

Do French companies under-report their workforce at 49 employees to get around the law?

IPP Policy Briefs

n°82

March 2022

Philippe Askenazy
Thomas Breda
Flavien Moreau
Vladimir Pecheu

www.ipp.eu

Various legal obligations in terms of social dialogue, profit sharing and accounting apply to French companies when they reach the threshold of 50 employees. This policy brief shows that a significant proportion of companies voluntarily under-report their workforce below this threshold and this allows them to avoid their obligations. Compliance with the law in terms of social dialogue or profit-sharing thus appears to be linked to the number of employees that companies declare and not to their actual workforce. These results illustrate how the labor code can be circumvented in a complex regulatory environment and in the absence of sufficient means of oversight. They invite reflection on the use of more direct and effective methods of monitoring compliance with the law. They also invite caution in considering the results of several recent studies that quantify the cost of legal obligations at the 50-employee threshold, assuming that they are fully respected in practice.

- Far more French companies declare 49 employees than 50 employees in their tax returns.
- This spike at 49 employees is often attributed to the additional obligations that are triggered at the 50-employee threshold: companies may refuse to cross this "social threshold" in order to avoid, for example, having to set up a works council. This reduced growth of companies would ultimately limit productivity and employment.
- However, when the workforce is calculated directly from administrative data on all employees, the spike at 49 employees disappears entirely. Thus, it is the workforce reported by the employer and not the actual number of employees that spikes at 49.
- We suggest that this phenomenon is explained by the fact that the legal workforce is difficult to calculate and is not public, so that compliance with certain legal obligations depends in practice on the declared workforce.
- The cost of misreporting appears to be low, so that companies that fear legal obligations have everything to gain by misreporting their workforce and thus avoiding these obligations.
- These results partly challenge the evidence associating workforce thresholds with a deleterious effect on growth.



The Institut des politiques publiques (IPP) was created by PSE and developed through a scientific partnership between Paris School of Economics (PSE) and Groupe des écoles nationales d'économie et de statistique (GENES). The aim of the IPP is to promote quantitative analysis and evaluation of public policy using cutting-edge research methods in economics.

Workforce thresholds: An exorbitant cost?

Depending on the number of employees, French companies must fulfill a certain number of legal obligations: setting up a works council, profit-sharing with employees, certification of accounts by an auditor, etc. These obligations are generally triggered by company size thresholds, often referred to as social thresholds because they entail obligations mainly in terms of social dialogue.

Several studies have looked at the potential cost of these thresholds for companies and their effect on growth. They attempt to estimate the economic cost of legal obligations (Gourio and Roys, 2014; Garicano, Lelarge, and Van Reenen, 2016), their effect on the share of labor in added value (Smagghue, 2020), or their effect on innovation (Aghion, Bergeaud, and Van Reenen, 2021). Garicano, Lelarge, and Van Reenen, 2016 estimate that the obligations applying to the 50-employee threshold alone would have a staggering economic cost: 3.4% of GDP, or €92 billion in 2019.

The starting point for these analyses is the existence of a spike at 49 employees in the distribution of the number of firms, followed by a trough at 50 employees and above (Figure 1a). The spike suggests that many firms do not wish to cross the threshold, which would be costly for them. Regulations at the 50-employee threshold could not only affect the growth of some companies just below the threshold, but also induce significant additional economic costs for all those whose workforce is already above the threshold, and which should therefore in theory have implemented the legal obligations. The above-mentioned studies attempt to quantify this overall cost using economic equilibrium models estimated by exploiting distortions in the distribution of company size.

The authors of the studies cited above generally use the number of employees provided by employers in their tax returns as a measure of firm size. Since this workforce is declared by the employer, it can be manipulated. However, it is also possible to reconstitute the size of firms from the payroll records of each employee. This second measure of the workforce is difficult for the employer to manipulate as long as his employees have an employment contract and receive a salary. However, when this second source is used, in which the size of firms is measured rather than declared, the spike at 49 employees disappears and the distribution of firm sizes seems relatively smooth around the 50-employee threshold.¹

The aim of this policy brief is to offer a comprehensive explanation for the discrepancies between sources. To do so, we focus on the different ways in which company size

can be measured and how legal requirements are applied and monitored in practice.

