and by lending legitimacy and external validation for choices the firm's management team would like to implement anyway (such as during layoffs, plant closures, or other restructuring)." Panel (d) reports forecasts of the effects of consulting in our sample of Belgian firms and compares them with our DiD estimates. Surveys were elicited in percentage points and DiD estimates with 95% confidence intervals are reported as logs or percentage effects (see Appendix B). The questionnaire describes the research designs, context, sample, and datasets at a high level. See Section 2.4 and Appendix C.1 for more details.

**Figure 3:** Distributions: Spending on Consulting, Number of Suppliers, and Spell Lengths

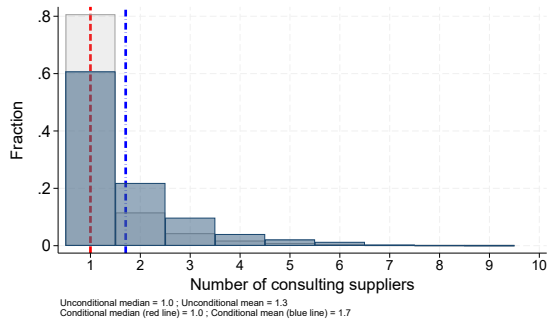
**(a)** Annual Spending on Strategy Consulting Services as Absolute Volume (2020 EUR)



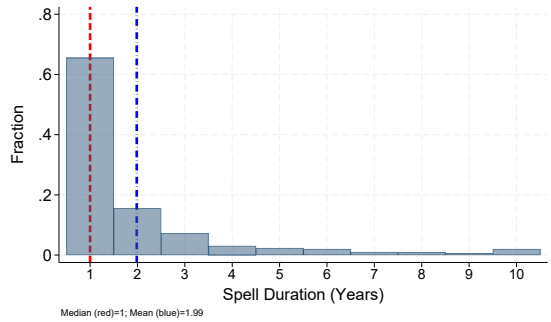

**(b)** Annual Spending on Strategy Consulting Services as a Share (%) of Client Payroll




**(c)** Consultancy Suppliers Per Spell

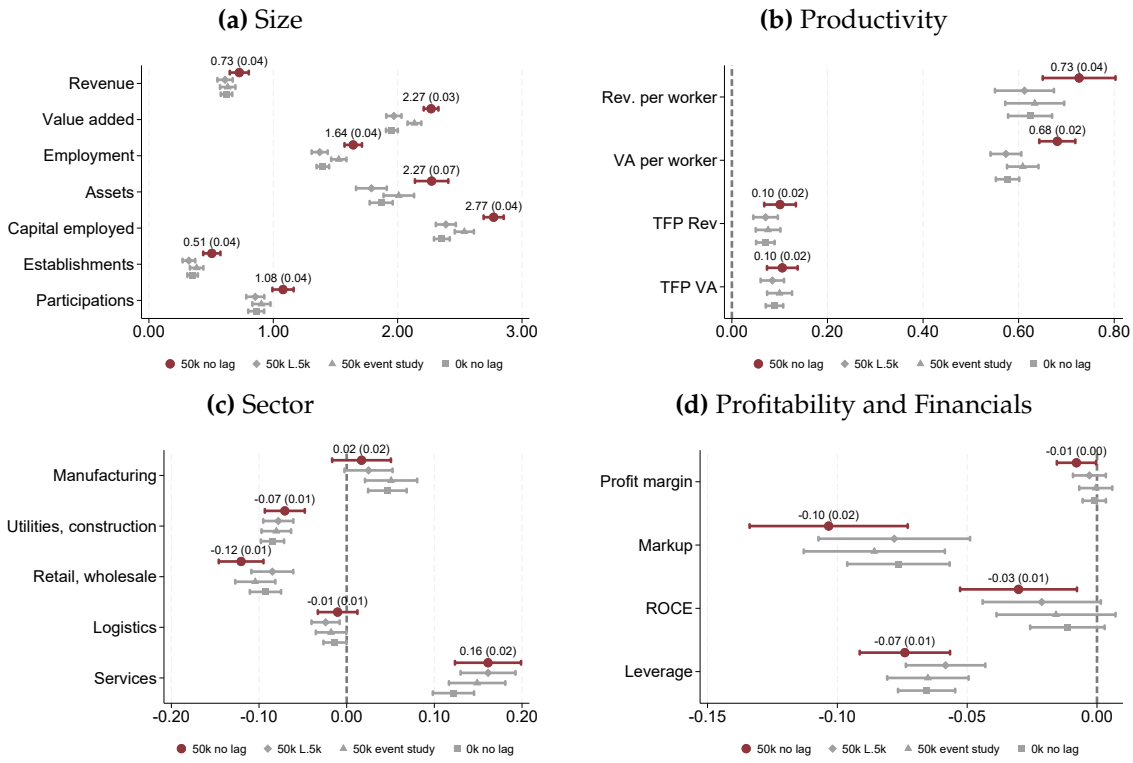



**(d)** Consulting Spell Length



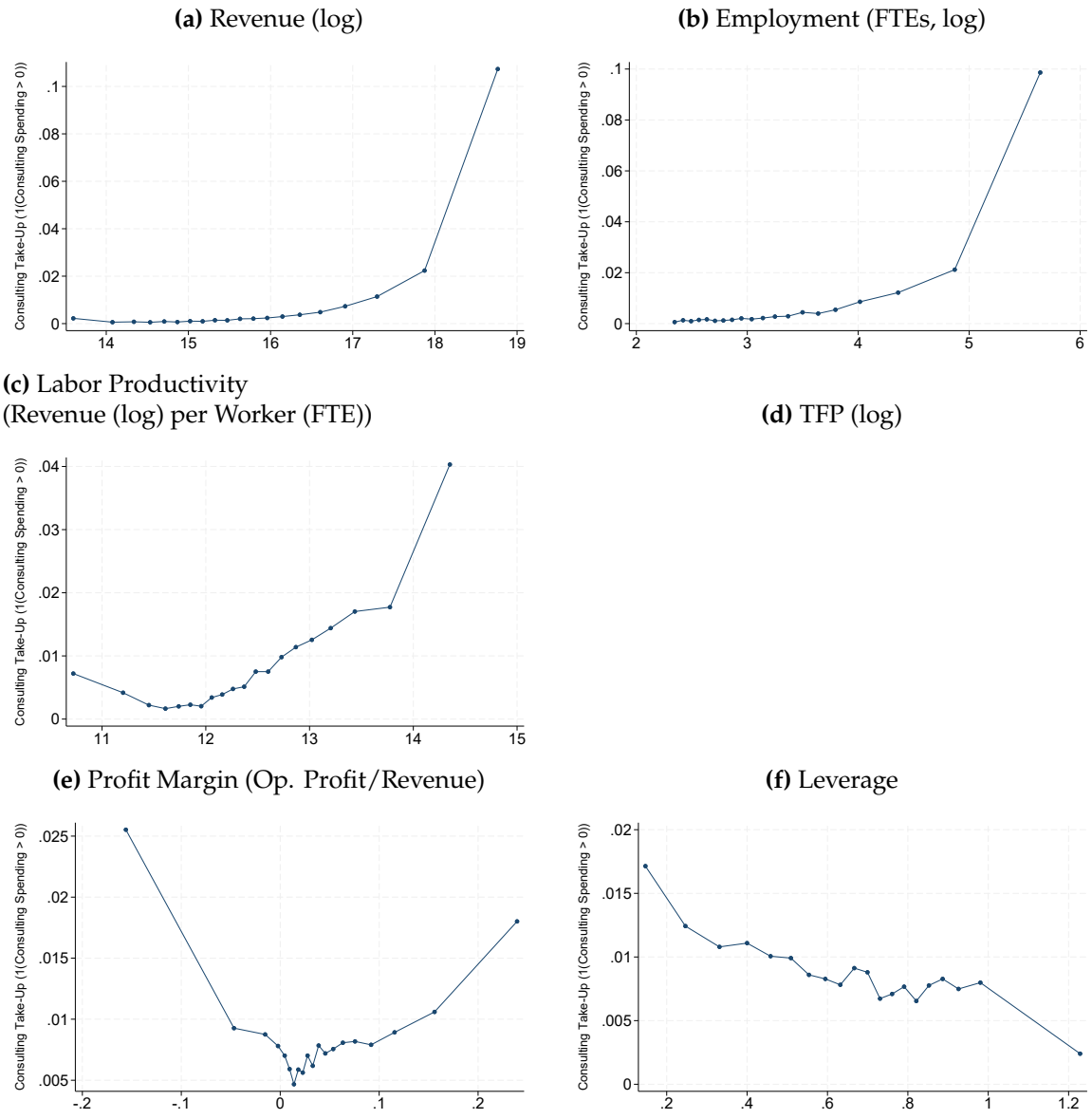

*Note*: The figure plots the distribution of annual spending on consulting services in the sample of firms with strictly positive expenditure for consulting services in a given year, pooling across all years in our sample. For each client-year, we aggregate spending on consulting services across of our focal consulting suppliers. Panel (a) plots the annual spending on strategy consulting services using 2020 euros. It foreshadows our eventual focus on nontrivial engagements with a cutoff of at least EUR 50,000. Panel (b) plots annual spending on strategy consulting services as a share of the payroll. In Panels (a) and (b), we winsorize at the 2.5% level; it plots two histograms, with the solid one denoting the observations of spending of at least EUR 50,000, and the gray ones using all observations with any positive such value. Panels (c) and (d) are not winsorized. A spell is defined as a client firm-year observation with total consulting spending exceeded EUR 50,000, and it ends when this variable falls to zero; we found similar results if we instead required counted spells to end once they fall below EUR 50,000 (median of 1, mean of 1.66). Since spending is observed coarsely at the year level, this measure is an upper bound for consulting episode length.

**Figure 4:** Summary of Extensive-Margin: Take-Up of Consulting Services By Firm Characteristics Among All Firms




*Note*: The figure plots differences in $t-1$ characteristics b/w firms taking up consulting in $t$ vs. those that do not. We do so under alternative definitions of consulting take-up. The baseline definition requires spending of at least EUR 50,000 (red circles). In gray symbols, this figure additionally shows results for: (i) the same EUR 50,000 threshold conditional on spending less than EUR 5,000 in the prior year (diamond); (ii) the event-study definition used in Section 6, which requires a threefold increase relative to the three-year average (triangle); and (iii) any positive consulting spending, i.e., a threshold of EUR 0. The firm characteristics are measured in year $t-1$. Leverage is measured as debt over total assets. We estimate TFPr following Ackerberg, Caves, and Frazer (2015) (and experimented with industry-level cost-share-based estimates of output elasticities). All nominal values are deflated to 2020 euros using the GDP deflator. Variables are not winsorized, with the exception of the variables in Panel (d) (due to large outliers). See Appendix B for information on the construction of the variables.

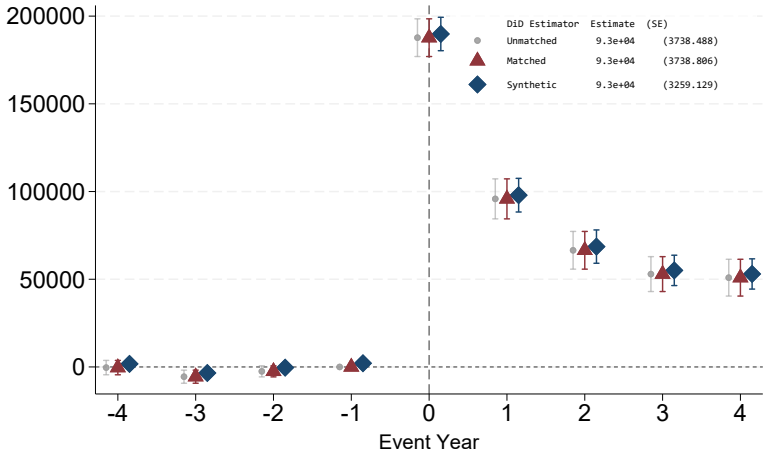
**Figure 5:** Extensive Margin: Take-Up of Consulting Services By Firm Characteristics Among All Firms



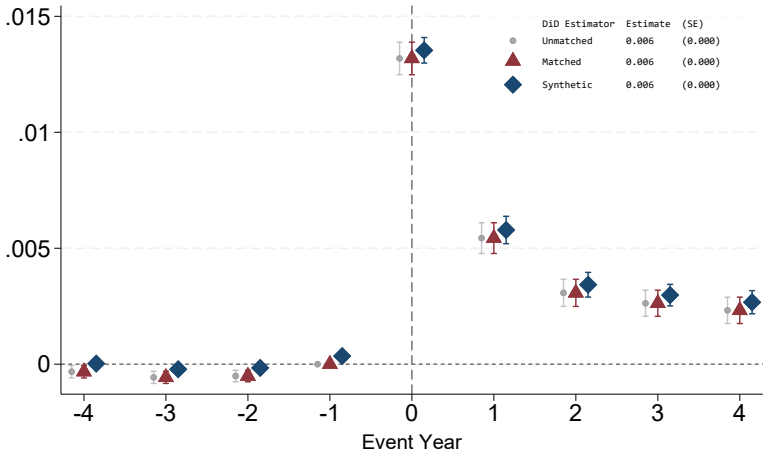

*Note*: The figure plots the probability of (indicator for) purchasing consulting services in period $t$ against various firm characteristics measured in $t-1$. All specifications include year fixed effects. Leverage is measured as debt over total assets. We estimate TFPr using industry-level cost-share-based estimates of output elasticities (and obtained similar results using the method in Ackerberg, Caves, and Frazer, 2015). All nominal values are deflated to 2020 euros using the GDP deflator. Variables are not winsorized, with the exception of the profit margin, leverage, and TFP (due to large outliers). See Appendix B for information on the construction of the variables.

