

It's a man's world: culture of abuse, #MeToo and worker flows*

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Abstract

Sexual harassment and sexist behaviors are pervasive issues in the workplace. Around 12% of women in France have been subjected to toxic behaviors at work in the last year, including sexist comments, sexual or physical harassment, or violence. Such toxic behaviors do not only deter women from entering the labor market, but can also lead them to leave toxic workplaces at their own expense. This article examines the relationship between toxic behaviors and worker flows using the #MeToo movement as an exogenous shock to France's workplace norms regarding toxic behaviors. Survey data on reported toxic behaviors in firms is combined with exhaustive administrative data to create a measure of toxic behavior risk for all French establishments. Then, a triple-difference strategy is applied comparing female and male worker flows in high-risk versus low-risk firms before and after #MeToo. We find that the #MeToo movement increased women's relative exit rates in higher-risk workplaces, while men's worker flows remained unaffected. In particular, women are more likely to quit their job and move to firms who pay 2% less on average. This demonstrates the existence of a double penalty for women working in high-risk environments, as they are not only more frequently the victims of toxic behaviors, but are also forced to quit their jobs in order to avoid them.

JEL codes: J16, J81, J24, J52.

Keywords: Occupational Gender Inequality, Workflows, Sexual harassment, Social Movement.

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1 Introduction

Toxic behaviors, sexual harassment, and violence are prevalent and serious issues for women in the workplace. For instance, the 2019 AEA Professional Climate Survey in Economics reported that 43% of female respondents had experienced offensive sexual remarks directed at them by another economist. The equivalent statistic was 13% for male respondents.¹ A hostile work environment may have detrimental effects on women’s career choices and opportunities, which could explain why women are underrepresented in the economic profession,² and in general, in the labor market.

This paper explores in the French context the labor market effect of sexist and sexual harassment³ in the workplace on women by focusing on a social movement that altered the norm and awareness of such conduct. In 2017, the #MeToo movement exposed the existence of a “culture of abuse” in the workplace for women; that is, environments where acts of sexist and sexual harassment could prosper and be minimized. Starting with several actresses accusing the film producer Harvey Weinstein of rape and sexual harassment in work-related contexts, the #MeToo movement took off worldwide as women shared their experiences of sexual violence in their daily and working life. In this paper, we investigate the consequences of this culture of abuse on female worker flows using the onset of the #MeToo movement as an exogenous shock on social norms regarding violence against women in the workplace. In the labor market, a “culture of abuse” disproportionately impacting women could prevent them from accessing or pursuing high-paying and prestigious careers. If employers lack evidence to enforce disciplinary action against harassers or prefer to turn a blind eye to the issue, then the only way out for women might be to quit their job. This double penalty – harassment and higher job turnover – could even deter women from entering the labor market or push them into

¹<https://www.aeaweb.org/resources/member-docs/final-climate-survey-results-sept-2019>, last accessed in January 2021.

²According to [Bayer and Rouse \(2016\)](#), 56% of PhDs in STEM fields go to women, but it is still less than 33% in economics and further along the road it gets worse, only 14% of Full professors in Economics are women.

³As defined in Section 2.1, in this paper, we use “toxic behaviors” or “sexist and sexual harassment” interchangeably in this paper to refer to the following: sexual propositions, saying obscene or degrading things, making derogatory remarks or jokes about women, and sexual assaults.

safer and maybe less rewarding jobs.

This paper first investigates the predictors of workplace toxic behaviors using a probit model and data from a representative survey of about 11,500 employed French women, which includes a self-administered questionnaire about instances of sexual harassment and sexist behavior. This prediction is then applied to the exhaustive administrative labor market dataset to construct a measure of harassment risk for all French establishments. This establishment-level measure of harassment risk is then combined with another administrative database containing different types of worker flows for women and men at the establishment-level: hires, layoffs, terminations by agreement, and quits.

Using the newly constructed data and the #MeToo shock in France, this paper then examines whether the social movement had an effect on worker flows patterns. The assumption is that the #MeToo movement may have altered women's working conditions or tolerance for toxic behaviors, which in turn may have an effect on labor flows within an establishment. Adapting an Exit, Voice, Loyalty model ([Hirschman, 1970](#)) to our context, one could expect the consequences of #MeToo in the labor market to depend on the reactions of the three main actors: women, men, and employers. Following #MeToo, women can choose between three options: (i) voice their disagreement against sexual harassment and try to change their work environment, (ii) exit their firm if they do not see any change, or (iii) stay silent on the issue. If #MeToo lowered the acceptability of sexist and sexual harassment, women might decide to *voice* their concerns more and denounce their harassers. In response to that, men can either change their behavior and contribute to improving their female coworkers' working conditions, or men can decide not to change their behavior. Similarly, employers can choose to take action against harassers or not. If men's behaviors (or employers' attitudes towards harassers) do not change, one would expect women's *exit* rate to increase, both through an increase in quits and in terminations by agreements. Women's layoff rate could also increase if they also face retaliation for speaking up. If men change their behaviors and harass less, then women's exit rate should decrease as their working conditions improve. If the change in working conditions is driven by employers defending their female workers against harassers, we

could also see an increase in the layoff rate of men. However, if following #MeToo, women prefer to avoid any scandal that could potentially damage their firm's reputation (*loyalty*), they could choose not to mention any ongoing harassment. Hence, we should not expect any change in women's or men's worker flows.

To estimate the impact of #MeToo, we use a triple difference strategy comparing worker flows of women and men before and after the #MeToo shock in high-risk versus low-risk establishments. To disentangle whether the effects are driven by women's or men's worker flows, we also implement a difference-in-differences strategy comparing worker flows for each gender in high versus low-risk establishments before and after #MeToo.