Distribution of the declared and recalculated workforce at around 50 employees

Figure 1a shows the proportion of French firms reporting each employee size between 30 and 70 in 2006. The workforce variable considered is the average of the total number of employees at the end of each quarter of the current accounting period (regardless of their status, seniority and workload). It is reported by the employer and we observe it in the FICUS tax data, which is an aggregation by the national statistics bureau (Insee) of data from different tax regimes (see Box 1).

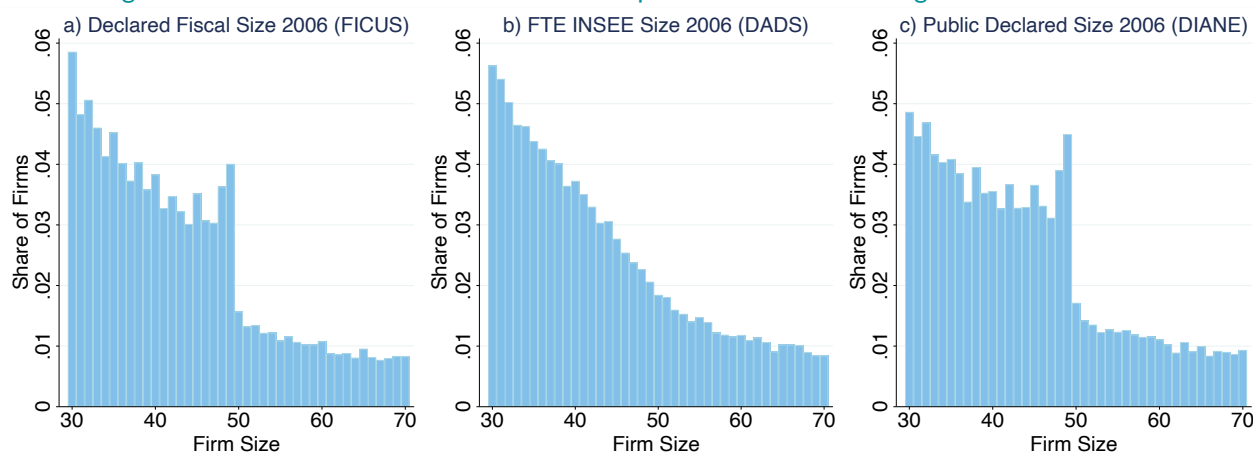
Figure 2b reproduces the same exercise for the same year, but this time considering the average full-time equivalent (FTE) workforce over the year, as reconstructed by Insee from the annual declarations of employee data (DADS) (see Box 1). The number of employees is not declared by the employer but is calculated by adding up the number of employees for whom a company pays social security contributions. The filing of DADS is mandatory. Erroneous declarations expose the company to heavy fines, both variable (as a percentage of the amount omitted) and fixed (per erroneous or omitted line). In addition, since 2006, payroll software must automatically produce the DADS declaration to be transmitted to the administration (DADS-U standard). It can therefore be considered that the DADS provide a portrait of a company's workforce that is difficult to manipulate by the employer. When the Insee measure constructed from this source is used, the jump to 49 employees is no longer visible.²

Companies are also obliged to file their accounts with the commercial court registries, and by default these must be identical to tax returns filed with the tax authorities. Although the commercial courts have a diverse legislative arsenal at their disposal to enforce the obligation to file annual accounts, sanctions are rare in practice. Companies do, however, have incentives to file their accounts to provide information that many of their lenders, customers or suppliers consider useful before entering into a business relationship. These filed accounts are then made public and collected in a DIANE database (see Box 1) for commercial purposes. Except in the (in practice rare) case in which a firm has filed different accounts with the tax authorities and the commercial court clerks, the DIANE data are identical to the FICUS tax data.

¹This difference between sources has already been noted by Ceci-Renaud and Chevalier, 2010, who were, however, unable to fully understand the cause.