**Figure 6:** DiD: Treatment Intensity of Consulting Take-Up and Expenditure

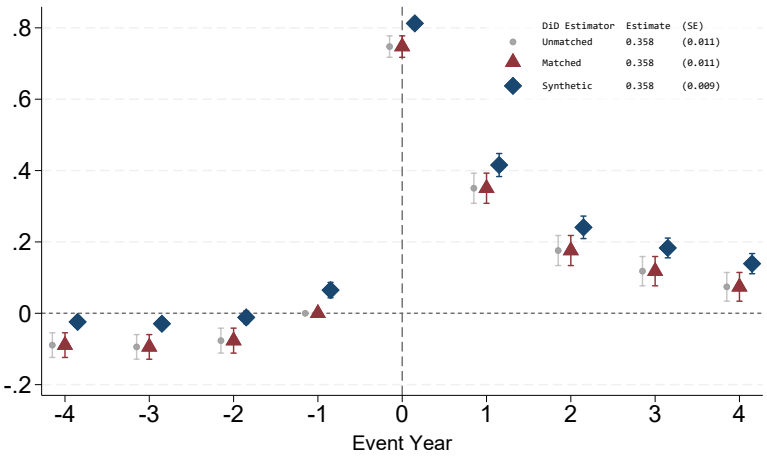
**(a)** DiD Effects: Spending in EUR




**(b)** DiD Effects: Spending as Share of Payroll

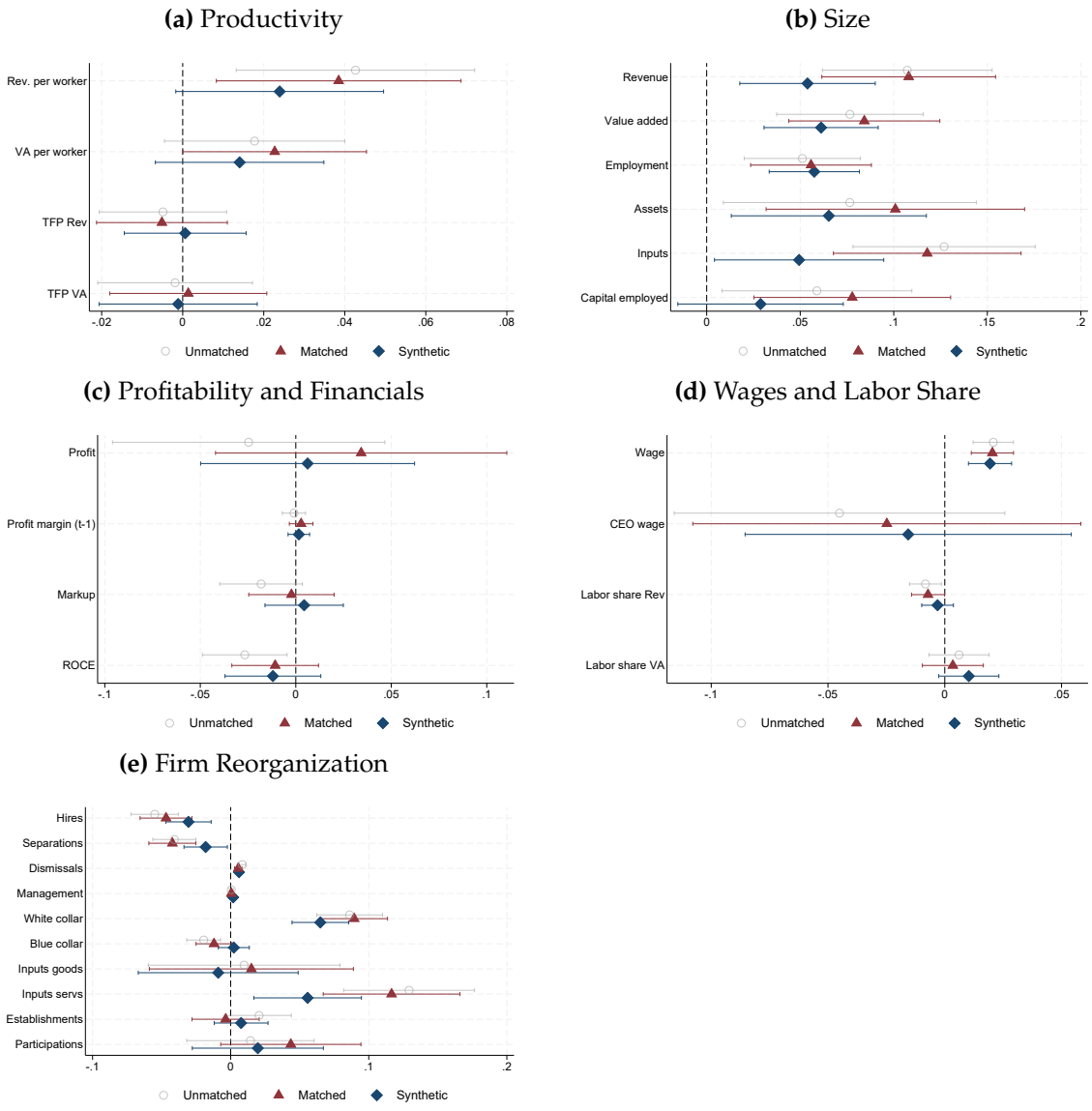



**(c)** DiD Effects: 𝟙(Any Cons. Spending)



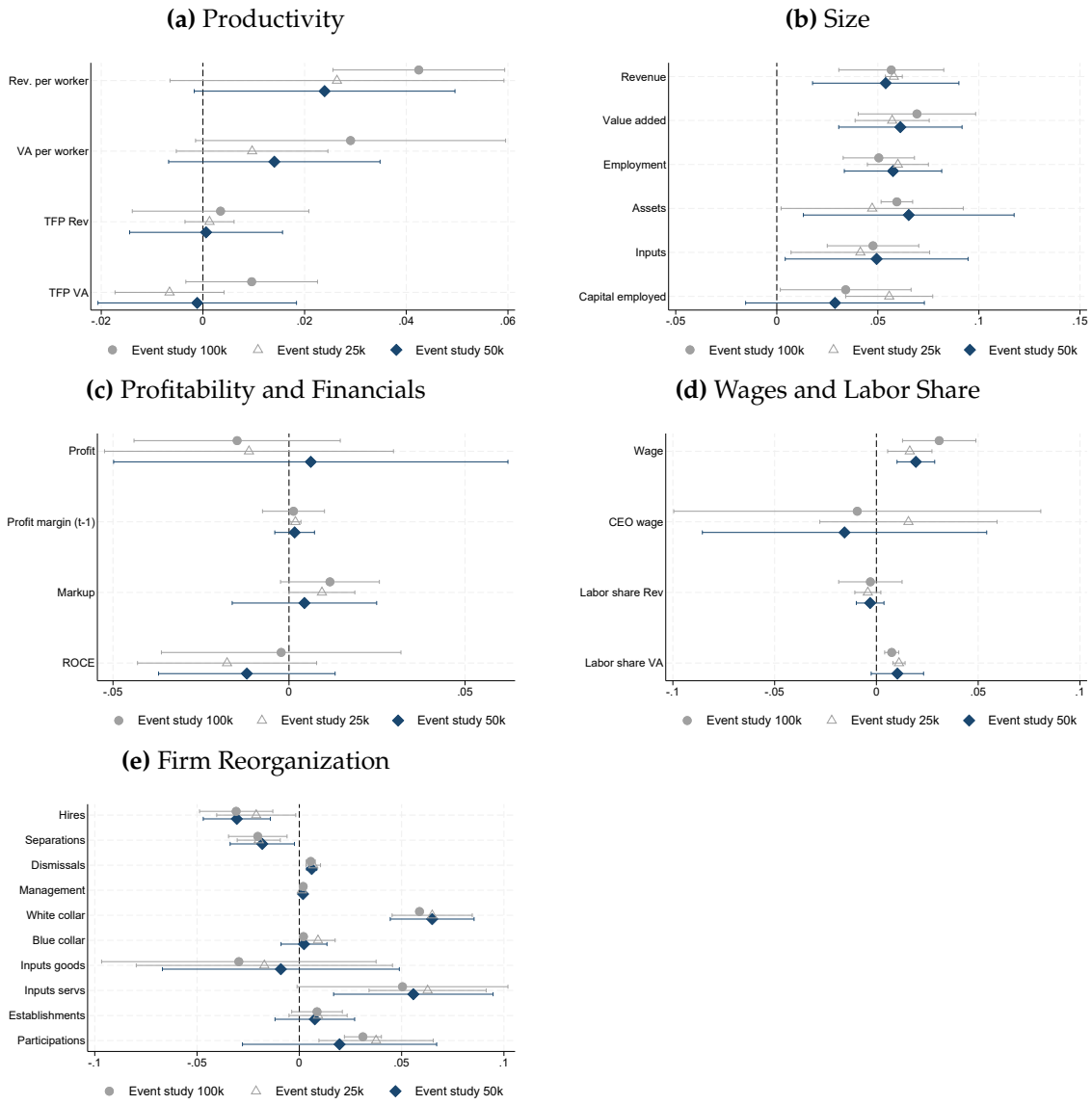

*Note*: The figures plot the "treatment intensity" of the consulting engagement event. Panel (a) plots the DiD effect on the spending in EUR on consultancies. Panel (b) reports as outcome variable the total consulting spending normalized by the client firm's wage bill. Panel (c) reports the effect on an indicator for any consulting spending. See Appendix B for information on the construction of the variables. The bottom of the panels also spell out the estimated treatment effects on those outcome variables in year 0 (the event year) and the average post-treatment DiD effect.

**Figure 7:** DiD: Summary of the Effects of Consulting Events on Firm Outcomes




*Note*: We estimate DiD effects of substantial consulting engagements on firm outcomes, as in Equation 2, for on pooled effects across all event periods (0 to 4). The horizontal bars denote 95% confidence intervals. All nominal values are deflated to 2020 euros using the GDP deflator and winsorized at the 2.5% level. See Appendix B for information on the construction of the variables. We investigate robustness to different thresholds in Figure 8.

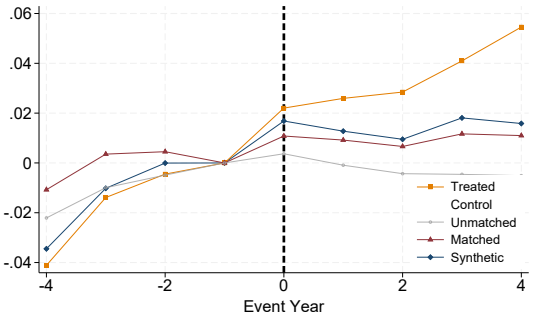
**Figure 8:** Robustness: Effects of Consulting Events Under Alternative Spending Thresholds



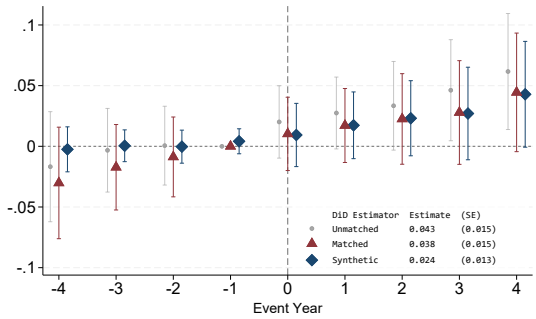

*Note*: This figure replicates the summary coefficient plots in Figure 7 under alternative minimum spending thresholds for defining a consulting event. Our baseline definition requires a spending increase of at least EUR 50,000; the figure additionally shows results for thresholds of EUR 25,000 and EUR 100,000. Each panel reports pooled post-event DiD effects (average across $\tau = 0$ to $\tau = 4$) for three estimators: Raw DiD, Matched DiD, and Synthetic DiD (SDID). Horizontal bars denote 95% confidence intervals. All nominal values are deflated to 2020 euros using the GDP deflator and winsorized at the 2.5% level. See Appendix B for variable definitions.

**Figure 9:** The Effects of Consulting Events on Firm Outcomes: **Productivity**

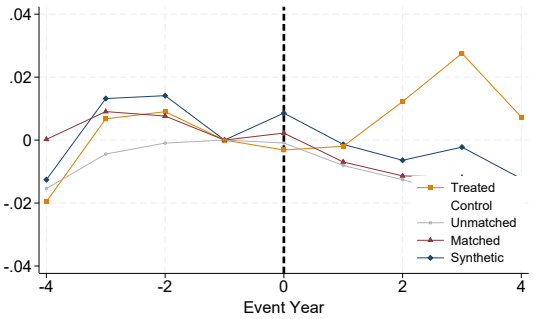
**(a)** log Labor Productivity (Levels)
(Revenue per Worker (FTE) )