Using the representative Working Conditions Survey, we find that around 12% of women reported being a victim of sexual harassment or suffering from a sexist work environment in the last 12 months in France. Women frequently suffer from a variety of toxic behaviors that are interrelated: women who reported always hearing derogatory remarks or jokes about women are 15 times more likely to be subject to obscene remarks, 130 times more likely to be made sexual propositions, and 40 times more likely to be physically or sexually assaulted than those who never hear such remarks. Women who report having suffered from toxic behaviors are also more likely to be younger and to work in establishments with a higher male representation. Women also appear to be more at-risk in the private sector compared to the public sector. At the establishment level, the risk of harassment is correlated with narrower gender wage gaps because of lower hourly wages. Finally, there is a significantly higher relative quit rate for women (compared to men) in high-risk (vs. low-risk) establishments. This corroborates the hypothesis of a double penalty faced by women, who are not only more frequently the victims of toxic behaviors but also forced to quit their jobs to avoid it.

Moving on to the causal analysis, we find that the #MeToo movement increased the relative share of women exiting establishments with a high risk of harassment. This is mainly driven by an increase in the relative quit rate of women. The difference-in-differences strategy indicates that this is because women, not men, change their labor-market behavior: there is no change in the rate at which men enter or exit high-risk

establishments. This suggests that the #MeToo shock increased women’s awareness of toxic work environments, and that, at least in the short term, their working conditions did not improve enough to prevent them from leaving in greater numbers.

This #MeToo effect is stronger in smaller establishments, where the CEO is a man rather than a woman, where there is a higher share of executives, and where there is a higher share of men. The effect is also greater in some male-dominated sectors such as manufacturing of transportation vehicles or industrial products, but also in the information and communication sector, which includes the audiovisual and film industries. We also show that the effect of #MeToo increases women’s exit from firms that have a higher risk of all types of toxic behaviors and that even in firms that have a higher risk of derogatory remarks and jokes about women, there is an increase in women’s exits following the #MeToo movement.

We also show that women forego earnings in order to escape those toxic workplaces: after the #MeToo shock, women relative to men in higher risk establishments move to establishments that pay 2% less on average. However, women compared to men in higher-risk establishments do not tend to move to firms where they face a lower risk of harassment after the #MeToo movement. This suggests that this toxic behavior risk may be difficult to assess or avoid in certain occupations.

Finally, when comparing high-risk firms to low-risk ones, we find that this higher turnover has a small negative effect on revenues. However, we do not observe any effect on the profit rate after #MeToo, suggesting that this loss in revenues is too small to impact the profitability of high-risk firms.

This paper contributes to three strands of the literature. First, we contribute to the literature that measures the incidence of sexual harassment in the workplace and its consequences on women. Male-dominated work settings are found to be more prone to the emergence of sexual harassment against women ([McLaughlin et al., 2012](#); [Kabat-Farr and Cortina, 2014](#); [Folke and Rickne, 2022](#)). We extend those analyses by merging survey and linked employer-employee data, enabling us to uncover in detail which characteristics of both firms and women are correlated with a higher risk of sexual harassment. We

also relate to the literature on compensating pay-differentials (Hersch, 2011; Folke and Rickne, 2022). Similarly to Folke and Rickne (2022), we find that a high risk of sexual harassment is associated with lower wages, suggesting that there is no compensation for such harassment. Besides the consequences for mental and physical health (McDonald, 2012), violence against women can have long-lasting effects on their career (Willness et al., 2007; Siddique, 2018; Adams-Prassl et al., 2022). For example, McLaughlin et al. (2017) shows that sexual harassment tends to increase the financial stress of victims by precipitating job changes. By being able to differentiate between different types of exits, our results can tell us a great deal about the consequences of sexual harassment on women’s career. Our results show that by choosing to quit their jobs as their main exit strategy, women are willing to forego unemployment benefits to escape toxic behaviors.

Second, our paper contributes to a vast literature on the drivers of gender inequalities in the labor market. Differences in earnings between women and men are now well documented in the literature (Goldin, 2014; Blau and Kahn, 2017) and can stem from a variety of channels: occupational segregation (Goldin, 2014), childhood penalty (Azmat and Ferrer, 2017; Kleven et al., 2019; Azmat et al., 2020), gender norms and culture (Fernandez, 2007), need for flexibility (Goldin, 2014), differences in application pattern (Hospido et al., 2022) or in wages asked (Roussille, 2020). Our paper sheds light on a new potentially significant driver of career differences between men and women: working conditions, and more specifically, sexist and sexual harassment against women. Our results suggest that women compared to men move to establishments that pay 2% less on average after #MeToo.

Lastly, we relate to the literature that examines whether activist movements can change the norms and behavior of employees or firms. For instance, Weber et al. (2009) show that anti-genetic movements in Germany affected the commercialization of biotechnologies by pharmaceutical firms. In particular, our paper also contributes to an emerging literature that focuses specifically on the #MeToo movement (Cheng and Hsiaw, 2020; Borelli-Kjaer et al., 2021; Lins et al., 2021; Gertsberg, 2022). Levy and Mattsson (2019) find that, by changing norms, the #MeToo movement increased the reporting of sexual

crimes to the police by 13% during the first six months and that this effect persisted for at least 15 months. Focusing more on labor market outcomes, [Cici et al. \(2020\)](#) find that the productivity of female mutual fund managers significantly increased following #MeToo, suggesting that reducing the threat of sexual harassment improves productivity. More similar to us, [Bernabe \(2020\)](#) finds that women’s propensity to switch jobs was 20% lower in US counties where the tone of news coverage on #MeToo was negative compared to the ones where it was neutral. Our analysis goes deeper as we are able to look at the impact of #MeToo at the firm level, and to the best of our knowledge, we are the first to analyze the impact of the #MeToo movement on worker flows such as hires, quits, and layoffs within firms. In line with this literature, our results show that women employees did respond to the #MeToo movement by leaving more high-risk establishments. Our results suggest that #MeToo lowered the acceptability of sexual harassment and resulted in more women voicing their disagreement with toxic behaviors. However, we show that there is no evidence that employers or men employees changed their behavior sufficiently to prevent women from leaving high-risk firms.