²Figure 1b shows the graph for the FTE workforce reconstructed by Insee. Insee also calculates the number of employees present on December 31. The distribution of this alternative measure likewise does not show a discontinuity at 49 employees.

Figure 1: Distribution of the workforce of companies in 2006 according to different sources



Note: The sources used are described in the text and in Box 1.

Interpretation: A significant jump to 49 employees appears for the workforce declared in the unadjusted tax data (FICUS and DIANE), but it is non-existent for the FTE workforce recalculated by Insee from DADS data.

In Figure 1c, we see that for firms that have agreed to make their accounts and workforce public (about 75% of firms around the 50-employee threshold), there is a spike in the number of firms with 48 and 49 employees, and a drop in the number of firms beyond that.

Our online working paper reproduces the same figures for more recent years. From 2008 onwards, the spike at 49 employees in the data reprocessed by Insee is much less significant. In fact, Insee reprocessed the original declarative variable in the FARE-ESANE system, the successor to FICUS, because it judged its quality to be too limited, and even advised against using it for statistical processing.

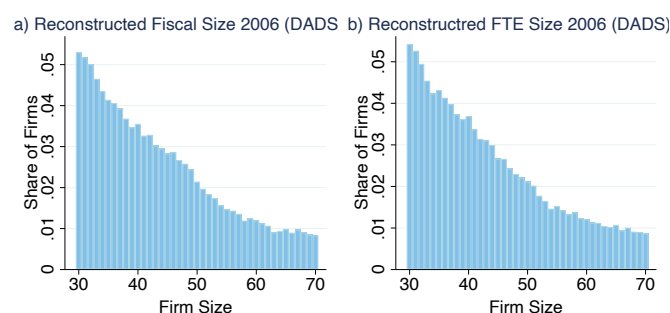
Deliberate under-reporting of the workforce...

To what extent does the spike at 49 employees in the distribution of the workforce reported by employers reflect *intentional* under-reporting?

To answer this question, we used DADS social security data to construct a new, non-manipulable measure of the workforce that corresponds exactly to the definition of workforce in the tax data. This exercise is made possible by the exhaustive nature of the DADS dataset, which makes it possible to observe each year for each job in each company, the start and end dates of the job observed, as well as the corresponding number of hours worked. We were thus able to recalculate the number of employees present in a given company at the end of each quarter of the current fiscal year, then take the arithmetic average of these numbers over the year to obtain a measure of the workforce strictly equivalent to the definition of the workforce reported in the accounting data. Figure 2a shows the distribution of this "fiscal" workforce, as recalculated for 2006, between 30 and 70 employees: this distribution does not show any spike at the 50-employee threshold

(with identical results for other years).

Figure 2: Distribution of companies' workforce recalculated by the authors in 2006



Note: Workforce variables reconstructed by the authors from DADS data and rounded down in the graphs. Interpretation: Whichever concept of workforce is used (average number of employees present at the end of each quarter or the FTE number over the year), the distribution does not show a jump or discontinuity around 50 employees.

To examine whether firms are strategically under-reporting their workforce, we compare the workforce reported in the tax data to the equivalent that we have reconstructed. Figure 3a thus shows for each reconstructed firm size between 30 and 70 employees and for the years 2002 to 2015, the proportion of firms that report a workforce that is (i) the same as, (ii) larger than, or (iii) smaller than the reconstructed workforce. We observe that the proportion of firms declaring their workforce correctly is low: between 10% and 20%, regardless of the size of the firm considered. More firms under-report their workforce (between 50% and 70%) than over-report it (between 20% and 40%).

The central feature of Figure 3a, however, is the way in which the mismatch between the two workforce measures varies at the 50-employee threshold: the proportion of firms under-reporting their workforce rises sharply around the 50-employee threshold, from about 50% to 70%. This suggests that the difference between declared

Box 1: Data used to measure the number of employees and the obligations at the 50-employee threshold

FICUS tax data (2000-2007). The FICUS data come from the tax returns of companies subject to the industrial and commercial (BIC) and non-commercial (BNC) tax regimes. In addition to an income statement and balance sheet data, firms report, in an appendix, their workforce for the accounting period. This is calculated as the arithmetic average of the number of employees at the end of each quarter of the fiscal year. This is the total number of people with employment contracts who are paid directly by the company, and therefore excludes temporary workers.