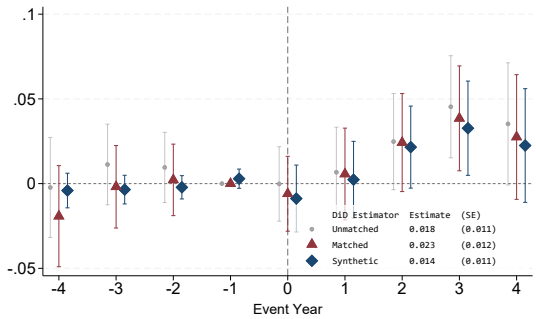

**(b)** log Labor Productivity (DiD)
(Revenue per Worker (FTE))



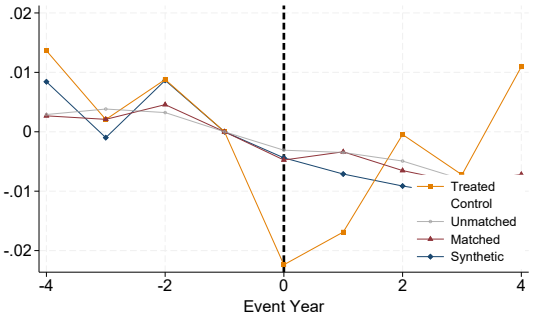

**(c)** log Labor Productivity (Levels)
(Value Added per Worker (FTE))



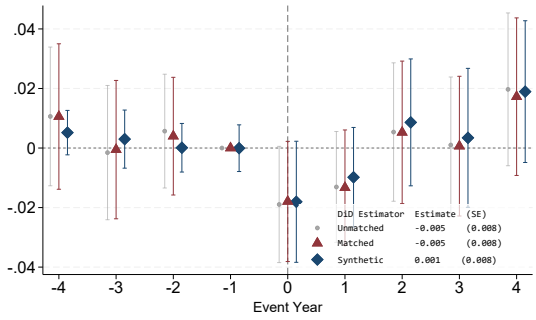

**(d)** log Labor Productivity (DiD)
(Value Added per Worker (FTE))




**(e)** log TFPr (Levels))

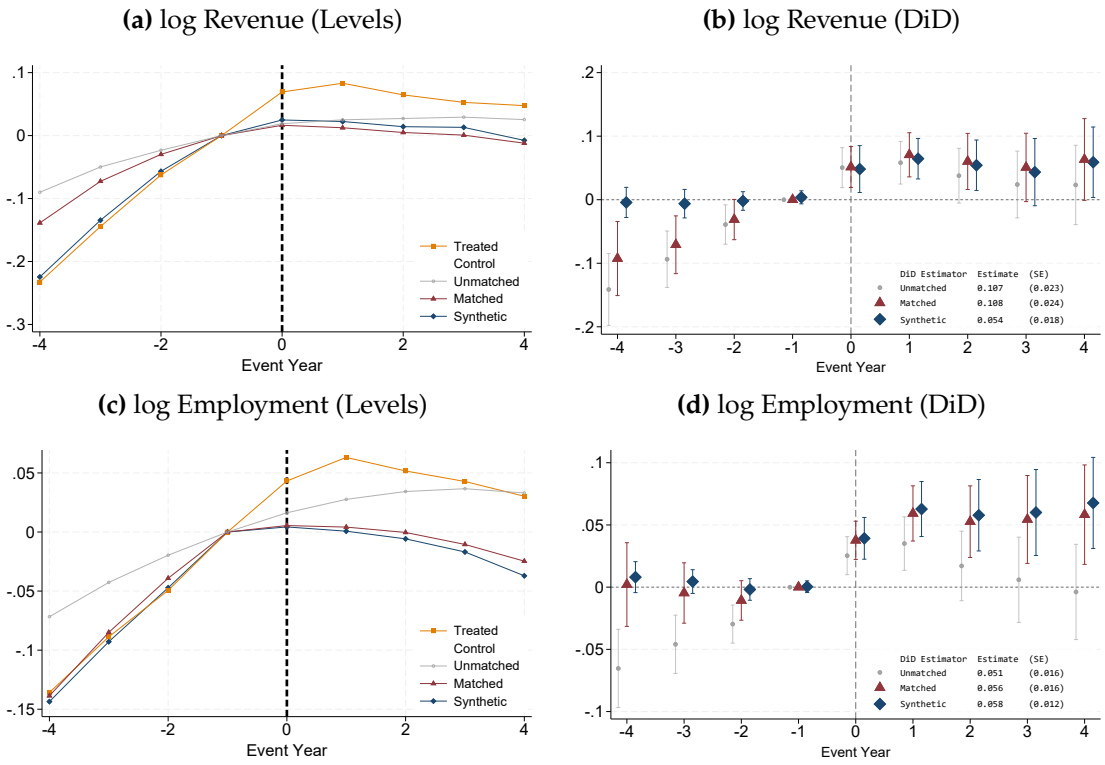



**(f)** log TFPr (DiD))



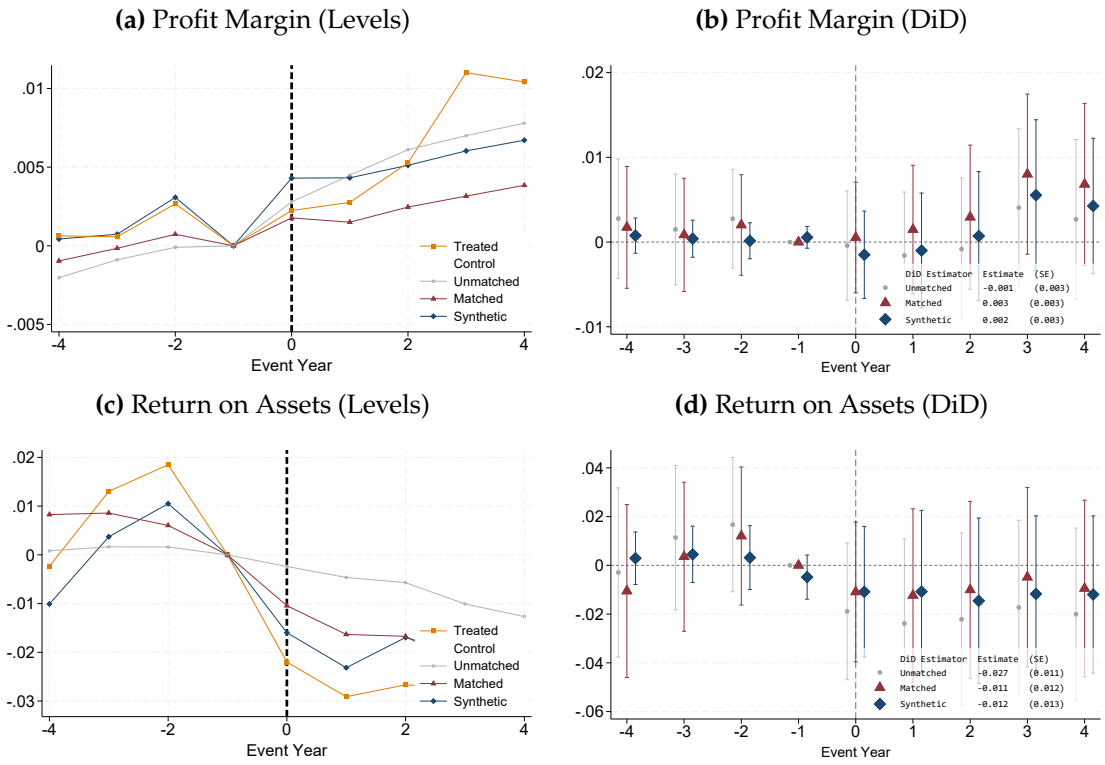

*Note*: The figures report results of the difference-in-differences design, plotting outcomes for firms that are treated as well as the synthetic control group of firms, as well as the year-specific DiD effects following in Equation (2) with 95% confidence intervals. We construct TFP by using information on value added (residualized by industry-year fixed effects) and estimating factor cost shares by industry for labor and capital (total assets), to identify Cobb Douglas output elasticities, and back out firm-level TFP. All nominal values are deflated to 2020 euros using the GDP deflator and winsorized at the 2.5% level. See Appendix B for information on the construction of the variables.

**Figure 10:** The Effects of Consulting Events on Firm Outcomes: **Firm Size**



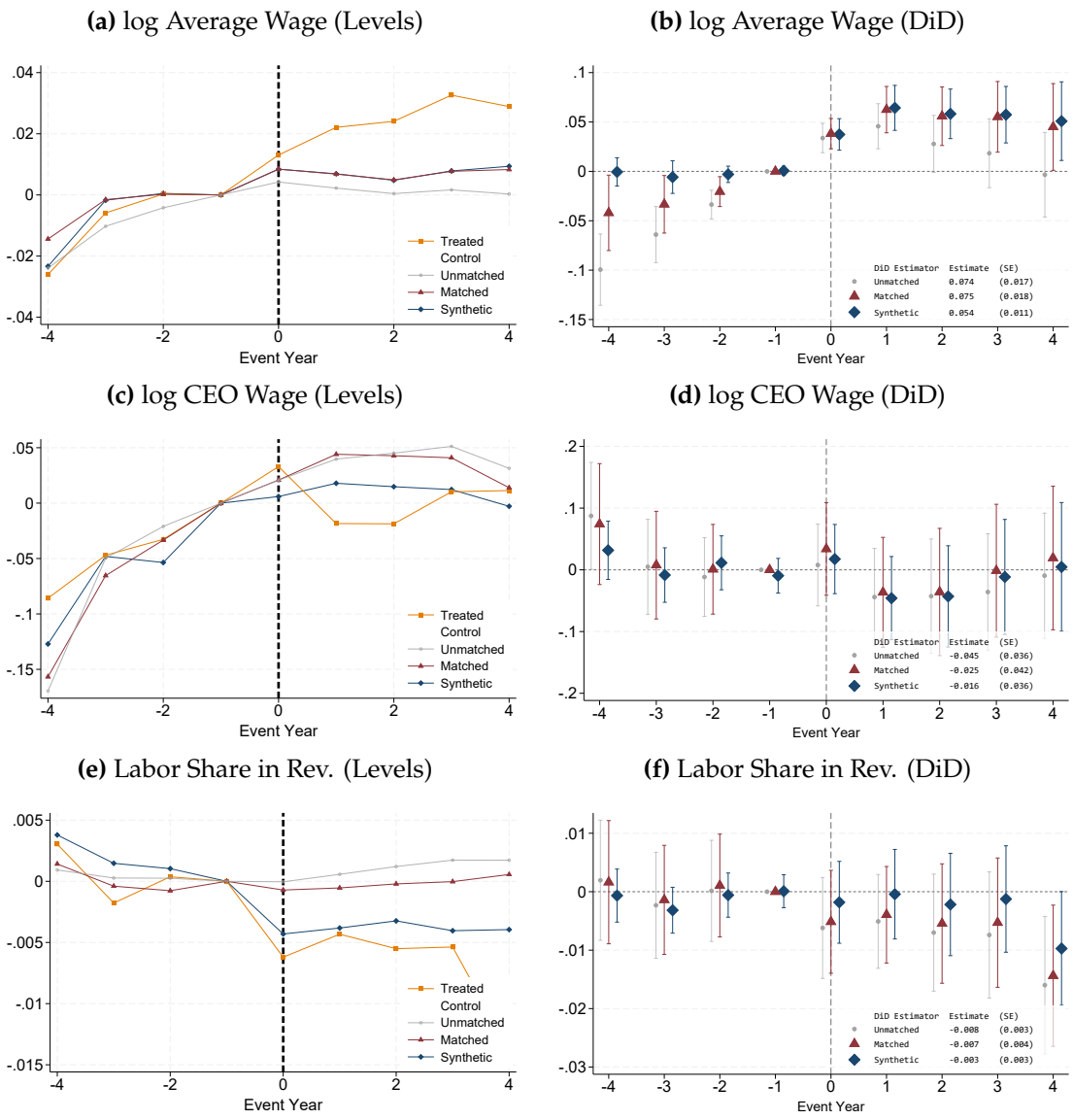

*Note*: The figures report results of the difference-in-differences design, plotting outcomes for firms that are treated as well as the synthetic control group of firms, as well as the year-specific DiD effects following in Equation (2) with 95% confidence intervals. All nominal values are deflated to 2020 euros using the GDP deflator and winsorized at the 2.5% level. See Appendix B for information on the construction of the variables.

**Figure 11:** The Effects of Consulting Events on Firm Outcomes: **Profitability and Return on Assets**




*Note*: The figures report results of the difference-in-differences design, plotting outcomes for firms that are treated as well as the synthetic control group of firms, as well as the year-specific DiD effects following in Equation (2) with 95% confidence intervals. All nominal values are deflated to 2020 euros using the GDP deflator and winsorized at the 2.5% level. See Appendix B for information on the construction of the variables.

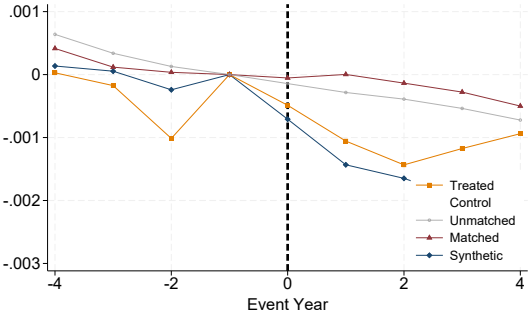
**Figure 12:** The Effects of Consulting Events on Worker Outcomes: **The Labor Income Share and Average Wages**



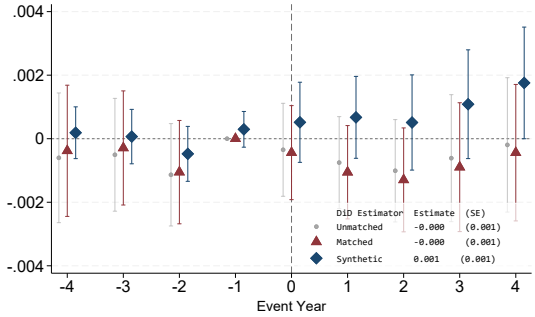

*Note*: The figures report results of the difference-in-differences design, plotting outcomes for firms that are treated as well as the synthetic control group of firms, as well as the year-specific DiD effects following in Equation (2) with 95% confidence intervals. All nominal values are deflated to 2020 euros using the GDP deflator and winsorized at the 2.5% level. See Appendix B for information on the construction of the variables.

**Figure 13:** The Effects of Consulting Events on **Firm Organization and Skill Structure**

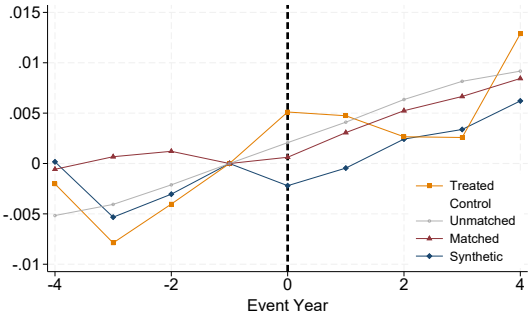
**(a)** Share of Managers (Levels)