The remainder of the paper is organized as follows. [Section 2](#) details the data we use in this paper, the context of the #MeToo movement in France, as well as the findings on the prevalence of sexist and sexual harassment in the workplace in France. [Section 3](#) presents our empirical strategy. [Section 4](#) lays out the results on the impact of the #MeToo movement on women worker flows, and [Section 5](#) concludes.

2 Data and Context

2.1 Data

We rely on three main data sources. We use the 2016 Working Conditions survey, which interviews a representative sample of around 27,700 employed adults about their working conditions from October 2015 to June 2016.⁴ The survey covers a wide variety of topics and is organized into two sections. The first section contains questions regarding pro-

⁴Enquête Conditions de Travail 2016

fessional activities, work organization, health, family life, and career path. The second section is self-administered and includes more intimate questions regarding their personal life, job difficulties, work relationships, and sexual harassment. Around 7% of the sample does not respond to the self-administered section. We use the responses to the sexual harassment questions to ascertain the types of establishments in which women are more likely to report being harassed. To that end, we restrict the sample to employed women between the ages of 18 and 65, yielding 11,488 observations. We then focus on four main questions:

1. “In the past 12 months, have you experienced any of the following difficult situations at work? One or more people systematically behave with you in the following ways: They insistently make sexual propositions to you”⁵
2. “In the past 12 months, have you experienced any of the following difficult situations at work? One or more people systematically behave with you in the following ways: Saying obscene or degrading things to you.”⁶
3. “In the past 12 months, in the course of your work, have you been physically or sexually assaulted by your colleagues or superiors?”⁷
4. “At work, I hear derogatory remarks or jokes about women”⁸

Following up on the first two questions, further questions were asked to elicit additional information on the perpetrators of those behaviors: (a) “The individual(s) who has(ve) had the described behavior is (are): one or more persons of your firm”⁹ and (b)

⁵“Au cours des douze derniers mois, vous est-il arrivé de vivre au travail les situations difficiles suivantes ? Une ou plusieurs personnes se comportent systématiquement avec vous de la façon suivante: Vous fait des propositions à caractère sexuel de façon insistante ?”

⁶“Au cours des douze derniers mois, vous est-il arrivé de vivre au travail les situations difficiles suivantes ? Une ou plusieurs personnes se comportent systématiquement avec vous de la façon suivante: Vous dit des choses obscènes ou dégradantes ?”

⁷“Au cours des douze derniers mois, dans le cadre de votre travail, avez-vous été victime d’une agression physique ou sexuelle de la part de vos collègues ou de vos supérieurs ?”

⁸“A mon travail, j’entends des propos désobligeants ou des blagues sur les femmes”

⁹La ou les personnes ayant eu les comportements décrits est(sont) : une ou plusieurs personnes de votre entreprise.

“The individual(s) who has(ve) had the described behavior is (are): one or more clients, customers or patients.” ¹⁰

We analyze behaviors of coworkers or superiors, not of clients. We create a binary variable that indicates whether a person has been subjected to harassment and assigns the value 1 to women who respond yes to questions (1) and (a), or to questions (2) and (a), or to question (3). Additionally, the variable is equivalent to 1 for women who respond “always” or “often” to questions (4). Our variable is set to zero for women who respond “no” to all three of our first questions, or for women who respond “yes” to one of our two initial questions but not to (a), and who respond “sometimes” or “never” to question (4). Sexual harassment, sexual assault, and overtly sexist work conditions are all included in our variable. For the sake of clarity, we will refer to this collection of instances of sexual harassment for the remainder of the study.

Sexual harassment may be difficult to perfectly measure. French law establishes two distinct categories of sexual harassment.¹¹ It can be serious pressure used to obtain a sexual act, such as layoff blackmail, which does not need to be repeated; or it can be unwanted *repeated* sexual remarks or behaviors. Sexual assault on the other hand is defined as “any sexual act performed with the use of violence, constraint, threat or surprise”.¹² Thus, we may be missing some instances of sexual harassment in which significant pressure was used to elicit a sexual act only once, as none of the questionnaire’s questions pertain to that specific situation. This is, however, the least prevalent form of sexual harassment (Waldo et al., 1998; Fitzgerald and Cortina, 2018).

Respondents may also be hesitant to report toxic behaviors for fear of retaliation or to avoid looking like a victim. While this is unlikely to completely solve this issue, all sexual harassment questions in the 2016 Working Condition Survey are self-administered by respondents, which improves privacy and is likely to reduce under-reporting bias (Cullen, 2020). Moreover, employees are guaranteed anonymity for their responses, and employers are unable to access their employees’ responses. Employees are thus protected from retal-

¹⁰La ou les personnes ayant eu les comportements décrits est(sont) : un ou plusieurs de vos clients, usagers, patients

¹¹art. L. 1153-1 of labor law

¹²Art. 222.21 CP

iatory firing (Dahl and Knepper, 2021) and, because the results are not made public, there is no possibility that the responses to these questions could harm the firms' reputations. These reasons should help reduce the underreporting bias even further. In addition, as the first two questions do not include the term "sexual harassment," and because previous research has shown that directly asking respondents about their experiences with sexual harassment (rather than simply listing behaviors) results in significantly lower estimates of sexual harassment incidence (Ilies et al., 2003), the under-reporting is likely to be low. Finally, because sexual harassment is included in a broader set of questions about working conditions, it is less salient, possibly reducing social desirability and demand bias.

We also use the DMMO database (Declarations of Labor Movement, or *Déclarations des Mouvements des Mains d'Oeuvre* in French) from 2015 to 2018. The DMMO database is produced by the DARES, the statistical office of the French labor ministry.¹³ All establishments with more than 50 employees must complete a survey detailing each entry and exit from the establishment: recruitment on permanent or fixed-term contracts, transfer to another establishment, quits, dismissal for economic or other reasons, retirement, termination by agreement, etc. This data not only distinguishes between establishment entries and exits, but also provides the gender of the individual affected by the movement. It hence allows to precisely measure the number of each type of worker flow within an establishment on a daily basis, for both women and men.