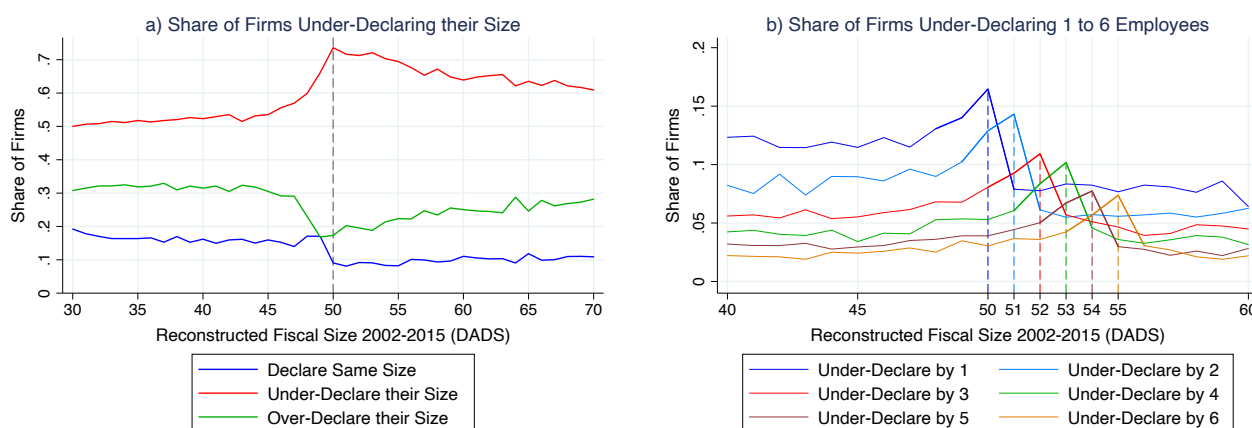
DIANE tax data (2002-2015). DIANE data are collected by the private company Bureau Van Dijk from the commercial court registries. Companies are required to file their tax returns with the commercial court register, under penalty of sanctions. These filed accounts are then public, except for micro-businesses that can since 2014 choose a confidentiality clause, and since August 7, 2016, for small companies with an average declared workforce of less than 50 employees. Except in the case in which a company has filed different accounts with the tax authorities and the commercial courts, the DIANE data is identical to the FICUS tax data.

FARE tax data (2008-2015). The FARE data contain accounting information from tax returns that are consistent with information from the Annual Sectoral Survey. In addition to businesses subject to the BNC and BIC regimes, FARE contains data on agricultural businesses under the BA regime. FARE contains the same accounting information as FICUS, but unlike FICUS, the FARE workforce data is reprocessed by Insee, with the algorithm described in *Insee2012*.

DADS social security data (2002-2015). In the 'postes' section of DADS, employers provide the start and end dates of the pay period for each employee, as well as the number of hours worked. This information is used to recalculate the workforce measures.

MARS workplace election reports (2009-2016). The MARS data come from the processing of the minutes of the workplace elections for works councils and staff delegates that took place in companies with at least 11 employees over both the 2009-2012 and 2013-2016 periods. They make it possible to identify firms that have a works council from 2012 onwards.

Figure 3: Difference between declared and recalculated workforce using the same definition according to firm size



Note: The sources used are described in Box 1. *Interpretation:* As firms approach the 50-employee threshold, they begin to under-report more of their workforce (graph a). Beyond 50 employees, under-reporting allows firms to remain just below the threshold and is observed up to large staff levels (graph b and additional figures in this policy brief).

and reconstructed workforce numbers is not simply due to a slight difference in the workforce concepts used, or to approximations by employers who may not know their exact workforce numbers. Indeed, if this were the case, we should not observe a jump in the probability of under-reporting exactly at the threshold where this under-reporting may be of interest, as we will show.