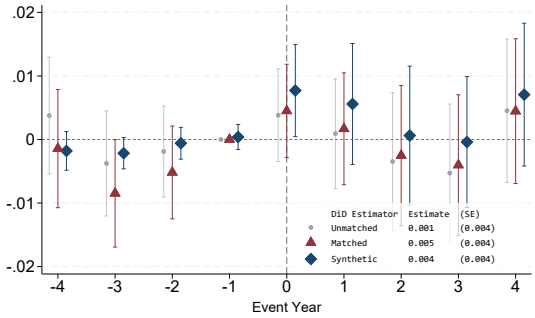

**(b)** Share of Managers (DiD)



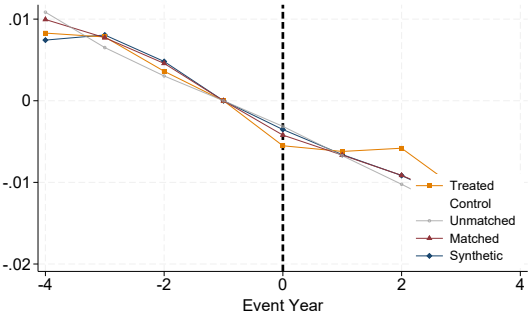

**(c)** Share of White-Collar Workers (Levels)



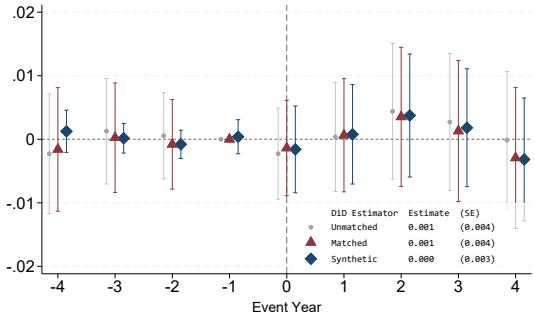

**(d)** Share of White-Collar Workers (DiD)



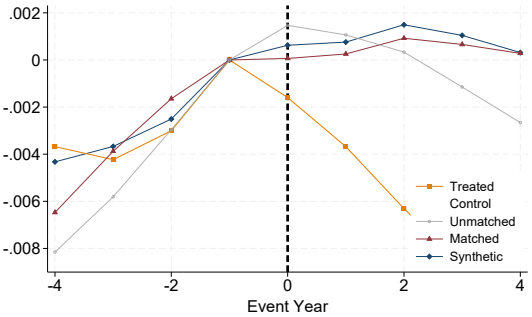

**(e)** Share of Blue-Collar Workers (Levels)



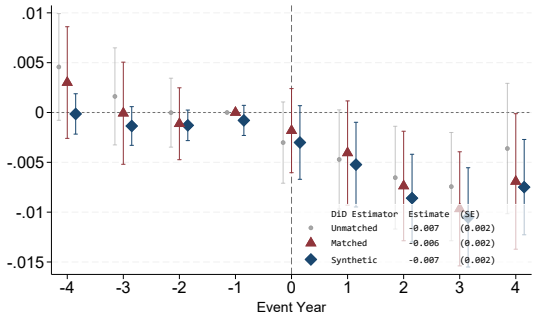

**(f)** Share of Blue-Collar Workers (DiD)




**(g)** Share of Hours by Temp Agency Workers (Levels)

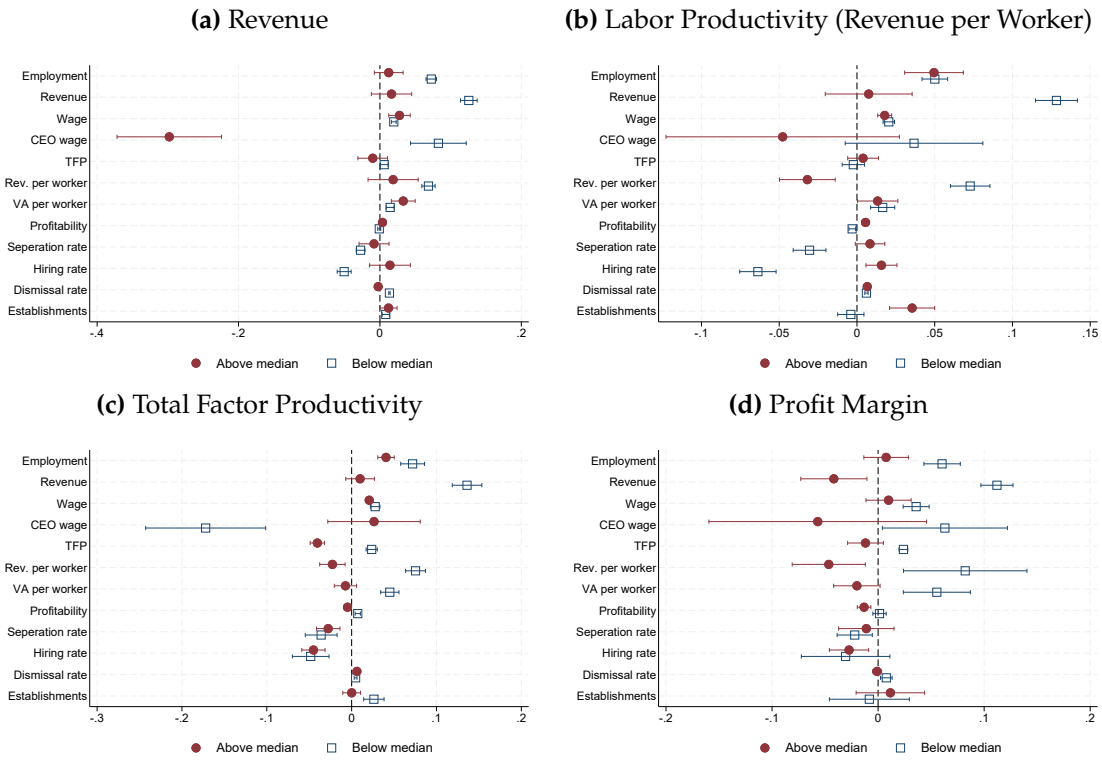



**(h)** Share of Hours by Temp Agency Workers (DiD)



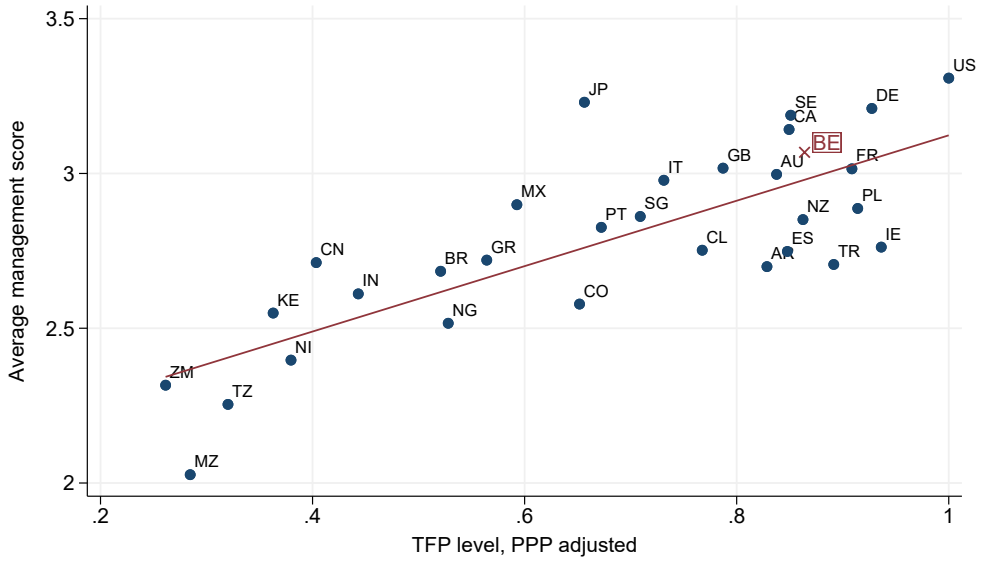

*Note*: The figures report results of the difference-in-differences design, plotting outcomes for firms that are treated as well as the synthetic control group of firms, as well as the year-specific DiD effects following in Equation (2) with 95% confidence intervals. See Appendix B for information on the construction of the variables.

**Figure 14:** DiD: Heterogeneous Effects of Consulting Events on Firm Outcomes




*Note*: The figures report results of the difference-in-differences design following in Equation (2), estimated separately for subsamples of firms above and below the median in $t-1$ according to revenue, labor productivity, TFPr or profit margin. The horizontal bars denote 95% confidence intervals. See Appendix B for information on the construction of the variables.

**Figure 15:** Management Scores and TFP




*Note*: Own visualization based on Penn World Tables, 2019 data on TFP levels at current PPPs (USA=1) and management scores from Bloom, Sadun, and Van Reenen (2017). We highlight Belgium, for which we impute a World Management Survey management quality value with a regression-based interpolation within the overlapping sample of the World Bank Enterprise Surveys (WBES) analogs in Viganola and Diallo (2025), who focus on Europe. In the conclusion, we discuss this cross-country relationship as context to juxtapose our study with two existing RCT-based studies in India and Mexico (Bloom, Eifert, Mahajan, McKenzie, and Roberts, 2013; Bruhn, Karlan, and Schoar, 2018).

# Table

**Table 1:** Summary Statistics by Firm Type

| | (1) All Firms | (2) Non-Client Firms (Never Buyers) | (3) Client Firms (Ever Buyers) | (4) Client Firms (Event Study Firms) |
|---|---|---|---|---|
| **Wage (EUR)** | | | | |
| Median | 47194.68 | 46066.59 | 73773.42 | 82178.35 |
| Mean | [50199.66] | [48225.09] | [78321.01] | [85699.64] |
| Std. Dev. | (20861.50) | (19054.49) | (24824.05) | (25596.11) |
| **Value Added (EUR)** | | | | |
| Median | 1.09e+06 | 1.02e+06 | 6.78e+06 | 2.06e+07 |
| Mean | [2.58e+06] | [1.94e+06] | [1.18e+07] | [2.10e+07] |
| Std. Dev. | (4.95e+06) | (3.26e+06) | (1.15e+07) | (1.34e+07) |
| **Revenue (EUR)** | | | | |
| Median | 3.47e+06 | 3.21e+06 | 2.58e+07 | 8.38e+07 |
| Mean | [1.09e+07] | [8.09e+06] | [5.08e+07] | [9.23e+07] |
| Std. Dev. | (2.40e+07) | (1.69e+07) | (5.47e+07) | (6.54e+07) |
| **Employment (FTE)** | | | | |
| Median | 16.20 | 15.70 | 51.80 | 153.10 |
| Mean | [31.19] | [26.19] | [102.45] | [174.26] |
| Std. Dev. | (46.31) | (33.99) | (103.94) | (123.18) |
| **VA / FTE (EUR)** | | | | |
| Median | 62439.89 | 60657.96 | 106239.40 | 126680.20 |
| Mean | [72370.18] | [68870.30] | [122231.10] | [142663.60] |
| Std. Dev. | (44630.72) | (40933.22) | (61962.27) | (72403.02) |
| **Revenue / FTE (EUR)** | | | | |
| Median | 185931.10 | 177851.70 | 373541.00 | 446920.90 |
| Mean | [306549.50] | [287683.10] | [571052.00] | [703957.40] |
| Std. Dev. | (347988.40) | (324896.00) | (513860.60) | (617080.60) |
| $N$ (Firms) | 62176 | 58097 | 4079 | 798 |

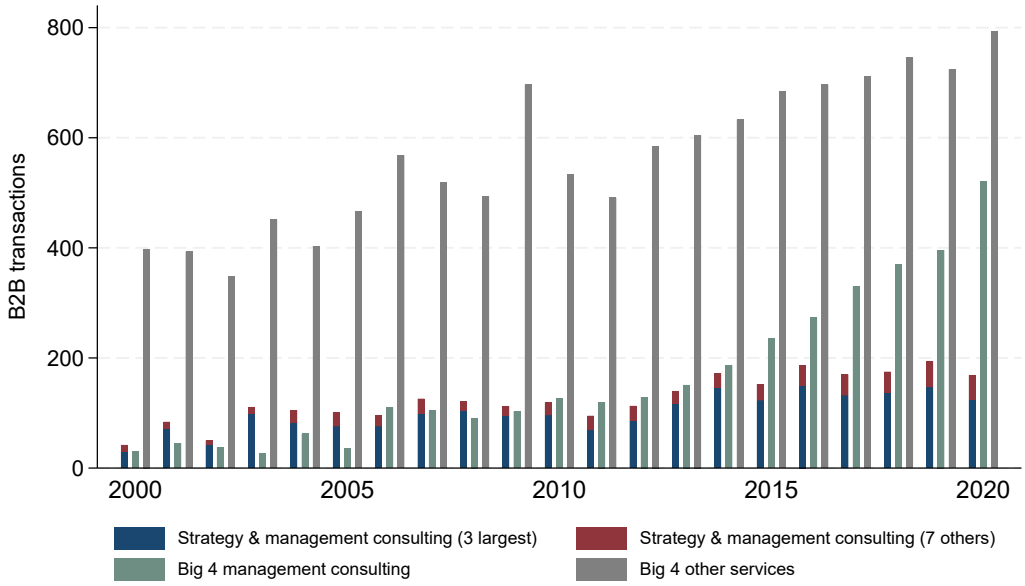
*Note*: The table reports summary statistics by firm type for firms with at least 10 FTE. All values are winsorized at the 2.5% level and deflated to 2020 euros using the GDP deflator. Column (1) reports statistics for all firms in our sample (excluding financial firms and the government sector). Columns (2) and (3) report statistics for non-client and client firms, i.e., firms that at no or some point buy consulting services from any of our focal consultancies, respectively, reporting within-firm means across the sample period. Column (4) reports statistics for the event study sample, i.e., firms with a consulting spending spike as defined in Section 5.1, measured in the year before the consulting event ($t-1$).

# Online Appendix of:
# What Does Consulting Do?

**Gert Bijnens, Simon Jäger, and Benjamin Schoefer**

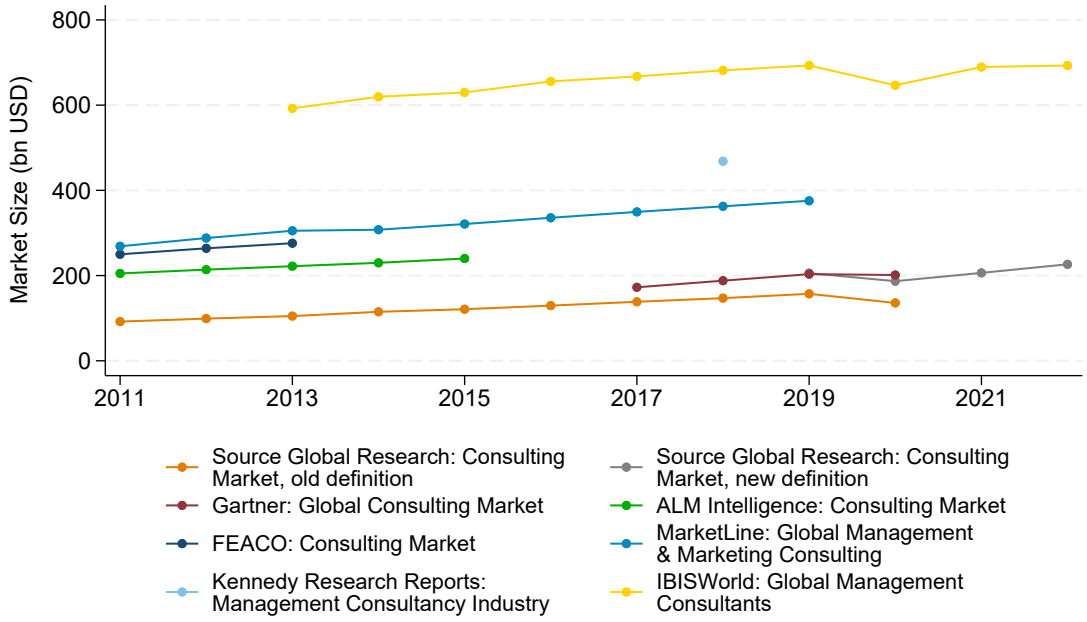
# A Appendix Figures

**Figure A.1:** Top-10 Pure-Play Management and Strategy Consultancies vs. Big Four Management Consulting Branches




*Note*: The figure compares the sample of consulting events identified from the top-10 management and strategy consultancies used in prior versions of the analysis ("pure play") with the extended sample that additionally includes the management consulting branches of the Big Four accounting firms.

**Figure A.2:** Estimates of the Market Size of the Global Consulting Industry, 2011–2022




*Note:* Own representation based on (1) **Source Global Research.** 2020. "Datasets. Market Trend Reports 2020"; Data from Source Global Research cited by **Consultancy.org.** n.d. "Consulting Industry. Consulting market"; (2) **Source Global Research.** 2021. "Datasets. Market Trend Reports 2021"; **Source Global Research.** 2022. "Datasets. Market Trend Reports 2022"; (3) Gartner (2019); Gartner (2021); (4), (5) Data from ALM Intelligence, FEACO cited by **Consultancy.org.** n.d. "Consulting Industry. Consulting market"; (6) MarketLine (2016, p. 8); (7) Data from Kennedy Research Reports in Baaji (2022, p. 48); (8) IBISWorld (2022, p. 13). The following values were forecasted: the 2015 value for (1), the 2022 value for (2), the 2013 value for (5), the values from 2016 to 2019 for (6) and the 2022 value for (8). For (1), the 2016 and 2017 values were interpolated.

**Figure A.3:** Intensive Margin: Amount of Spending on Consulting Services By Firm Characteristics Among Firms with Take-up – Under reconstruction

*Note*: The figures plot spending on consulting services (2020 EUR, ln) in year $t$ against various firm characteristics measured in $t-1$. All specifications include year fixed effects. We estimate TFPr using industry-level cost-share-based estimates of output elasticities (and obtained similar results using the method in Ackerberg, Caves, and Frazer, 2015). All nominal values are deflated to 2020 euros using the GDP deflator. Variables are not winsorized, with the exception of the profit margin, leverage, and TFP (due to large outliers, and at 2.5%). See Appendix B for information on the construction of the variables.

# B Variable Definitions

We describe the main variables we use in the paper as outcome variables and take-up predictors, and recap their units and transformations (share as ppt vs. logs).

**Productivity:**

- **TFP:** we construct TFPr measures based on cost shares (median of industry NACE 3d among firms with at least 10 employees) using revenue as well as employment, capital and intermediate inputs as in De Loecker et al. (2024), where capital is tangible fixed assets, all variables from VAT declarations; we found similar results using value added rather than value added and, separately, following the TFP estimation method in Ackerberg, Caves, and Frazer (2015) (logs)
- **Rev. per worker:** Revenue per employee (FTE) (logs)
- **VA per worker:** value added per employee (FTE) (logs)
- **Turnover** and inputs from VAT declaration - capital=tangible fixed assets

**Size:**

- **Revenue:** "turnover," yearly sales as per VAT declarations (logs)
- **Value added:** value added (logs)
- **Employment:** average FTE over the year (logs)
- **Assets:** tangible fixed assets (logs)
- **Capital employed:** tangible fixed assets plus inventory plus accounts receivable minus accounts payable (logs)
- **Establishments:** number of establishments (i.e., geographical locations) of the firm (i.e., not separate other legal entities but all under one VAT number) (logs)
- **Participations:** number of other firms (local or foreign) the firm has an ownership in (i.e., other legal entities) (logs)

**Restructuring and organization (mostly from social balance sheet in annual accounts):**

- **Hiring:** number of new employees (FTE) / total number of employees FTE (share in ppt)
- **Separations:** number of people leaving the company / total (share in ppt)
- **Dismissals:** subset of separations above coded as dismissal type (share in ppt of employment)
- **Management:** share of workers in managerial positions (share in ppt)
- **White/blue collar:** share of workers classified as white/blue collar (share in ppt)
- **Intermediate inputs: goods:** intermediate inputs that are goods divided by revenue (share in ppt)

- **Intermediate inputs: services:** intermediate inputs that are services (net of consulting) divided by revenue (share in ppt)
- **Temp hours:** number of hours bought from temporary work agencies divided by total number of hours worked (share in ppt). Note that temp work does not enter into the headcount of the firm, but is invoiced as a service.