Finally, we also use the DADS 2015 (Annual Declaration of Social Data, or "Déclaration Annuelle des Données Sociales" in French), an exhaustive database that links employees and employers. The DADS uses forms sent by all private companies for the payment of employer contributions. It first provides information on the sector and type of activity of the establishments. Second, firms report the duration of employment, the corresponding wage, and the worker's occupation for each position. It also provides information on socio-demographic characteristics of workers. This allows to measure the gender wage gap, the proportion of women, the number of employees and other pertinent characteristics within each establishment in 2015.

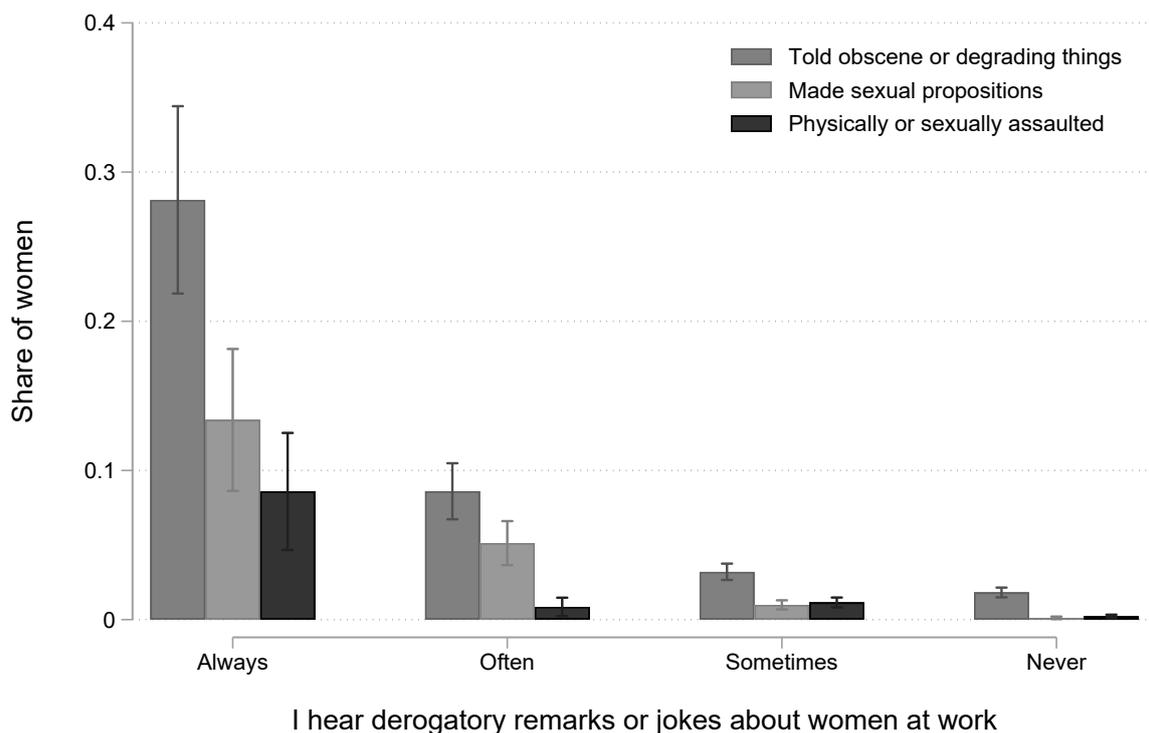
¹³The DMMO are DARES proprietary data that researchers can access if they follow the protocols outlined [here](#).

2.2 Sexual harassment in France

2.2.1 Stylized facts

Using the representative sample of 11,488 women from the 2016 Working Conditions survey, we find that around 12% of women report having experienced at least one instance of sexist behavior or sexual harassment in the last 12 months. More precisely, 9% constantly or frequently hear derogatory remarks about women, and a little less than 1% report being physically or sexually assaulted in the past year. About 3% have been told demeaning or obscene remarks, and 1% have been made persistent sexual advances by coworkers or superiors over the last twelve months.¹⁴

Figure 1: Share of women experiencing toxic behaviors according to the likelihood to hear derogatory remarks or jokes about women at work



Source: 2016 Working Conditions Survey. Note: The figure reports the share of women experiencing different types of harassment according to their answers on whether they hear derogatory remarks or jokes about women at work.

Reading: 27% of women reporting always hearing derogatory remarks or jokes about women at work also report being told obscene or degrading things.

¹⁴The perpetrators are more frequently coworkers than clients or customers: 0.26 percent and 0.11 percent of women, respectively, reported being told obscene or degrading comments or being made sexual propositions only by clients, customers, or patients in the preceding twelve months.

Sexist and harassment experiences are correlated with each other: women reporting one type of toxic behavior are also more likely to report experiencing other types. Figure 1 illustrates the dramatic disparities in the likelihood of reporting various types of sexual harassment based on the level of sexism in the workplace. This is identified by responses to question (4) regarding the frequency of hearing derogatory remarks about women at work. Compared to women working in non-sexist environments, women working in sexist environments are 15 times more likely to also report being told obscene remarks, over 110 times more likely to report receiving insistent sexual propositions, and about 40 times more likely to report being physically or sexually assaulted.¹⁵ As such, question (4) about hearing derogatory remarks about women appears to be an accurate proxy for incidents of sexual harassment and likely compensates for some of the under-reporting bias.

Table A.1 compares women who report experiencing sexist or sexual harassment to those who do not. We find that women who report toxic behaviors are much more likely to work in companies with a higher male representation and in the private sector. We observe no statistically significant differences in terms of age, monthly income, firm size, or gender of the CEO. Table A.2, displays the mean harassment likelihood by sectors and compares it to the mean for all sectors. It shows that while women are less likely to be harassed in the public administration, education, human health, and social work sectors, they are also much more likely to be harassed notably in the accommodation and catering sectors.