In Figure 3b, we take this exercise a step further and examine by size the proportion of firms that under-report their workforce relative to the reconstructed workforce by 1 to 6 employees. We observe a staircase profile: the proportion of firms under-reporting by 1 employee jumps

to 50 employees, the proportion under-reporting by 2 employees jumps to 51 employees, and so on. Whatever its magnitude, the under-reporting of the reported workforce in relation to the reconstructed workforce is most noticeable when it keeps the former at exactly 49 employees. This phenomenon of under-reporting continues to be observed in a statistically significant way up to firms with more than 70 employees.³

³If we look at over-reporting by a fixed number of employees (e.g. 1 employee), we do not observe the same staircase pattern, suggesting that there is nothing mechanical about the results presented here. In the paper that accompanies this policy brief, we produce additional analyses to validate the fact that even in the case of noisy DADS data, we cap-

The proportion of firms under-reporting their workforce increases sharply around the 50-employee threshold.

... which can help avoid legal constraints

Why would companies have an interest in under-reporting their workforce to the tax authorities when they exceed 49 employees? The answer we suggest is that they can avoid the social regulations that apply above the threshold, without facing any particular risk.

The cost of such behavior is first of all low because the number of employees mentioned in the tax returns has no direct impact on corporate taxation. Unlike the DADS, an erroneous declaration cannot generate a tax penalty and is therefore not information on which tax inspectors focus their attention. Nor is it of interest to labor inspectors or social security collectors (Urssaf), since all the provisions of the labor or social security codes are based on other concepts of company size (see the working paper associated with the policy brief). As for the official statisticians, they are content to note the poor quality of the declarative variable.

Under-reporting your workforce on the tax forms is therefore not very risky. But what do companies have to gain? The important point here is that even if the declared workforce does not correspond exactly to the legal workforce on which the implementation of regulations is based, it is most often the only publicly available information on the size of the company. Although commercial databases containing accounts filed with the commercial court registries are subject to a fee, they generally provide the size class of the company free of charge, and thus whether their declared workforce is above 50 employees. The information is available on sites such as societe.com. A trade union seeking to establish itself in companies without a works council will only have access to these public sources to determine the target companies. Within companies, in a context in which the legal workforce is difficult to calculate and the administration does not directly use other sources to enforce legal obligations, the declared workforce accessible online may become the one used by employees to request the application of regulations that come into force beyond 50 employees.

Regulations enforced on the basis of declared rather than actual workforce

To support this thesis, we attempt to examine the level of compliance with the regulations theoretically applying to the 50-employee threshold as a function of two workforce variables: the workforce declared by employers and a measure of the reconstructed workforce of companies that comes as close as possible to the legal workforce that should serve as the basis for compliance with the labor code.

The regulations that apply to the 50-employee threshold are described in detail in the working paper that accompanies this policy brief: among the most important are the establishment of a works council and an employee profit-sharing plan.

These two obligations, like all those included in the labor code and the social security code, are based on a different concept of workforce to that declared in the tax data. This is the FTE workforce during a given period. Specifically, since 2001 and until the PACTE law of 2019, companies must calculate their workforce in FTE month by month. They have one year to comply with their new obligations in terms of social or labor law when their FTE workforce has exceeded 50 employees for at least 12 months during the previous three years. The law suggests that verification should be done every month, and that the first month that the above condition is verified starts the clock for the implementation of the obligations.