**Profitability and financials:**

- **Profitability:** profit from operations (0009901 form annual account *profit before financial gains, financial cost, taxes) divided by revenues (ppt as it can be negative)
- **Markup:** calculated using cost share method as in De Loecker et al. (2024) and De Loecker and Warzynski (2012) (logs)
- **ROCE:** return on capital employed (ppt, as it can be negative).
- **Leverage:** debt / total liabilities (ppt)

**Labor-related outcomes:**

- **Hours worked:** total hours worked (logs)
- **Wage:** average wage, computed as total wage bill divided by employment (logs)
- **Labor share (revenue):** wage bill divided by revenue (share in ppt)
- **Labor share (value added):** wage bill divided by value added (share in ppt)

# C Surveys: Academic Experts and Consulting Practitioners

To benchmark our empirical findings against professional and practitioner priors, we fielded two surveys among academic experts and consultants. The surveyed academic experts included academic economists, management scholars, and finance researchers who work on productivity, strategy, or the consulting industry. The sample of consultants was recruited through the alumni network of Princeton University and through contacts with leaders in the consulting industry.

The surveys were conducted in June and July 2025 and elicited forecasts about firm self-selection into consulting and the subsequent causal effects of consulting services on eight firm-level outcomes. The survey of consulting practitioners also asked a variety of questions about the nature of consulting work.

In summary, for the academic experts, responses are from 70 active researchers in economics, management, and finance with research on management and productivity. For the consultants, we survey 37 current or former professionals, with the bulk stemming from senior roles (manager or partner/director). 43% report more than ten years of consulting experience, and 51% list corporate or competitive strategy as their primary functional focus. Their clients span diverse industries, with 29% reporting work across mixed industry compositions, and are geographically concentrated in advanced economies including the United States, the United Kingdom, and Belgium. This sample composition implies that the practitioner beliefs we report below are drawn from senior consultants who routinely run or oversee large, strategy-heavy engagements and who are accustomed to working with top management on organization, operating-model redesign, growth, and cost programs.

Below, we report on the recruitment and provide additional details on both surveys, with the full questionnaires in Appendix C.6 and C.7. For both groups, we preface the questionnaire with a description of our research project (e.g., sample, context, datasets, and for the academic experts, a more detailed account of the respective research designs, e.g., clarifying that we construct a control group of firms chosen to resemble the treatment group).

## C.1 Academic Expert Survey Design

**Sample Design** The sample was constructed using two primary sources: the authors of consulting- and productivity-related articles presented at the National Bureau of Economic Research Summer Institute (Macroeconomics and Productivity, Corporate Finance, Labor Studies) in the past five years, the faculty at top management departments in the United States working in the field of strategic management, and academics focusing on entrepreneurship and familiar with the Belgian firm landscape. We supplemented this list with researchers having published highly cited work on strategic management or on the consulting industry, and with the co-authors of researchers previously identified who published peer-reviewed research on productivity- and strategy-related topics. The resulting sample was composed of 305 researchers.

**Survey Instrument** We designed a short questionnaire divided in five sections, which can be found in Appendix C.6. The first section asked for consent to participate in the survey and described the study, context and empirical strategy implemented in the main part of the paper. The rest of the questionnaire was divided into 4 parts, related, respectively, to the views of respondents on consulting in general, to their expectations regarding the characteristics of firms taking up

consulting services, to their expectations on the effects of consulting take-up, and to their personal profile.

Half of the respondents were asked about their views on consulting first, while the other half were shown these questions in the third section.

In the two sections asking about respondents' forecasts, they were given the possibility to explain their reasoning. Before asking to predict the effects of consulting on eight firm-level outcomes, the survey introduced our research design. For each outcome predicted to have a non-neutral effect, respondents were asked to provide a quantitative forecast of the effect.

At the end of the survey, respondents were asked about their academic positions, the country in which they are based, their discipline and main research fields. They were also asked about their previous experience with the consulting industry.

**Implementation** We obtained IRB approval to conduct the survey (Princeton IRB number: 18239). The survey was sent to participants via a personalized email. Links to the survey were anonymized but individual, so that participants could not share with other researchers.

The survey was sent in three different waves between June 20 and July 3, 2025. On July 18, 2025, 73 responses were recorded, translating into a response rate of 24%. 54 surveys were fully completed, and 19 partially. We drop 3 respondents who had already seen preliminary results from the paper prior to the survey.

## C.2 Practitioner Survey Design

**Sample Design** We recruited the sample using two sources: (i) Princeton School of Public and International Affairs' alumni who are (or were) working in consulting, and (ii) authors' contacts to consulting practitioners. To complement our sample, we used snowball sampling, asking respondents to provide up to five names and email addresses of peers who might be interested. The final sample that was contacted was composed of 181 people.

**Survey Instrument** The questionnaire sent to consulting practitioners can be found in Appendix C.7. After asking for participants' consent and describing the study, the questionnaire proceeds in five parts. The first section asked for general views on management and strategic consulting. The second section covered the personal profile of respondents, the motivations of their typical clients, and the characteristics and content of a typical project. The third and fourth parts of the survey asked respondents about their expectations regarding the selection of firms into consulting and regarding the effects of consulting. In the final section, respondents could leave their comments in open questions, and provide contacts of peers who might be interested in participating in the survey.

The survey design follows that of the expert survey. The section on the general views on consulting was randomized to be asked first or last in the survey. In the two sections on forecasts, respondents had the possibility to explain their predictions. For the forecasts on the effects of consulting, each outcome predicted to have a non-neutral effect led to a follow-up question on the expected quantitative magnitude.

**Implementation** We obtained IRB approval to conduct the survey (Princeton IRB number: 18241). We primarily sent the survey to participants via a personalized email, using an individual but

anonymized link. We also sent anonymous links to a selected number of respondents to be forwarded in their respective firms (adjusting survey parameters to prevent multiple submissions from the same device).

The survey was sent in several waves in July 2025. At closing, the response rate was 21%, with 38 recorded responses. 27 surveys were fully completed, and 11 partially. We drop one response due to implausible magnitudes for prediction.

### C.3 Results

**Academic Expert Characteristics** Figure C.1 describes the main characteristics of our sample. It is primarily composed of Professors (57.4%), working in Economics (70.4%) or Management (16.7%). On average, respondents have conducted research in two of the nine fields included in the survey. Labor Economics (50.0%), Organizational Economics (37.0%), and Macroeconomics (27.8%) are the most represented fields.

**Practitioner Characteristics** Figure C.2 describes the main characteristics of our sample. A majority (51%) of consultant's main functional focus is or was corporate strategy, with other areas making up less than 10% of the responses. (Two thirds of the respondents are currently working as consultants while the remaining third are former consultants.) Our respondents are or were predominantly senior consultants, with two thirds holding the position of manager or director, and 43% of those currently working have worked in the sector for over ten years.

Figure C.3 describes the characteristics of the typical clients of the respondents. They report that their clients are mostly based in the same countries as they are (with the top three responses being the United States, the United Kingdom, and Belgium). The sample is representative of a wide range of client industries with 29% of respondents reporting clients from a mixed composition of industries. As for clients' triggers for engagement with consulting services, the most reported ones are organizational or operating-model redesign (59%) and growth strategy (56%), followed by cost reduction (41%), operational performance (41%) and post-merger integration (34%).

Figure C.4 gives an overview of the type of consulting engagements performed by the respondents to our survey. The prevalent workstream they engage in is Business Unit Strategy (68%), followed by Operations and Cost Excellence (52%), Organization and Governance (39%), and Digital and Analytics (29%). When selecting up to three primary Key Performance Indicators (KPIs) used by clients, the most frequently selected KPI is cost reduction (39%), followed by no KPI used, revenue growth (26%) and profit margin (23%). As for declining prospective clients, it is reported as a rare event: 34% report declining less than 10% of prospective clients and another 22% report declining between 10% and 40%, with only 6% reporting over 40%. The most commonly selected reasons for doing so are a conflict of interest with an existing client (50%), ethical or reputational concerns (50%), and misaligned expectations with the clients regarding fees or the budget (41%).

**Views on Management and Strategic Consulting** Survey takers were presented with five statements regarding the characteristics of firms taking up consulting services and the role of consultants. Results are presented in Figures 1 and 2, respectively.

Experts and practitioners have divergent opinions on which firms hire consultants. 66% of practitioners agree or strongly agree with the "catch-up" view, that unproductive firms take up consulting to catch up to the frontier of management practices. On the other hand, only 44% of

experts agree or strongly agree with this view, and 26% of them disagree or strongly disagree. Although a large share of both groups does not have a clear opinion on the "Matthew principle" view (38% of practitioners and 44% of experts), we see some disagreements between practitioners, with 38% who agree or strongly agree and 24% who disagree or strongly disagree, while academic scholars mostly support this view (35% agree or strongly agree against 13% who disagree or strongly disagree).

Both experts and practitioners expect management and strategic consulting to have a positive impact on firm growth and productivity, although to different degrees: 62% of practitioners agree and 17% strongly agree with this view, against respectively 46% and 5% of experts. The idea that consultants allow to facilitate and legitimize tough decisions is also shared among academics and practitioners from the consulting industry, with more support among experts. 64% of experts and 52% of practitioners agree or strongly agree with this view. 11% of experts and 28% of practitioners have no clear stance, while around 20% of both groups disagree. However, opinions of experts and practitioners on the "rent shifting" role of consulting differ sharply. 45% of the experts agree or strongly agree that consultants are brought to reallocate rent from workers to managers, while only 10% of practitioners do so. 45% of practitioners disagree with this view, and 45% are uncertain, compared to, respectively, 21% and 29% of experts.

**Self-Selection of Firms into Consulting** Survey takers were asked to forecast the sign of the correlation between consulting take-up and a set of five firm characteristics. Academic experts have more divergent opinions than practitioners, but they generally agree on the sign of the correlation for each firm characteristic. The results are presented in Figure C.5, which reports both raw means (as in the main text) and confidence-weighted means (where we drop respondents who do not answer the forecast questions, and weight the responses using their confidence level). For the experts, between 6.8% and 8.5% do not answer at each question; for the practitioners, 10.7% do not answer at each question, except for labor productivity for which it reaches 14.3%.

We asked survey takers about the correlation with two measures of firm size, employment and revenue. Both experts and practitioners overwhelmingly expect consulting take-up to be positively correlated with firm size, whether with employment or with revenue. Although around 20% of experts predict a zero correlation with employment or revenue, most expect a positive sign (74.2% for employment and 79.4% for revenue). Practitioners are more unanimous: respectively 95.5% and 92.5% of them expect a positive correlation with employment and with revenue.

Forecasts are more mixed for the correlation of consulting take-up with firm profitability (given as EBITDA / revenue) 45.2% of experts and 34.3% of practitioners do not expect take-up to depend on profitability, while 35.7% of experts and 58.2% of practitioners expect a positive correlation.

Forecasts also differ substantially on the correlation with Total Factor Productivity and labor productivity. For Total Factor Productivity, the majority of each group expect a zero correlation (59.7% for experts and 49.3% for practitioners), but a sizable share also predicts a positive correlation (30.6% and 32.8% respectively) or negative correlation (9.7% and 17.9% respectively). The same pattern arises for labor productivity, with 52.4% of experts and 51.6% of practitioners forecasting a zero correlation but 32.3% of experts and 23.4% of practitioners expecting a positive correlation for instance.

**Predicted Effects of Consulting** The respondents of both surveys were also asked to forecast the effect direction and size of consulting take-up by Belgian firms within a five year period. Academic

experts were generally more conservative than consultants, although they generally agreed on the sign of effects when they were expected to be significant. Mean predicted effect sizes are reported in Figure 2 Panel (d).

The effects that surveyed consultants expected to be the largest were the effect of consulting on firm revenue (+15% predicted on average), total factor productivity (+13%) and labor productivity (+10%), while academic experts also predicted significant positive effects on those variables albeit of reduced magnitude (4.6%, 2.2% and 3.5% respectively).

On employment and average wages, practitioners were also slightly more optimistic than experts. Consultants on average expected a positive effect of consulting services on total firm employment of slightly below 1% while experts forecasted a negative effect of -1%. As for wages, both expected a positive effect (+0.5% for experts and +2.4% for consultants).

On separations and dismissals, both surveyed groups predicted small positive effects, with experts expecting larger effects: 5% compared to 1% for separations and 4% compared to 0.7% for dismissals. Finally, when it comes to the number of plants, experts expected a slight decrease of -0.2% while practitioners predicted that the number of establishments will increase by 2%.

Figure C.6 reports the same forecast means weighted by confidence. The results are broadly similar.

## C.4 Illustrative Answers to Open-ended Questions

We now copy some illustrative answers to the open-ended questions.

**Take-up Patterns** Open-ended answers allow us to shed more light on the hypothesized mechanisms of selection. One consultant practitioner noted the size gradient while acknowledging the heterogeneity in terms of performance measures and also conjecturing complex interactions between heterogeneous treatment effects and heterogeneity in take-up:

> Larger firms (as measured by revenue or employees) are more likely to be able to afford consultant support. Firms with lower labor productivity have greater room for improvement and therefore are likely to see greater returns (especially in the short run or on specific engagement types) to consulting spend. However profitability and operational efficiency could cut both ways – increasing the need for consulting or increasing the availability of resources to spend on it.

Another practitioner also made a similar point, consistent with a U-shaped pattern in terms of performance measures:

> We were a big-ticket purchase, and only firms of substantial size were usually interested in paying fees at our level. I worked on big strategic issues and corporate transformations. Some of the clients were doing well and some were not doing as well as they wanted. Hence, their margins, efficiency, etc at the time of engaging us might be good or not so good.

The following respondent also argued for a U-shaped pattern in terms of profit and productivity measures:

> Assuming that 'employment' refers to firm size in terms of FTEs, this would be that larger firms use consulting more; likewise with revenue. Profit and productivity have

> been assigned neutral as consultants are used by those who are high and low on each (eg to improve further or recover). The latter case might be linked to shareholder pressure.

Another respondent advanced a reasoning more directly arguing for a negative correlation of take-up with performance measures (conditional on size):

> In my experience, consultants get hired where there is a problem to fix; not when everything is going fine. And since my company only works with large clients, I expect that employment and revenue have a positive correlation, meaning those firms have the budget to pay for consultant services.