2.2.2 Harassment risk and women outcomes

To link the harassment probability obtained from the 2016 Working Conditions survey to all firms in the French exhaustive administrative dataset, we first fit the following probit model on our sample of working-age women from the Working Conditions Survey:

¹⁵We define non-sexist workplaces as those in which women never report hearing derogatory remarks or jokes about women, and sexist workplaces as those in which women report constantly hearing such comments.

$$\begin{aligned}
P(\text{Harassed}_{ij} = 1) = & \\
& f(\text{Age}_i, \text{WageDecile}_i, \text{Job}_i, \text{ShareWomen}_j, \text{Private}_j, \\
& \text{NbPositions}_j, \text{CEOWomen}_j, \text{Sector}_j, \text{Region}_j, \epsilon_{ij}) \quad (1)
\end{aligned}$$

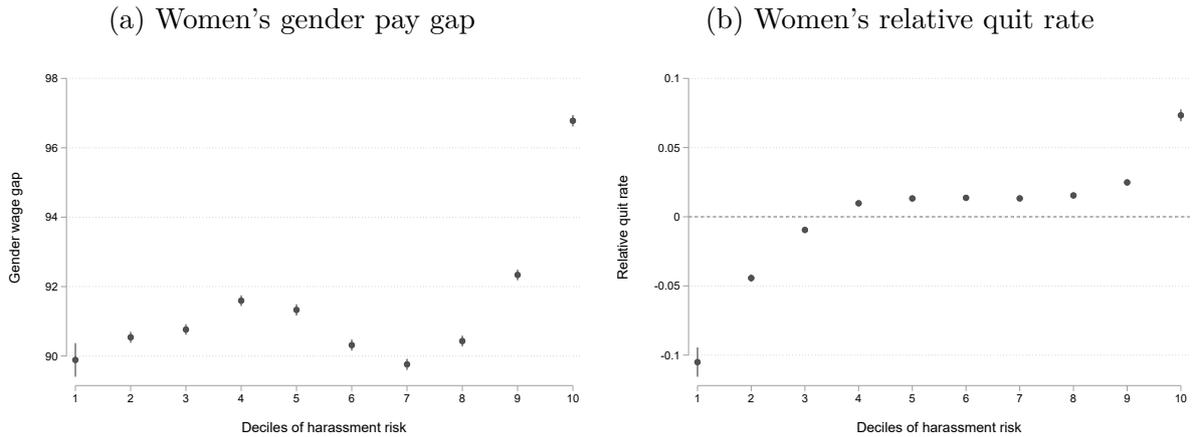
where $\text{Harassed}_{ij} = 1$ if the woman i declared having suffered from sexual or sexist harassment in firm j , Age_i is the age, WageDecile_i is the decile position in the wage distribution of workers, $\text{Private}_j = 1$ if the firm is in the private sector, NbPositions_j is the number of employees in the firm, $\text{CEOWomen}_j = 1$ if the firm's CEO is a woman, Job_i is the socio-economic profession, Sector_j is the firm's sector, and Region_j is the region of the firm. Table B.1 displays the results of the probit and shows that women who are younger, not working in the public sector, or in establishments with a lower share of women are more likely to experience sexist or sexual harassment.

Given that these characteristics are present in both the 2016 Working Conditions Survey and the DADS data, we use the prediction from this probit model to obtain the probability of harassment risk for each woman in the DADS and aggregate those probabilities to obtain a measure of harassment risk for women at the establishment level.¹⁶ The harassment risk measures the average probability that women in the establishment have encountered instances of sexist or sexual harassment in the last 12 months.

As illustrated in Figure 2a, a higher harassment risk is associated with a smaller gender wage gap at the establishment level. This can be explained in part by the fact that establishments with a high risk of harassment also pay lower hourly wages.

¹⁶The distribution of harassment risk across establishments can be seen in figure B.1

Figure 2: Harassment of women, gender pay gap and quit rates



Source: 2016 Working Conditions Survey, DADS 2015, and DMMO 2016.

Note: Figure 2a relates the deciles of estimated harassment risk with the gender pay gap. Reading: In establishments part of the 10th decile of harassment risk in 2015, women earned 97% of the men's wage, and workers earn on average a bit less than 12€ per hour. Figure 2b shows women's relative quit rate according to the decile of estimated harassment risk in the establishment. Reading: In establishments in the last decile of harassment risk, women's quit rate is about 8 points higher than men's quit rate.

Figure 2b examines the relationship between establishments' harassment risk and women's relative quit rate (i.e., the rate of women leaving a firm in a quarter) in comparison to men. Figure 2b shows that women quit their jobs at a higher rate in high-risk establishments. In particular, their relative quit rate increased significantly for establishments in the last decile of harassment risk. This supports the double penalty hypothesis where not only are women subjected to more sexual harassment in these establishments but they are also forced to quit their jobs to escape it. We also perform the prediction of harassment risk using the same variables as in Equation 1 using a Random Forest algorithm and find similar patterns, as shown in Figures D.2a and D.2b.^{17 18}

2.3 The #MeToo movement in France

On October 15th, 2017, in response to media reports about Harvey Weinstein, the actress Alyssa Milano re-popularized the 2007 hashtag #MeToo, inviting women to share their