The great richness of the DADS data allows us once again to construct a workforce variable as close as possible to the legal workforce variable described above. First, we ignore the dynamic complexity of the regulations and construct an FTE workforce for each calendar year. We sum the total number of employees observed in each firm in a given year, weighting them by the ratio between the number of hours they worked over the year and the number of hours corresponding to a full-time job over the year in the sector considered.⁴ Our measure (for which the distribution is presented in Figure 2b) corresponds to the same concept of workforce as that used for the labor and social security code regulations, with one exception: the legal workforce includes temporary workers present in the company in FTE, whereas our measure excludes them, as these workers are attached to their temporary employment agency and not to their place of work in the DADS. Our measure of the legal workforce in FTE is therefore an underestimation when temporary workers are present in the firm. For this reason, it should be considered as a

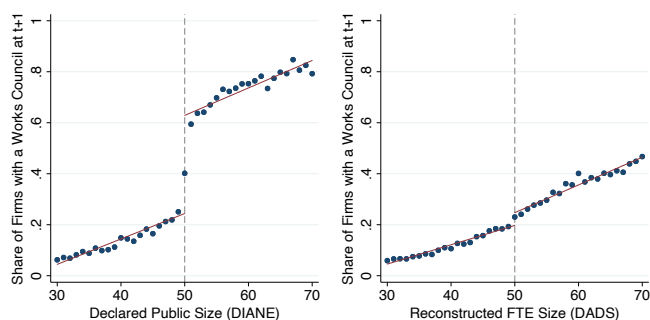
ture a phenomenon of deliberate under-reporting at the 50-employee threshold.

⁴See our working paper for details. The definition of the FTE workforce proposed by Insee in the DADS excludes jobs with too few hours worked or with too low a salary, even though all jobs must be considered to calculate the legal workforce. This is why we had to reconstruct a measure of the FTE workforce.

lower bound of the actual legal workforce, so that all companies with 50 or more employees according to our FTE workforce measure should normally implement the obligations.

To measure the presence of a works council, we use the MARS data containing, for the 2009-2016 period, the reports that companies must send to the administration when they organize workplace elections.⁵ By combining the information contained in MARS on the dates of the elections and the duration of mandates, we were able to construct a variable indicating the presence of a works council for the years 2012 to 2016.⁶ It is clear from the left-hand graph of Figure 4 that the proportion of companies having an active works council (or attempting to organize an election) the following year jumps sharply, from around 25% to 60%, when the declared size exceeds 49 employees: thus it is indeed the company size that employers declare in the tax data that triggers the setting up of works councils. If we consider the size reconstructed in FTE, which corresponds to the concept of workforce that should trigger the legal obligations, there is practically no jump at 50 employees (Figure 4, right-hand graph).⁷

Figure 4: Presence of works councils in the company the following year according to the workforce declared by the employer and the reconstructed legal workforce



Note: The sources used are described in Box 1.

Interpretation: The probability of the presence of a works council rises sharply when the workforce declared for tax purposes by the employer (average number of employees present at the end of each quarter) exceeds the 50-employee threshold. This is not the case when the FTE headcount, on which the establishment of works councils should legally be based, exceeds the threshold.

These results confirm the idea that companies can avoid their legal obligations by under-reporting their workforce.

⁵It cannot be totally excluded that some companies have not sent their report to the administration but still have a works council. This phenomenon is not likely to be more prevalent in companies that declare 49 employees.

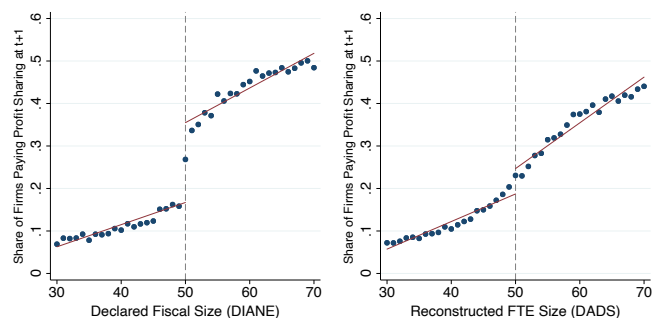
⁶It happens quite frequently that there are no candidates for workplace elections. In this case, the company must report this absence to the administration and we then consider that it has fulfilled its legal obligations for the duration of the mandates corresponding to the election in question.

⁷In practice, the obligation to set up a works council at 50 employees or more applies not only at company level but also at each of a company's sites. To facilitate interpretation, we have focused on companies with a single workplace. However, the results are similar when we also include companies with several premises, assuming that they have a works council if one of their premises has one.