Another points out rich selection forces, including those coming from consultancies themselves (which we evaluate in the professional survey directly):

> Another important channel to consider is supply-side selection. Consulting firms actively choose their clients, preferring financially stable, high-performing firms that can pay well and generate successful case studies. This creates a two-sided matching market in which the adoption of consulting services reflects both client demand and consultant preferences. This can potentially confound the relationship between firm productivity and the adoption of consulting services.

One respondent captured the complexity of selection dynamics by highlighting the competing forces that make the relationship between firm performance and consulting adoption theoretically ambiguous:

> I believe that larger firms with higher employment and revenue are more likely to use consulting services because they have the resources and complex operations that justify such investments. However, I have no strong prior beliefs about the relationship between efficiency metrics and consulting. There are competing forces at play: struggling firms need consulting help, while successful firms use it strategically for maintaining competitive advantages. Additionally, consultant firms may prefer working with profitable clients.

While practitioners converge on the importance of firm size, their perspectives reveal substantial disagreement and ambiguity in predictions about consulting adoption patterns, with competing theories about whether performance drives positive, negative, or U-shaped relationships, underscoring the need for systematic empirical investigation.

**Effects of Consulting** The practioners' optimism is reflected in practitioner testimonials, with one noting:

> The assignments of my firm mainly focus on strategy and virtually always result in revenue growth and improved margins...

while another emphasized how consultants:

> Support board and management drafting strategy, drive innovation and improve company efficiencies.

The operational value was highlighted by a practitioner who explained that:

> A major part of the value proposition that external consultants offer is the ability to focus 100% of their time on a project while the firm's internal employee base and management team can focus on running the day-to-day business.

However, opinions diverge sharply on the "rent shifting" role of consulting. While 45% of academic experts agree or strongly agree that consultants are brought to reallocate rent from workers to managers, only 10% of practitioners share this view. Instead, 45% of practitioners disagree, compared to 21% of experts. Practitioners actively pushed back against this characterization, with one stating:

> Consulting tends to be viewed as one monolithic thing, with an overemphasis on cost cutting. In my career, I more commonly worked on growth strategy than cost cutting.

The legitimacy and external validation view found substantial support in both groups, though with some divergence: 64% of academic experts agree or strongly agree compared to 52% of practitioners. Practitioners acknowledged this function with nuance, with one explaining that:

> Firms use consultants to conceptualize their ignorance, doubts, intuition or ambitions so that they can arrive at agreed conclusions faster and sell them more convincingly to stakeholders.

Another respondent provided a mechanism that emphasizes consultants as (productive) translators and aggregators of pre-existing internal ideas rather than originators, noting that:

> The recommendations from consultants are often not unique viewpoints that no internal staff has ever thought about. What consultants can help is to surface these viewpoints to the decision makers in a coherent way, which allows decisions to be made.

In this sense, consulting may also play a "voice" role, aggregating and sharing information and lending legitimacy to corporate decisions and governance (analogously to the more-researched effects of formal worker voice, albeit with very different governance, legitimacy, and power foundations, see Jäger, Schoefer, and Heining, 2021; Jäger, Noy, and Schoefer, 2022b,a; Harju, Jäger, and Schoefer, 2025).

**Heterogeneity Patterns** As noted in then main text, we converged on streamlined questionnaires that ask about average effects and selection patterns. But we shied away from higher-dimensional questions on heterogeneous treatment effects. Nevertheless, several respondents of both groups believe that consulting as such cannot be summarized into one size fits all perspective (consistent with the multiplicity of views above that may hold simultaneously). We recorded such views through open-text boxes. While we cannot report on all these text responses, we hope to illustrate the rich predictions and perspectives formulated by the respondents with the handful of incisive examples presented in this section.

For instance, two respondents provide rich descriptions of the multiplicity of what consulting may mean in a way not captured by our questionnaires:

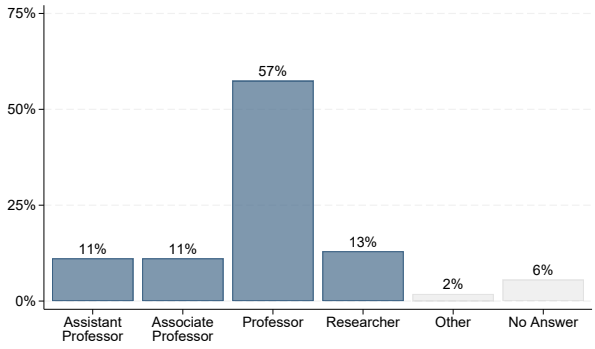
Consulting ranges from outsourcing labor to external individual consultants, to big 4 strategy consulting and can involve all type of work. There will not be a general answer to what "consulting" does, any more than there will be a general answer to what e.g. "HR" does, or what "labor" does.

They help firms solve problems they don't know how to solve or that are too political to solve internally. Some of these are problems of growth. Some of them are problems of downsizing. Some of them are strategic problems. Some of them are things like putting in place a big IT system, which changes workflows in complicated ways. I don't think these neatly fit into "pulling ahead" or "catching up."

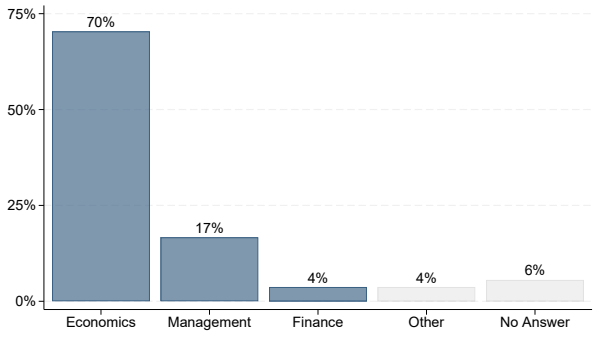
## C.5 Figures: Surveys of Academic Experts and Consulting Practitioners

**Figure C.1:** Expert Survey: Sample Characteristics

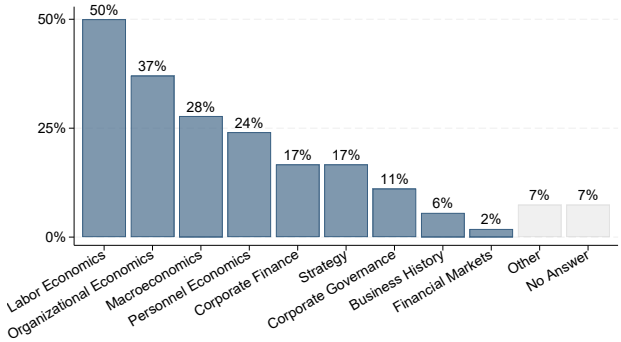
**(a)** Current Position




**(b)** Discipline



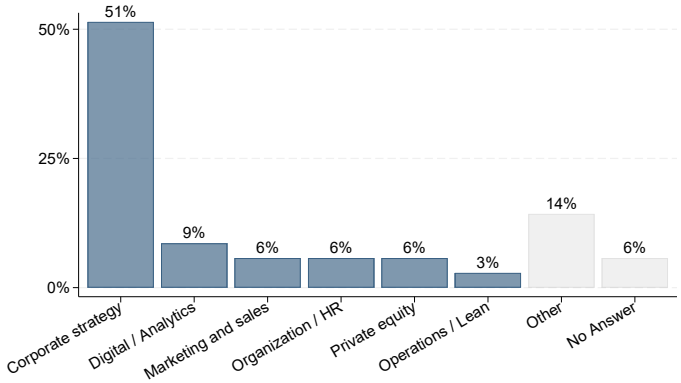

**(c)** Main Fields



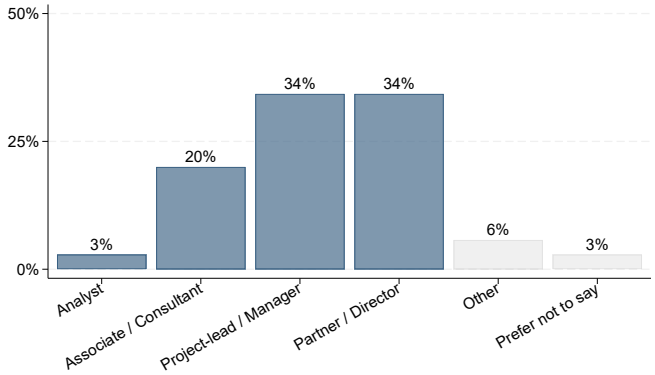

*Note*: The figures report descriptive statistics for the respondents to the expert survey. Panel (a) shows the current position held by respondents. Panels (b) and (c) describe their discipline and main fields of research.

**Figure C.2:** Practitioner Survey: Sample Characteristics (Consultant Profile)

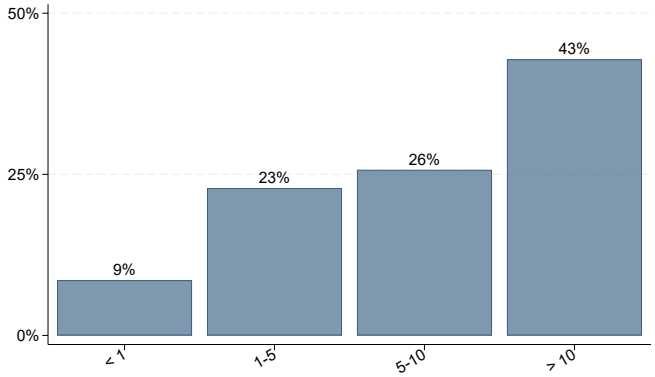
**(a)** Functional Focus




**(b)** Position



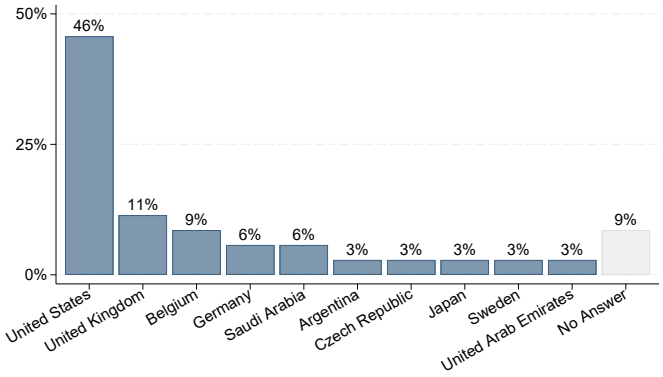

**(c)** Experience in Consulting



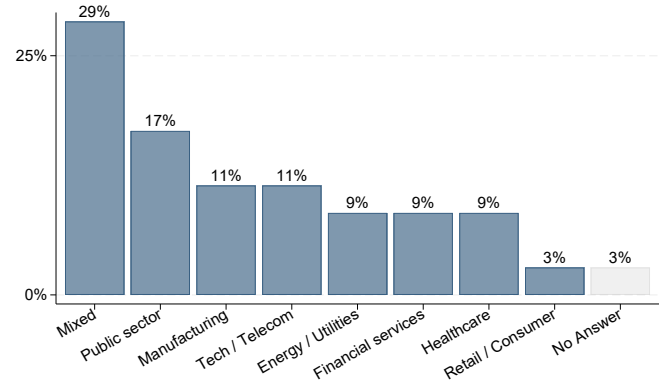

*Note*: The figures report descriptive statistics for the respondents to the practitioner survey. Panel (a) describes their reported primary functional focus. Panels (b) and (c) detail the position and the number of years spent in the consulting sector by the respondents.

**Figure C.3:** Practitioner Survey: Sample Characteristics (Typical Client Profile)

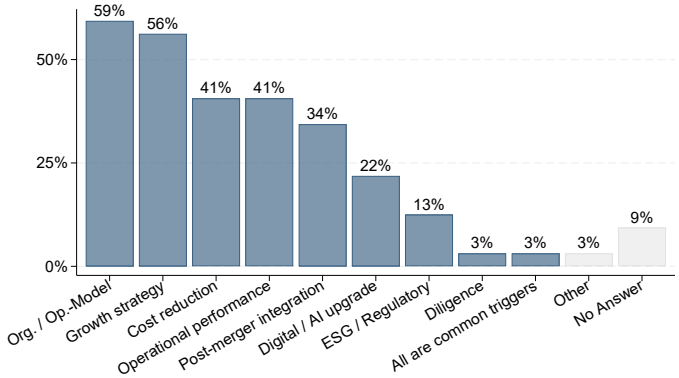
**(a)** Country




**(b)** Industry



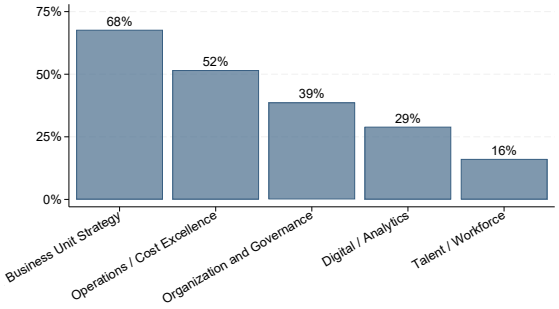

**(c)** Triggers for Engagement



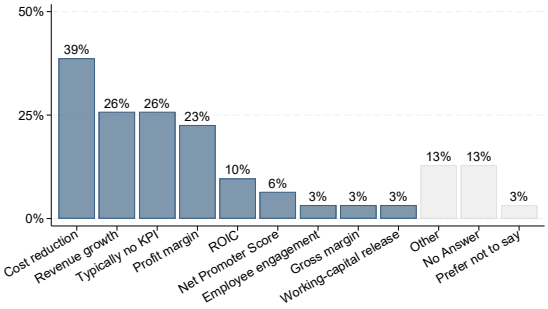

*Note*: The figures report descriptive statistics for the typical client profile reported by respondents to the practitioner survey. Panels (a), (b) and (c) detail the country, industry, and main triggers for engagement of a typical client.