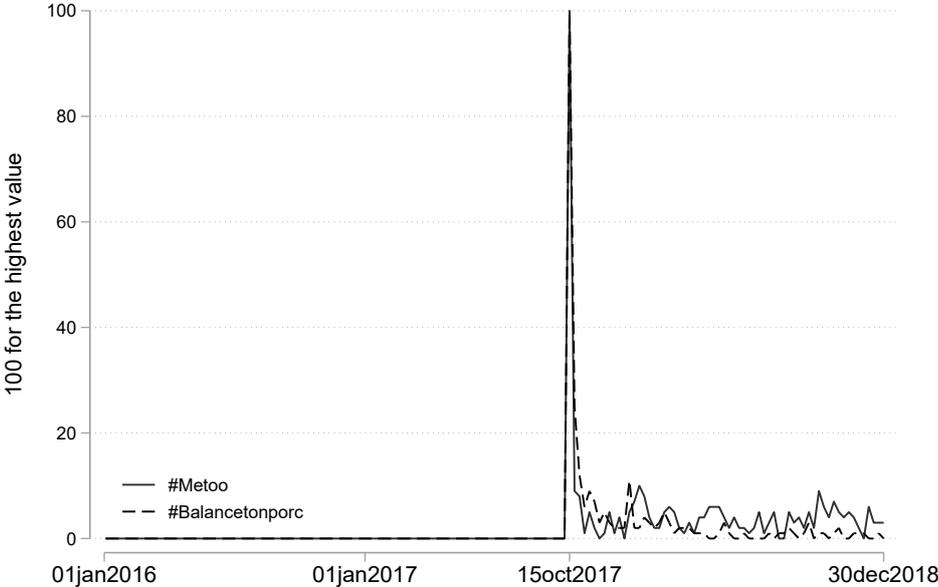
¹⁷The distribution of harassment risk across establishments can be seen in Figure D.1. The random forest algorithm was performed with 500 trees (convergence of the algorithm from 200 trees) and 7 variables randomly sampled as candidates at each split (chosen using a grid search for tuning this parameter). The algorithm achieved an accuracy of 88% when applying the algorithm trained on a training dataset representing 80% of the data on a testing dataset of the remaining 20% of the original data.

¹⁸Controlling for whether the occupation is part-time or full-time decreases the sample size by about 10% in the probit, but still yields similar results in the probit and triple difference estimations (results available upon request).

stories of sexual violence. This resulted in a flood of anonymous and non-anonymous statements on general and social media platforms, raising public awareness of sexual harassment issues. In France, on October 14th, 2017, journalist Sandra Muller created an analogous hashtag, #balancetonporc, which garnered over 931 000 tweets within a year. Its claimed goal was to name and shame perpetrators, but the broader goal was to spark a public conversation about the best ways to eradicate sexual harassment and encourage victims to speak out. Along with condemning harassers, what was denounced was a chronic culture of abuse in some instances, with the institutions responsible for policing it remaining silent or even sometimes protecting harassers.

The #MeToo and #balancetonporc phenomena were very strong and generated overnight an important reckoning about sexual harassment issues in the workplace in most developed countries. Figure 3 depicts the weekly frequency of Google searches in France for #MeToo and #balancetonporc between 2016 and 2018. Beginning on October 15th, 2017, searches rose considerably, having been virtually non-existent earlier. In particular, there were not already ongoing discussions on related topics if we look at the time

Figure 3: Google searches for #MeToo surged after October 2017



Source: Google Trends.

Note: The results reflect the proportion of searches for the "#MeToo" keyword in a specific region and time period, relative to the region with the highest usage of that keyword (value of 100). Thus, a value of 50 means that the keyword was used half as often in the region concerned, and a value of 0 means that there is insufficient data for that keyword.

before the hashtag breakout. In Figure A.1 in Appendix, we can see the identical spike on October 15th for google searches regarding sexual harassment ("harcèlement sexuel"), providing more evidence for the exogeneity of the #MeToo shock.

3 Empirical Strategy

This paper examines whether the increased visibility of harassment issues in the aftermath of #MeToo in France in 2017 altered women’s working conditions, particularly in firms with a high risk of harassment. As demonstrated in Section 2.3, #MeToo in France provides an exogenous shock for examining a shift in norms regarding toxic behaviors at work. To examine the impact of #MeToo on women’s worker flows, we employ a triple difference strategy in which we compare women’s relative work movement probabilities (in comparison to men’s) before and after #MeToo in high- and low-harassment risk establishments.

A difference-in-differences strategy involving men in the same establishment as a control group would assume that men are unaffected by the #MeToo movement. However, if firms punish sexual harassment more severely in the aftermath of #MeToo, or harassers are less likely to act, using men as a control group could bias our findings. We thus estimate the following equation:

$$Y_{igt} = \beta_1 \cdot HarrassFirm_i \times MeToo_{gt} + \omega_{ig} + \delta_{it} + \mu_{gt} + \epsilon_{igt} \quad (2)$$

where Y_{igt} is the quarterly log share of entries or exits (and of certain types of exits: quits, lay-offs, terminations by agreement) relative to the number of employees in establishment i for gender g in quarter t .^{19,20} $MeToo_{gt}$ is a dummy equal to 1 when t is above or equal to the last quarter of 2017. $HarrassFirm_i$ is equal to 1 for establishments that are above the percentile value of a region-sector specific harassment risk cutoff $Cutoff_{sr}$,

¹⁹Results using the inverse hyperbolic sine defined as $(\log(x_i + \sqrt{x_i^2 + 1}))$ remain similar and are available upon request.

²⁰Results are robust to using an alternative measure of flows such as the quarterly probability of at least one entry or exit (and of certain types of exits: quits, lay-offs, terminations by agreement), as reported in Figure B.2.

defined as below. Our coefficient of interest is β_1 . It measures the relative impact of the #MeToo movement on the share of women and men’s workflows in high harassment risk compared to low harassment risk establishments. The identification of the coefficient of interest rests on the hypothesis that without #MeToo, the relative workflows of women in high-risk establishments would have evolved similarly to those in low-risk establishments.

To assign establishments into a high or low harassment risk category, we use a structural break search technique inspired by [Card et al. \(2008\)](#). In practice, we estimate the following reduced-form model to find the tipping point of harassment risk for women:

$$\begin{aligned}
 Exits_{igt} = & \beta_1.[HarrassRisk_i > Cutoff_{sr}] \times Post_t \times Women_i \\
 & + \beta_2.[HarrassRisk_i - Cutoff_{sr}] \times Post_t \times Women_i + \omega_{ig} + \delta_{it} + \mu_{gt} + \epsilon_{igt} \\
 & \text{for } 50 \leq Cutoff_{sr} \leq 99 \quad (3)
 \end{aligned}$$

where $Exits_{igt}$ is the quarterly share of exits of workers of gender g from establishment i in quarter t .²¹ $HarrassRisk_i$ is the predicted harassment level in establishment i . $Post_t$ is a dummy equal to 1 when t is above or equal to the last quarter of 2017. $Women_i$ is a dummy equal to 1 when the quits are those of women. $Cutoff_{sr}$ lies between 50 and 99 and is the percentile of the distribution of harassment risk above which an establishment might be defined as with a “high harassment risk” and is specific by region and large sectors, as described in [Table B.2](#). ω_{ig} , δ_{it} and μ_{gt} are a set of fixed effects that control respectively for the establishments’ gender policy, establishments’ specific time fixed effects, and national gender-specific fixed effects. We select the region-sector specific percentile of $Cutoff_{sr}$ that maximizes the R^2 of equation 3. $Cutoff_{sr}$ ranges from the 52nd to the 97th percentiles (corresponding to 14.64 and 25.94% of harassment risk) and is, on average, at the 70th percentile (17% percent of harassment risk).²² These should be understood to be the tipping points where women start to leave toxic establishments and in our setting, they differ among sectors and regions. This allows us not to choose an arbitrary level of