They also show a high level of non-compliance with legal obligations: all companies *declaring* 50 or more employees have not necessarily set up a works council.⁸ This is particularly the case for companies with exactly 50 employees, which fall between those with 49 and 51 employees. Additional analyses suggest that some of these companies may not have set up a works council because their managers or employees wrongly believe that the obligations are triggered from 51 employees and upwards, not from 50 employees.

For profit-sharing, we make direct use of the amounts paid out as reported in the tax data. Figure 5 shows a similar phenomenon to that observed for works councils: the proportion of companies that make profit-sharing payments jumps when the company declares more than 50 employees, but not when it actually has more than 50 FTE employees.⁹ This confirms that the implementation of the main legal obligations at the 50-employee threshold depends on the workforce declared by the employer, even though this does not correspond to the concept of workforce used by the law for these obligations.

Figure 5: Profit-sharing payments in the following year according to the workforce declared by the employer and the reconstructed legal workforce



Note: The sources used are described in Box 1.

Interpretation: The payment of profit-sharing is highly dependent on the workforce declared by the employer and not the FTE workforce on which it should legally be based.

These results confirm the idea that companies can avoid their legal obligations by under-reporting their workforce.

⁸In our working paper, we present several additional analyses with a particular focus on accounting for the dynamic aspects of the law. All of them confirm a limited level of compliance with legal obligations.

⁹The fact that 100% of companies to the right of the threshold do not pay profit-sharing can also be explained by the fact that only companies making a profit are required to make profit-sharing payments. However, the same analysis of firms with a positive result changes the results only marginally.

Small is beautiful?

For several decades, national and local authorities have sought to promote a network of small businesses in France. Crossing the 50-employee threshold therefore not only implies new regulations: it may also mean loss of eligibility for certain local or national aid or exemptions for "small businesses". Thus, companies may not want to grow – or appear to have grown – not because new obligations are being imposed on them, but because opportunities for public support are being removed. For example, new hires are exempt from social security contributions for one year for companies with fewer than 50 employees in rural revitalization zones. Vacation vouchers are also exempt from social security contributions for up to €400 per employee in companies with fewer than 50 employees.

Information on the subsidies received and social security contributions paid is available in the tax data, which makes it possible to study changes in relation to the actual and declared workforce. The results (detailed in the working paper on which this policy brief is based) do not reveal any strong discontinuity in the prevalence of aid when firms declare more than 50 employees. On the other hand, we do observe a slight jump in the weight of social security contributions at the threshold of 50 declared employees (but not at the threshold of 50 employees in our FTE recalculation), suggesting that the loss of these exemptions could play a role in staying below the threshold.

Are companies that under-report their workforce different?

Are companies that avoid certain legal obligations by under-reporting their workforce the worst performers and thus the ones that fear the potential cost of regulations the most? To examine this question, for each available year we construct two groups of firms:

- A group that under-report, comprising companies with a reconstructed workforce of between 50 and 55 employees and a declared workforce of less than 50 employees
- A group that do not under-report, comprising companies with a reconstructed workforce of between 50 and 55 employees and a declared workforce of 50 or more employees

We then examine how the economic performance, financial performance and workforce of the companies in the two groups evolve over time. The results (detailed in the working paper on which this policy brief is based) show that firms that under-report their workforce are smaller (their actual workforce is smaller) and are less likely to

have crossed the 50-employee threshold in the past. They also have lower economic performance but higher financial performance than firms that do not under-report. These differences observed at the time of under-reporting are not one-off: they were already present 5-10 years before the time of under-reporting, and they remain in part thereafter, although some of them tend to fade, notably the differences observed in terms of financial performance.

Does under-reporting limit company growth?

Under-reporting at 49 employees for tax purposes is likely to become increasingly difficult as the actual number of employees grows. Even if the penalties are limited, it is obviously harder for a company with 70 employees to claim it has 49. A company might therefore be tempted to limit its growth in order to keep its workforce at a level that would allow it to maintain its declared workforce at 49 in a relatively plausible way. This means that the 50-employee threshold could be detrimental to the actual growth of firms, even when they have the opportunity to under-report their workforce by a few units.