**Figure C.4:** Practitioner Survey: Sample Characteristics (Typical Engagement Profile)

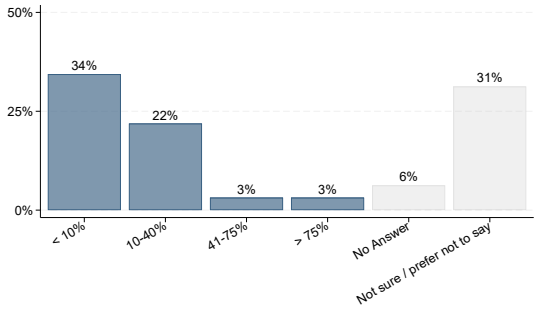
**(a)** Major Workstreams



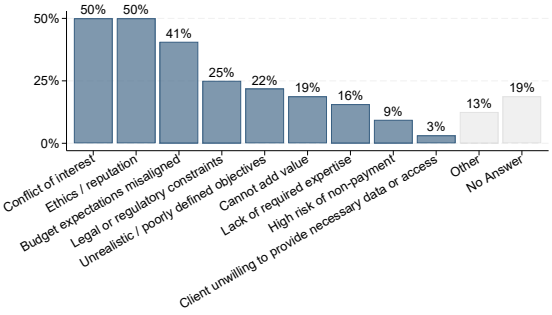

**(b)** Primary KPIs




**(c)** Frequency of Declining a Prospective Client

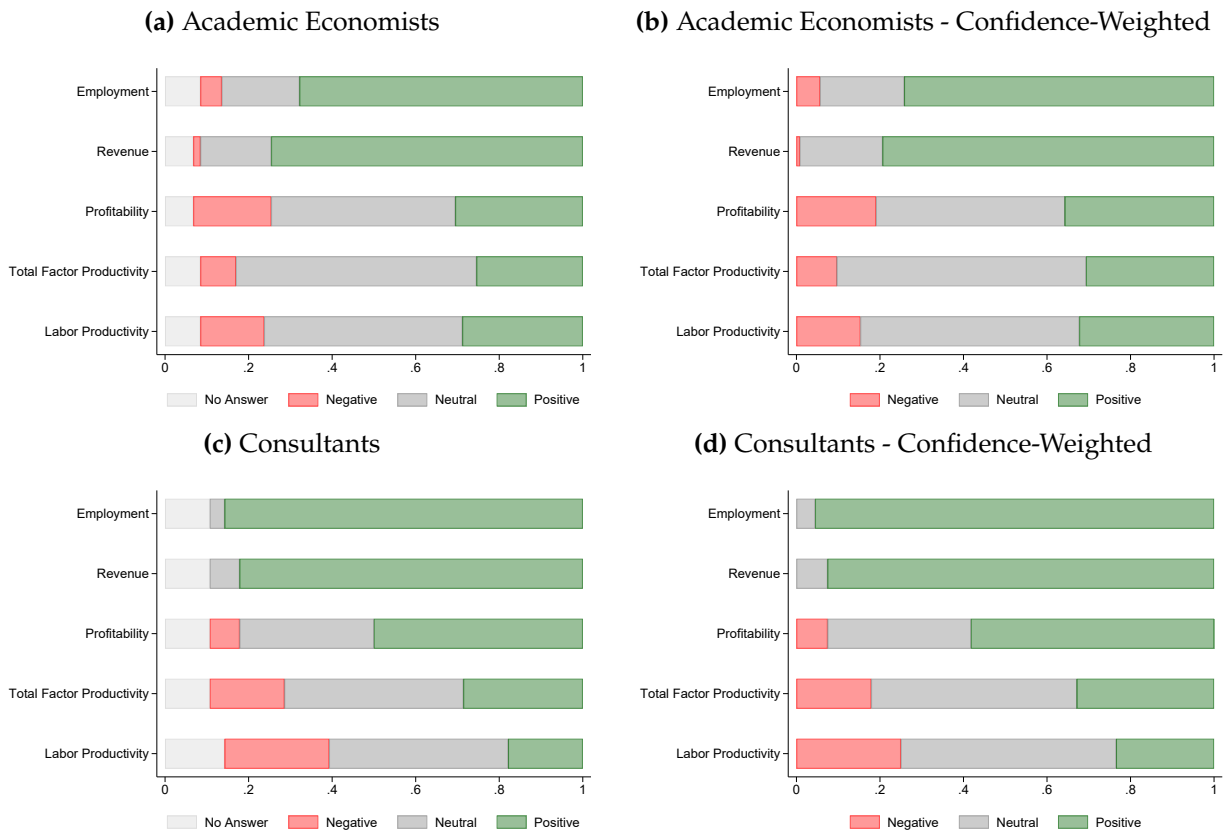



**(d)** Reasons for Declining a Prospective Client



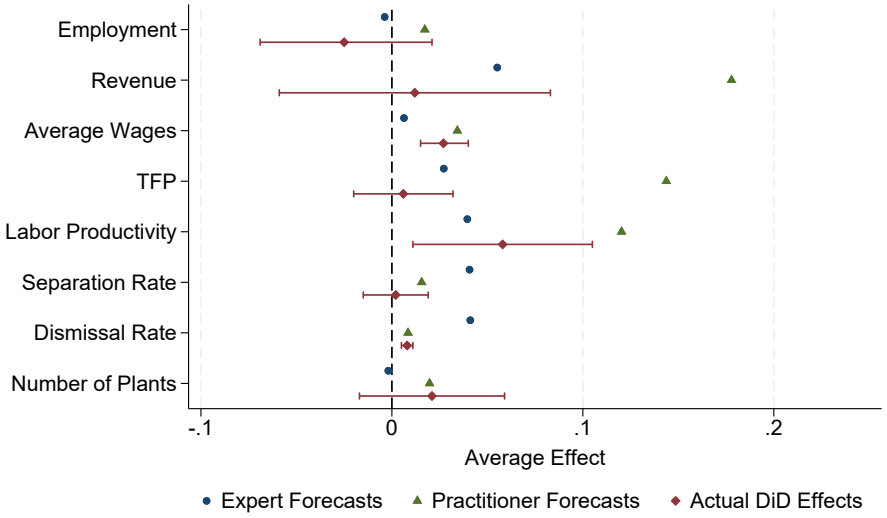

*Note*: The figures report descriptive statistics for the typical consulting engagement experienced by respondents to the practitioner survey. Panel (a) shows the share of each workstream having a "major" part in a typical engagement. Panel (b) shows the typical Key Performance Indicators (KPIs) most often written into the Statement of Work (SOW). Panels (c) and (d) report how often and, if ever, why consultants decline prospective clients.

**Figure C.5:** Surveys of Academic Experts and Consulting Practitioners: Forecasts for Take-up Correlates




*Note*: The figure reports results of our expert survey of academic economists and our practitioner survey of consultants separately. Both panels report forecasts of take-up correlates in our sample of Belgian firms. The questionnaire describes the research designs, context, sample, and datasets at a high level. For confidence-weighted panels, we drop survey takers who did not answer and weight each forecast by the level of confidence, with a weight of 1 for respondents who are "not confident at all;" 2 for "slightly confident;" 3 for "moderately confident;" and 4 for "very confident."

**Figure C.6:** Surveys of Academic Experts and Consulting Practitioners: Confidence-Weighted Quantitative Forecasts for Effects of Consulting




*Note*: The figure reports forecasts of the effects of consulting in our sample of Belgian firms and compares them with our DiD estimates. The questionnaire describes the research designs, context, sample, and datasets at a high level. Both panels are confidence-weighted: we drop survey takers who did not answer or answered "No opinion," and weight each forecast by the level of confidence, with a weight of 1 for respondents who are "not confident at all;" 2 for "slightly confident;" 3 for "moderately confident;" and 4 for "very confident."

## C.6 Academic Expert Questionnaire

### Expert Survey: What Does Consulting Do?

Gert Bijnens (National Bank of Belgium), Simon Jäger (Princeton University), Benjamin Schoefer (UC Berkeley)

This short survey aims to collect the forecasts of scholars regarding the predictors of take-up of consulting services and the effects of the take-up of consulting services on firms and their workers. It is conducted by researchers at Princeton University, UC Berkeley, and the National Bank of Belgium.
This questionnaire should take approximately about **5 minutes to complete**. You may skip any question. **Participation is entirely voluntary**, and you may choose to exit the survey at any time. All records from this survey will be kept confidential. **All responses are anonymous and reported only in aggregate.**

**Contact for questions or concerns:**
Simon Jäger - simon.jaeger@princeton.edu
If you have questions regarding your rights as a research subject, or if problems arise which you do not feel you can discuss with the Investigator, please contact the Institutional Review Board by e-mail at irb@princeton.edu or by phone at (609) 258-8543.

**More information about study participation** There are no anticipated benefits to survey participation.
We do not foresee any risks to participation. All records from this study will be kept confidential. Your contact information will be kept in a confidential encrypted file. The survey will not collect any identifiable private information, hence preventing any possibility to link your contact information to your responses. Therefore, your responses will remain completely anonymous. Records of responses will be kept on encrypted storage points. The research team will be the only party to have access to your data.
This study has been approved by the Princeton University IRB, a committee organized to protect the rights and welfare of people involved in research studies.

I have read the information that was presented and understand it. I agree to participate in the research study described above. I understand that my participation is voluntary. Refusing to participate will involve no penalty, and I may stop my participation at any time. By consenting to participate, I do not waive any legal rights or release Princeton University or its agents from liability for negligence.

- ◦ By ticking this box, I confirm that I am 18 years or older and consent to participate in the survey.

Are you located in the European Union, Iceland, Liechtenstein, Norway or the United Kingdom while responding to this survey?

- Yes
- No

[*If the answer to the previous question was "Yes", a GDPR form is printed.*]

**[GDPR Notice]**

**What Does Consulting Do?**

This project studies the take-up* of strategy and management consulting and its effects on client firms and their workers. We use anonymized administrative tax data on the universe of Belgian firms from 2002 to 2023 to analyze the characteristics of firms taking up consulting services, as well as the resulting firm-level and worker-level effects of taking up these services. We focus on the largest strategy and management consulting firms belonging to an international group. We exclude the Big Four accounting firms due to their focus on audit and other services. The first part of the paper studies which characteristics predict take-up of consulting firms' services, which we measure in value-added tax data on firm-to-firm transactions. In the second part, our identification strategy relies on the comparison of client firms to matched control firms with similar lagged industry, size and productivity characteristics. Using an event-study design, we estimate how take-up of consulting affects outcomes such as productivity, wages, and firm size.
In this survey, we will ask you about your expectations regarding the characteristics of firms hiring consultants. We will also ask you to forecast the effects of consulting on a set of outcomes.
**By take-up, we mean a firm purchasing services from a consulting firm.*

[*The following two parts asking about general views was randomized to be shown either as the first or the last second-to-last section of the survey. In addition, the questions inside each part were shown in a randomized order. The order in which they are written in the following therefore does not reflect the order shown to respondents.*]

**How much do you agree with the following views on management and strategy consultants?**

Management and strategy consultants improve firm productivity and permit firms to grow.

- Strongly disagree
- Disagree
- Neither agree nor disagree
- Agree
- Strongly agree
- No opinion

Management and strategy consultants are usually brought in to cut costs and reallocate rents from workers to managers and shareholders, e.g., by lowering wages.

- Strongly disagree
- Disagree
- Neither agree nor disagree
- Agree
- Strongly agree
- No opinion

Management and strategy consultants usually mainly help implement tough decisions by reducing internal resistance and by lending legitimacy and external validation for choices the firm's management team would like to implement anyway (such as during layoffs, plant closures, or other restructuring).

- Strongly disagree
- Disagree
- Neither agree nor disagree
- Agree
- Strongly agree
- No opinion

**How much do you agree with the following views on the take-up of consulting services?**

Unproductive firms that are “behind" take up consulting to catch up with frontier management practices and other productivity-enhancing practices.

- Strongly disagree
- Disagree
- Neither agree nor disagree
- Agree
- Strongly agree
- No opinion

It is mostly the already productive firms that take up consulting to further pull ahead of their competition.

- Strongly disagree
- Disagree
- Neither agree nor disagree
- Agree
- Strongly agree
- No opinion

What other thoughts do you have about what consulting does, which firms use it, and for which purposes? We will carefully read each reply.

## Which firms take up consulting?

This part will ask you about the selection of firms into taking up consulting services.

How do the following characteristics of potential client firms predict take-up of consulting services? You can choose positive, neutral, or negative, depending on the direction of the anticipated effect.

**Predicted Correlation with Consulting Take-Up**

| | **Positive** | **Neutral** | **Negative** |
|---|---|---|---|
| Employment | ○ | ○ | ○ |
| Revenue | ○ | ○ | ○ |
| Profitability (profit margin, EBITDA/revenue) | ○ | ○ | ○ |
| Total Factor Productivity | ○ | ○ | ○ |
| Labor Productivity (Revenue / Employment) | ○ | ○ | ○ |

How confident are you about your forecasts?

- ○ Very confident
- ○ Moderately confident
- ○ Slightly confident
- ○ Not confident at all

(Optional) Would you like to share with us the reasoning behind your forecasts?

## The Effects of Consulting Take-Up

This part of the survey asks you to forecast the effects of consulting events on client firms.
We use an event-study design comparing treated firms, which take up consulting services, to control firms in a four-year window around the consulting event (t-4 to t+4, with consulting take-up occurring in year t). Treatment is defined as a large increase in spending on consulting services in a given year (> 3x average spending in t compared to average of spending in t-3 to t-1 and at least EUR 50,000 in absolute terms). The average treated firm in our sample spends more than EUR 700,000 on consulting services in year t. To construct a control group, we match each treated firm to control firms (those that did not take up consulting services) based on lagged observable characteristics.

What is the direction of the effect of taking up consulting services on client firm outcomes? Please consider the average effect in years t to t+4 (with consulting take-up occurring in year t).

**Predicted Effect of Consulting Take-Up**

| | **Positive** | **Neutral** | **Negative** |
|---|---|---|---|
| Employment | ○ | ○ | ○ |
| Revenue | ○ | ○ | ○ |
| Average Wages | ○ | ○ | ○ |
| Total Factor Productivity | ○ | ○ | ○ |
| Labor Productivity (Revenue / Employment) | ○ | ○ | ○ |
| Separation Rate (Separations / Employment) | ○ | ○ | ○ |
| Dismissal Rate (Dismissals / Employment) | ○ | ○ | ○ |
| Number of Establishments or Plants | ○ | ○ | ○ |

[*Each of the following questions is asked only if the respondent answered "Positive" or "Negative" on the previous matrix for each outcome.*]
You answered that consulting take-up has a {positive/negative} effect on employment. By how much does employment {increase/decrease} in the five years after consulting take-up?
_____ %

You answered that consulting take-up has a {positive/negative} effect on revenue. By how much does revenue {increase/decrease} in the five years after consulting take-up?
_____ %

You answered that consulting take-up has a {positive/negative} effect on average wages. By how much do average wages {increase/decrease} in the five years after consulting take-up?
_____ %

You answered that consulting take-up has a {positive/negative} effect on total factor productivity. By how much does total factor productivity {increase/decrease} in the five years after consulting take-up?
_____ %

You answered that consulting take-up has a {positive/negative} effect on labor productivity. By how much does labor productivity {increase/decrease} in the five years after consulting take-up?
_____ %

You answered that consulting take-up has a {positive/negative} effect on the separation rate. By how much does the separation rate {increase/decrease} in the five years after consulting take-up?
_____ %

You answered that consulting take-up has a {positive/negative} effect on the dismissal rate. By how much does the dismissal rate {increase/decrease} in the five years after consulting take-up?
_____ %

You answered that consulting take-up has a {positive/negative} effect on the number of establishments. By how much does the number of establishments {increase/decrease} in the five years after consulting take-up?
_____ %

How confident are you about your forecasts?

- Very confident
- Moderately confident
- Slightly confident
- Not confident at all

(Optional) Would you like to share with us the reasoning behind your forecasts?

## Personal profile

You are near the end of the survey. We would appreciate it if you could share some information about yourself.

What is your current position?

- ○ Researcher
- ○ Professor
- ○ Associate Professor
- ○ Assistant Professor
- ○ Post-Doctoral Fellow
- ○ PhD Student
- ○ Other, please precise: _____

Which of the following best describes your discipline?

- ○ Economics
- ○ Finance
- ○ History
- ○ Management
- ○ Sociology
- ○ Other, please precise: _____

Have you conducted research in the following fields? Please select all that apply:

- □ Labor Economics
- □ Macroeconomics
- □ Personnel Economics
- □ Organizational Economics
- □ Corporate Finance
- □ Corporate Governance
- □ Financial Markets
- □ Business History

- □ Strategy
- □ None of the above

Have you seen any preliminary results of this project before taking the survey?