²¹We use quits as a dependent variable building from evidence in the previous section on the relationship between harassment risk and quit rates.

²²The results are also robust to setting arbitrarily the cutoff at the percentiles 75, 80, 85, or 90 of the distribution of harassment risk. They are available upon request and the results using a cutoff at 90% are reported in [Table B.3](#).

harassment risk to put firms into the high and the low-risk categories.

In addition to our triple difference strategy, to disentangle whether the observed changes are due to changes in women’s worker flows, men’s worker flows, or both, we also employ a difference-in-difference strategy, comparing women’s (respectively men’s) worker flows in high-risk establishments to those of women’s (respectively men’s) worker flows in low-risk establishments. As a result, we estimate the following equation independently for women and men:

$$Y_{it} = \beta_2.HarrassFirm_i \times MeToo_t + \omega_i + \delta_t + \epsilon_{it} \quad (4)$$

where Y_{it} is quarterly log share of entries or exits (and of certain types of exits: quits, lay-offs, terminations by agreement) relative to the number of employees in establishment i for gender g in quarter t . $MeToo_t$ equals 1 when $t \geq$ last quarter of 2017 and $HarrassFirm_i$ equals 1 for establishments that are above the percentile value of their region-sector specific harassment risk cutoff $Cutoff_{sr}$. We also include establishment fixed effects, ω_i , and quarter fixed effects, δ_t .

4 Results

4.1 Effects of #MeToo on entries and exits

Table 1 presents the results of the estimation of equation (2) on the effect of the #MeToo movement on women’s relative workflows. Column (1) shows that there is no effect of the #MeToo movement on the relative entries of women compared to men in firms with a high or low risk of harassment. However, column (2) shows that there is a positive and statistically significant change in the relative share of women exiting establishments with a high risk of harassment after the #MeToo movement. The relative share of women exiting high-risk establishments compared to low harassment risk establishments increases by 9.29%.

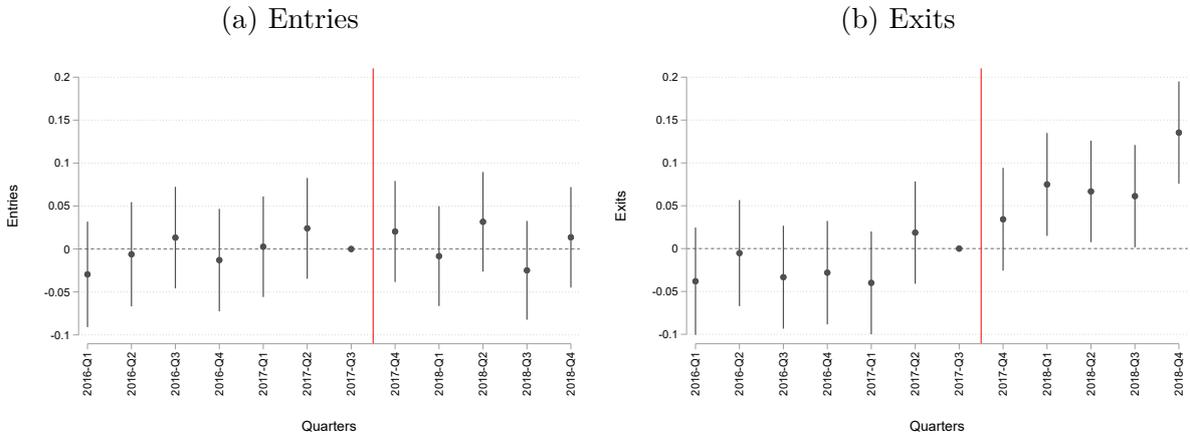
Table 1: Triple difference estimation of women’s relative workflows in high-and low-risk harassing establishments before and after #Metoo (Equation (2))

	(1)	(2)
	Entries	Exits
$HarrassFirm_i \times MeToo_{gt}$	0.00851 (0.01273)	0.09291*** (0.01304)
<i>Observations</i>	619,320	619,320
R^2	0.72	0.69

Note: The table shows the OLS-estimated coefficients from Equation (2) for different types of movements. Clustered standard errors at the establishment level are presented in parentheses. * $p < 0.05$, ** $p < 0.01$, *** $p < 0.001$.

Figure 4 presents the estimated dynamic effects on the relative quarterly share of exits of women in high-risk establishments after October 2017 (2017-Q3). The same pattern as in Table 1 appears with no change in entries of women relative to men in high-risk establishments compared to low-risk establishments and a significant increase in the relative share of women exiting high-risk establishments after the start of the #MeToo movement. To verify that this effect is driven by an increase in exits from high harassment risk establishments and not by a decrease in exits from low harassment risk establishments,