This hypothesis does not seem to be supported empirically. Indeed, the size gap between firms that under-report and those that do not under-report does not increase over time from the point at which under-reporting is measured. Firms that try to stay below 50 reported employees thus appear to have *real* growth comparable to the others.

Discussion

This policy brief shows that companies can under-report their tax-declared workforce without fear of sanctions and without necessarily being audited. A certain number of them indeed do so when they cross the threshold of 50 employees. This under-reporting behavior allows them to temporarily avoid the legal obligations that apply to the threshold, but it does not seem to affect their performance or growth potential.

Why under-report? First, the implementation of the obligations represents an immediate administrative cost for the company manager. In particular, a manager may not want to pay these costs if the workforce exceeds the threshold only to cope with a temporary increase in activity.¹⁰ Second, the implementation of obligations leads to a loss of exclusive control by the managers over the

¹⁰The PACTE law should partially remove this motivation by making certain obligations, including profit-sharing, conditional on exceeding the threshold for five consecutive years.

company since they allow employees or the public authorities to be more involved in the management of the company. Some managers may be reluctant to accept these constraints on their decision-making power. Thus, even if legal obligations do not necessarily represent a cost for the company and its stakeholders as a whole, there are many more personal reasons why executives or HR managers may want to postpone implementation.

More generally, it should be remembered that regulations implemented by the public authorities are not *a priori* intended to only induce additional costs for companies. In general, they have benefits for certain stakeholders: more frequent audits can help avoid undeclared work, credit constraints could limit defaults, works councils could lead to a more equitable distribution of the firm's profits, etc. While these supposed positive externalities are not necessarily proven, they also deserve to be evaluated before normative conclusions can be drawn about the overall effect of regulations. This requires a specific analysis of each of the measures imposed at the 50-employee threshold, rather than a black box approach that attempts to quantify the overall cost of a set of measures that are all assumed *a priori* to be bad.

The evidence of under-reporting behavior that allows companies to circumvent labor law invites us to rethink the way in which legislators ensure compliance with the law. The implementation of complex regulations, based on concepts of workforce that are difficult to measure, combined with the absence of sufficiently well thought-out monitoring procedures, largely explain the situation we have observed. The public authorities could, for example, systematically mobilize reliable data sources, as we are attempting to do here, to monitor the size of firms and enforce compliance with labor law.

Authors

Philippe Askenazy is a senior researcher at CNRS-Centre Maurice Halbwachs-ENS-PSL.

Thomas Breda is a research fellow at the CNRS affiliated with Paris School of Economics and director of the Labor Program at the Institut des politiques publiques.

Flavien Moreau is an economist at the International Monetary Fund. The views expressed in this policy brief are those of the authors and do not necessarily represent the views of the IMF, its executive board, or IMF management.

Vladimir Pecheu is a postdoctoral fellow at Aix-Marseille School of Economics.

References

- Aghion, Philippe, Antonin Bergeaud, and John Van Reenen (2021). *The impact of regulation on innovation*. Tech. rep. National Bureau of Economic Research.
- Ceci-Renaud, Nila and Paul-Antoine Chevalier (2010). "Les seuils de 10, 20 et 50 salariés: impact sur la taille des entreprises françaises". *Economie et Statistique* 437, pp. 29–45.
- Garicano, Luis, Claire Lelarge, and John Van Reenen (2016). "Firm size distortions and the productivity distribution: Evidence from France". *American Economic Review* 106.11, pp. 3439–79.
- Gourio, François and Nicolas Roys (2014). "Size-dependent regulations, firm size distribution, and reallocation". *Quantitative Economics* 5.2, pp. 377–416.
- Smagghue, Gabriel (2020). "Heterogeneous policy distortions and the labor share". *Review of Economic Dynamics*.

Reference studies

The arguments developed here are taken from Askenazy et al (2022): <https://halshs.archives-ouvertes.fr/halshs-03614750/document>