- ○ Yes
- ○ No

In which country are you based?

_____

Do you have any experience with management/strategy consulting?

- □ Previous own work experience (including as intern)
- □ Friends, colleagues, relatives
- □ I worked in a company that hired consultants
- □ None at all

Would you like to receive the results of this survey once data collection and analysis is completed? If yes, please provide an email address to which these results can be sent. Your email will be stored separately from the answers to the remaining part of the survey and will be deleted once we send the results.

_____

This is the end of the survey. Thank you for taking the time to respond. If you have any comments or suggestions to share with us, please leave them below.

We thank you for your time spent taking this survey.
Your response has been recorded.

Contact for questions or concerns:
Simon Jäger - simon.jaeger@princeton.edu

## C.7 Consulting Practitioner Questionnaire

### Princeton University Study of Professionals in the Consulting Industry

Gert Bijnens (National Bank of Belgium), Simon Jäger (Princeton University), Benjamin Schoefer (UC Berkeley)

This short survey aims to gather the insights of expert practitioners on client firms' motivations to hire consultants, and on the effects of consulting engagements in client firms.

**Why are we asking?**
We have just finished the first large-scale, representative analysis of which firms hire management and strategy consultants and how consulting affects client firms along dimensions such as operational efficiency, firm growth, and wages. But numbers alone do not tell the full story. Your practical insight will explain why companies turn to consultants and whether practitioners foresee the results we measure.

**What's in it for you?**

- Five to ten minutes of your time lets you shape the academic and policy debate on consulting.
- You will receive a short **executive brief** both of our results and benchmarking your expectations against the aggregate views of your peers later this summer.
- By adding your voice, you help future CEOs, investors, and policy-makers understand when and how consulting moves the needle.

**Who is running this?**
Researchers at **Princeton University**, **UC Berkeley**, and the **National Bank of Belgium**.

**How we handle your data**

- All records from this survey will be kept confidential.
- All responses are anonymous and reported only in aggregate.
- You may skip any question.
- Please do not share any information that may identify you in your responses.
- We will not ask you about your identity, your employer's identity, or about specific experiences you have had. Instead, we ask you about your broad views only.
- **Participation is entirely voluntary**; you can exit at any time.

**Contact for questions or concerns:**
Simon Jäger - simon.jaeger@princeton.edu
If you have questions regarding your rights as a research subject, or if problems arise which you do not feel you can discuss with the Investigator, please contact the Institutional Review Board by

e-mail at irb@princeton.edu or by phone at (609) 258-8543.

**More information about study participation**
There are no anticipated benefits to survey participation.
We do not foresee any risks to participation. All records from this study will be kept confidential. Your contact information will be kept in a confidential encrypted file. Records of responses will be kept on encrypted storage points. You may choose to disclose your e-mail address at the end of this survey, which will be kept confidential. The research team will be the only party to have access to your data. Study records will be kept to be used for potential future research studies.
This study has been approved by the Princeton University IRB, a committee organized to protect the rights and welfare of people involved in research studies.

I have read the information that was presented and understand it. I agree to participate in the research study described above. I understand that my participation is voluntary. Refusing to participate will involve no penalty, and I may stop my participation at any time. By consenting to participate, I do not waive any legal rights or release Princeton University or its agents from liability for negligence.

- ◦ By ticking this box, I confirm that I am 18 years or older, work in management or strategy consulting, and consent to participate in the survey.

Are you located in the European Union, Iceland, Liechtenstein, Norway or the United Kingdom while responding to this survey?

- ◦ Yes
- ◦ No

[*If the answer to the previous question was "Yes", a GDPR form is printed.*]

**[GDPR Notice]**

[*The following two parts asking about general views was randomized to be shown either as the first or the last second-to-last section of the survey. In addition, the questions inside each part were shown in a randomized order. The order in which they are written in the following therefore does not reflect the order shown to respondents.*]

**How much do you agree with the following statements on management and strategy consultants?**

Management and strategy consultants improve firm productivity and permit firms to grow.

- Strongly disagree
- Disagree
- Neither agree nor disagree
- Agree
- Strongly agree
- No opinion

Management and strategy consultants are usually brought in to cut costs and shift surplus value from workers to managers and shareholders.

- Strongly disagree
- Disagree
- Neither agree nor disagree
- Agree
- Strongly agree
- No opinion

Management and strategy consultants usually mainly help implement tough decisions by reducing internal resistance and by lending legitimacy and external validation for choices the firm's management team would like to implement anyway (such as during layoffs, plant closures, or other restructuring).

- Strongly disagree
- Disagree
- Neither agree nor disagree
- Agree
- Strongly agree
- No opinion

**How much do you agree with the following views on firms hiring consultants?**

Unproductive firms that are “behind" hire consultants to catch up with frontier management practices and other productivity-enhancing practices.

- Strongly disagree
- Disagree
- Neither agree nor disagree
- Agree
- Strongly agree
- No opinion

It is mostly the already productive firms that hire consultants to further pull ahead of their competition.

- Strongly disagree
- Disagree
- Neither agree nor disagree
- Agree
- Strongly agree
- No opinion

What other thoughts do you have about what consulting does, which firms use it, and for which purposes? We will carefully read each reply.

## Personal profile

Are you currently working as a consultant?

- Yes
- No

[*If the answer to the previous question was "Yes", the following question is asked.*]
When was your most recent experience working as a consultant?

_____ years ago

[*The following questions are asked to every respondent.*]

In what country are you based, or were you based in your most recent experience working as a consultant?

_____

What is your current or most recent position as a consultant?

- Partner / Director
- Project-lead / Manager
- Associate / Consultant
- Analyst
- Other, please specify: _____
- Prefer not to say

Years in consulting:

- < 1
- 1-5
- 5-10
- > 10
- Prefer not to say

If you no longer work in the consulting industry, please respond to the following questions based on your most recent experience working as a consultant.

Primary functional focus:

- Corporate strategy

- Operations / Lean
- Organization / HR
- Digital / Analytics
- Other, please specify: _____
- Prefer not to say

Typical client industry (choose main one):

- Manufacturing
- Retail / Consumer
- Financial services
- Tech / Telecom
- Healthcare
- Energy / Utilities
- Public sector
- Very mixed / no main industry
- Other, please specify: _____
- Prefer not to say

Typical client country:

_____

## Client motivations

If you no longer work in the consulting industry, please respond to this section based on your most recent experience working as a consultant.

For a *typical* new client your firm takes on, what are the main triggers for engagement?

- □ Growth strategy
- □ Operational performance
- □ Post-merger integration
- □ Digital / AI upgrade
- □ Cost reduction
- □ ESG / Regulatory
- □ Organizational or Operating-Model Redesign
- □ Other, please specify: _____

How often does your firm decline to take on a prospective client?

- ○ Never - we accept all legitimate inquiries
- ○ Rarely - fewer than 1 in 10 inquiries (< 10%)
- ○ Sometimes - about 1-4 in 10 inquiries (10-40%)
- ○ Often - about 2-3 in 4 inquiries (41-75%)
- ○ Very often - more than 3 in 4 inquiries (> 75%)
- ○ Not sure / prefer not to say

If your firm ever declines prospective clients, what are the most common reasons? (Select all that apply)

- □ Conflict of interest with an existing client
- □ Ethical or reputational concerns about the client or project
- □ Project objectives unrealistic or poorly defined
- □ Lack of required expertise or delivery capacity
- □ Budget / fee expectations misaligned
- □ Client unwilling to provide necessary data or access

- ☐ High risk of non-payment
- ☐ Legal or regulatory constraints (e.g., sanctions, compliance)
- ☐ Company is doing poorly
- ☐ Concern that we cannot add value
- ☐ Other, please specify: _____

## Project content and scope

If you no longer work in the consulting industry, please respond to this section based on your most recent experience working as a consultant.

For a *typical* client, how frequently do you engage in multiple projects over time?

- ○ Continuous collaboration over time
- ○ Repeated engagement on projects within a short period
- ○ Engagement on occasional projects over a longer time span
- ○ Engagement primarily on one-off projects

In a *typical* engagement, how large is each work-stream?

| | **Major** | **Minor** | **Non-existent** |
|---|---|---|---|
| Corporate / Business unit strategy | ○ | ○ | ○ |
| Organization & governance | ○ | ○ | ○ |
| Operations / Cost excellence | ○ | ○ | ○ |
| Digital / Analytics | ○ | ○ | ○ |
| Talent / Workforce | ○ | ○ | ○ |

## Consulting-centric KPIs

If you no longer work in the consulting industry, please respond to this section based on your most recent experience working as a consultant.

Which Key Performance Indicator (KPI) is most often written into the Statement of Work (SOW) as the primary success metric? Choose up to three KPIs.

- ☐ Our firm does not typically use KPIs
- ☐ Revenue growth
- ☐ Gross margin
- ☐ Profit margin
- ☐ Operating-cost reduction
- ☐ Working-capital release
- ☐ ROIC
- ☐ Net Promoter Score
- ☐ Employee engagement
- ☐ Other, please specify: _____
- ☐ Prefer not to say

[*The following question is asked to respondents who chose at least one answer to the previous question that is not "Our firm does not typically use KPIs" nor "Prefer not to say". Among all the answers chosen by respondents – including the one from the open-ended text box if they filled it –, one KPI is chosen at random to be asked about in the following question.*]
You mentioned {randomly chosen KPI} as a relevant KPI. What magnitude of improvement typically defines “success" 12 months after hand-off?

_____ %

## Forecasts

We have conducted a large-scale, representative analysis of which firms hire management and strategy consultants and how consulting affects client firms. Our analysis is based on the entire economy of a Western European country (Belgium) over the course of more than 20 years (2002 to 2023). We focus on the largest strategy and management consulting firms belonging to an international group. We exclude the Big Four accounting firms due to their focus on audit and other services. For data protection reasons, we never publish specific results pertaining to individual consulting firms. In the following, we will ask you several questions regarding your forecast of our results. We are interested in understanding whether experts with deep domain knowledge can accurately anticipate the results of our study.

Which firms work with consultants?

The following questions ask you to think about firms that hire consulting firms (client firms) and asks you to compare them to firms that do not work with consulting firms. Which of the following characteristics predicts whether a firm hires consultants?
*For example, if you think that firms with a larger workforce (i.e., a higher employment level) are more likely to hire consulting firms, you can select "Positive" in the first line below, if you think firms with more employees are less likely to hire consulting firms, you can select "Negative" below. If you think the size of a firm's workforce does not predict whether a firm hires consultants, you can select "Neutral" below.*

**Correlation with Engagement of Consulting Firms**

| | **Positive** | **Neutral** | **Negative** |
|---|---|---|---|
| Employment | ○ | ○ | ○ |
| Revenue | ○ | ○ | ○ |
| Profitability (profit margin, EBITDA/revenue) | ○ | ○ | ○ |
| Operational Efficiency* | ○ | ○ | ○ |
| Labor Productivity (Revenue / Employment) | ○ | ○ | ○ |

**By operational efficiency, we mean what economists refer to as total factor productivity, meaning the amount of revenue they generate with a given amount of workers, capital, and goods and services purchased from other firms.*

How confident are you about your assessments?

- ◦ Very confident
- ◦ Moderately confident
- ◦ Slightly confident

- Not confident at all

(Optional) Would you like to share with us the reasoning behind your assessments?

## The Effects of Working with Consultants

Our study follows firms that start hiring strategy or management consultants. We zoom in on firms with a large increase in spending on consulting services coming from a low level or no spending in the previous years.
We compare those client firms with an onset of spending on consulting services to firms with similar characteristics (e.g., in the same industry and a similar size) but that did not have any consulting spending in the time period we study. We then track both groups over time.
Following the hiring of consultants in the client firms, how do you expect the following characteristics to change relative to the group that did not hire consultants? Consider the average change over the five years after ramping up consulting spending.

**Predicted Effect of Consulting Take-Up**

| | **Positive** | **Neutral** | **Negative** |
|---|---|---|---|
| Employment | ○ | ○ | ○ |
| Revenue | ○ | ○ | ○ |
| Average compensation per employee (mean) | ○ | ○ | ○ |
| Operational Efficiency* | ○ | ○ | ○ |
| Labor Productivity (Revenue / Employment) | ○ | ○ | ○ |
| Employee Turnover Rate (Separations / Employment) | ○ | ○ | ○ |
| Dismissal Rate (Dismissals / Employment) | ○ | ○ | ○ |
| Number of Establishments or Plants | ○ | ○ | ○ |

**By operational efficiency, we mean what economists refer to as total factor productivity, meaning the amount of revenue they generate with a given amount of workers, capital, and goods and services purchased from other firms.*

[*Each of the following questions is asked only if the respondent answered "Positive" or "Negative" on the previous matrix for each outcome.*]
You answered that firms that ramp up consulting experience a {positive/negative} change in employment. By how much does employment {increase/decrease} in the five years after ramping up consulting?

_____ %

You answered that firms that ramp up consulting experience a {positive/negative} change in revenue. By how much does revenue {increase/decrease} in the five years after ramping up consulting?

_____ %

You answered that firms that ramp up consulting experience a {positive/negative} change in the average compensation per employee. By how much does the average compensation per employee {increase/decrease} in the five years after ramping up consulting?

_____ %

You answered that firms that ramp up consulting experience a {positive/negative} change in operational efficiency. By how much does operational efficiency {increase/decrease} in the five years after ramping up consulting?

_____ %

You answered that firms that ramp up consulting experience a {positive/negative} change in labor productivity. By how much does labor productivity {increase/decrease} in the five years after ramping up consulting?

_____ %

You answered that firms that ramp up consulting experience a {positive/negative} change in the employee turnover rate. By how much does the employee turnover rate {increase/decrease} in the five years after ramping up consulting?

_____ %

You answered that firms that ramp up consulting experience a {positive/negative} change in the dismissal rate. By how much does the dismissal rate {increase/decrease} in the five years after ramping up consulting?

_____ %

You answered that firms that ramp up consulting experience a {positive/negative} change in the number of establishments. By how much does the number of establishments {increase/decrease} in the five years after ramping up consulting?

_____ %

How confident are you about your forecasts?

- Very confident
- Moderately confident
- Slightly confident
- Not confident at all

(Optional) Would you like to share with us the reasoning behind your forecasts?

## Wrap-up

What is the biggest misconception economists have about strategy and management consulting? (200 words max.)

Anything else you'd like to share with the research team?

Would you like a brief summary of the study's findings? Your email will be stored separately from your responses and will be deleted once we send the results.

- ◦ No
- ◦ Yes → please leave your e-mail: _____

**Invite a colleague, shape the evidence**
We would like to create a broad evidence base for our analysis. To that end, could you please list up to five peers who currently work or previously worked in the consulting industry and who might also be interested in the study? We'll send them a single personalized invitation – no follow-ups unless they opt in. We will not name you as a referrer.
Name & email:

| | **Name** | **Email** |
|---|---|---|
| Colleague 1 | _____ | _____ |
| Colleague 2 | _____ | _____ |
| Colleague 3 | _____ | _____ |
| Colleague 4 | _____ | _____ |
| Colleague 5 | _____ | _____ |

This is the end of the survey.
Thank you for taking the time to respond.
Your response has been recorded.

Contact for questions or concerns:
Simon Jäger - simon.jaeger@princeton.edu