Figure 4: Dynamic effects: triple difference



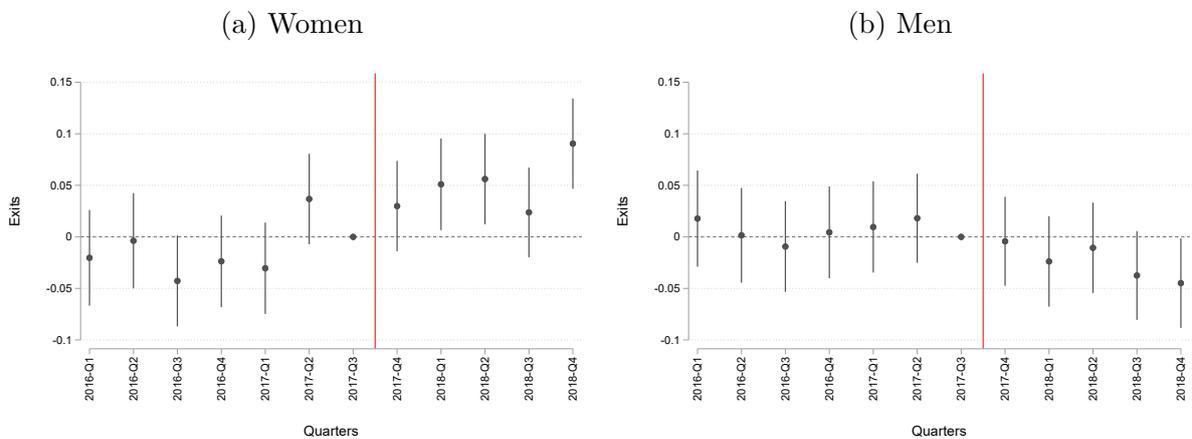
Source: 2016 Working Conditions Survey, DADS 2015, and DMMO 2016.

Note: The figure plots the coefficients β_{gk} obtained with the OLS estimation of equation $Y_{igt} = \sum_{k=-7}^4 \beta_{gk} \cdot HarrassFirm_i \times women_g \times \mathbf{1}\{t = k\} + \omega_{ig} + \delta_{it} + \mu_{gt} + \epsilon_{igt}$ and their 95% confidence intervals.

we estimate the effect of #MeToo on the relative exit rate of women for establishments in each decile of harassment risk, relative to establishments in the 5th decile. The results are plotted in figure B.3, and show that the effects are indeed driven by an increase in the relative exit rate of women in higher risk establishments. This first set of results on entries and exits of firms are robust to using alternative cutoffs to differentiate high and low-risk establishments, for instance using a cutoff at the 90th percentile of the harassment risk distribution as reported in Table B.3, or to using alternative measures of flows, such as the quarterly probability of at least one entry or exit as reported in Figure B.2.

The results of the estimation of Equation 4 are displayed in Figures 5a and 5b. They clearly show that the increased share of exits is due to women’s increased exit rate from high-risk establishments in the aftermath of #MeToo, while men’s exit rate appears relatively unaffected. This suggests that the #MeToo movement may have altered the behavior of women and firms toward women, but may not have altered the behavior of men or the attitude of firms toward men.

Figure 5: Dynamic effects on exits: double difference



Source: 2016 Working Conditions Survey, DADS 2015, and DMMO 2016.

Note: The figure plots the coefficients β_{gk} obtained with the OLS estimation of equation $Y_{it} = \sum_{k=-7}^4 \beta_{gk} \cdot HarrassFirm_i \times \mathbf{1}\{t = k\} + \omega_i + \delta_t + \epsilon_{it}$ and their 95% confidence intervals on men and women worker flows.

4.2 Effects of #MeToo on the type of exits

In France, there are three main ways to terminate open-ended contracts. First, employees can quit their job. Given that it is a voluntary separation, employees do not qualify

for unemployment benefits, and the company is not at risk of legal action. Second, the employer and employees can reach an agreement to terminate the open-ended contract, which is known as termination by agreement. The worker will be eligible for unemployment insurance and a negotiated indemnity, and the company will not be at risk of legal action. Third, the employee may be laid off by the employer, but there must be a justification (economic reasons or individual wrongdoing), and the company risks legal action. The laid-off employees are eligible for unemployment benefits as well as severance pay.

Table 2 displays the results of the estimation of equation (2) on the effect of the #MeToo movement on women’s relative quits, terminations by agreement, and layoffs flows. Column (2) shows that around 25% of women’s relatively higher exit rate can be explained by an increase in termination by agreements. This type of exit may be initiated either by women or by establishments. Column (4) indicates that an increase in layoffs accounts for approximately 25% of women’s relatively higher exit rate. This type of exit initiated by the establishment is consistent with anecdotal evidence that companies may fire women who speak out against harassment situations or who take extended sick leave due to harassment.²³ If #MeToo increased women’s awareness of their harassment situation, it is plausible that it also increased the frequency with which they reported it to their employers or their propensity to take extended sick leaves, which might result in women’s termination. An increase in women’s awareness of their harassment situation may also increase their propensity to quit their jobs. Column (3) shows that this type of exit initiated by women accounts for approximately 50% of women’s exits from high-risk establishments. As shown in Table B.3, when a higher cutoff is used to define high-risk establishments – the 90th percentile instead of the 70th used on average in the main analysis – to examine exits from establishments with a very high risk of harassment, only the coefficient on quits remains significant. This is also consistent with Figure B.4 where only the effect on quits is significant in the second quarter after the #MeToo shock. The increased exit rate of women following the #MeToo movement is thus primarily

²³See, for instance, this account: https://www.francetvinfo.fr/societe/harcelement-sexuel/enquete-franceinfo-malgre-metoo-le-parcours-du-combattant-des-victimes-de-harcelement-sexuel-au-travail_2947225.html (accessed in May 2022).

attributable to the fact that, compared to men, women quit their jobs at a higher rate in establishments with a high harassment risk than in those with a low harassment risk.

Table 2: Triple difference estimation of women’s relative workflows in high-and low-risk harassing establishments before and after #Metoo (Equation (2))

	(1)	(2)	(3)	(4)
	Baseline	Terminations	Quits	Layoffs
	(exits)	by agreement		
$HarrassFirm_i \times MeToo_{gt}$	0.09291*** (0.01304)	0.02358** (0.00871)	0.05159*** (0.01191)	0.02369* (0.01070)
<i>Observations</i>	619320	619320	619320	619320
R^2	0.699	0.643	0.736	0.687

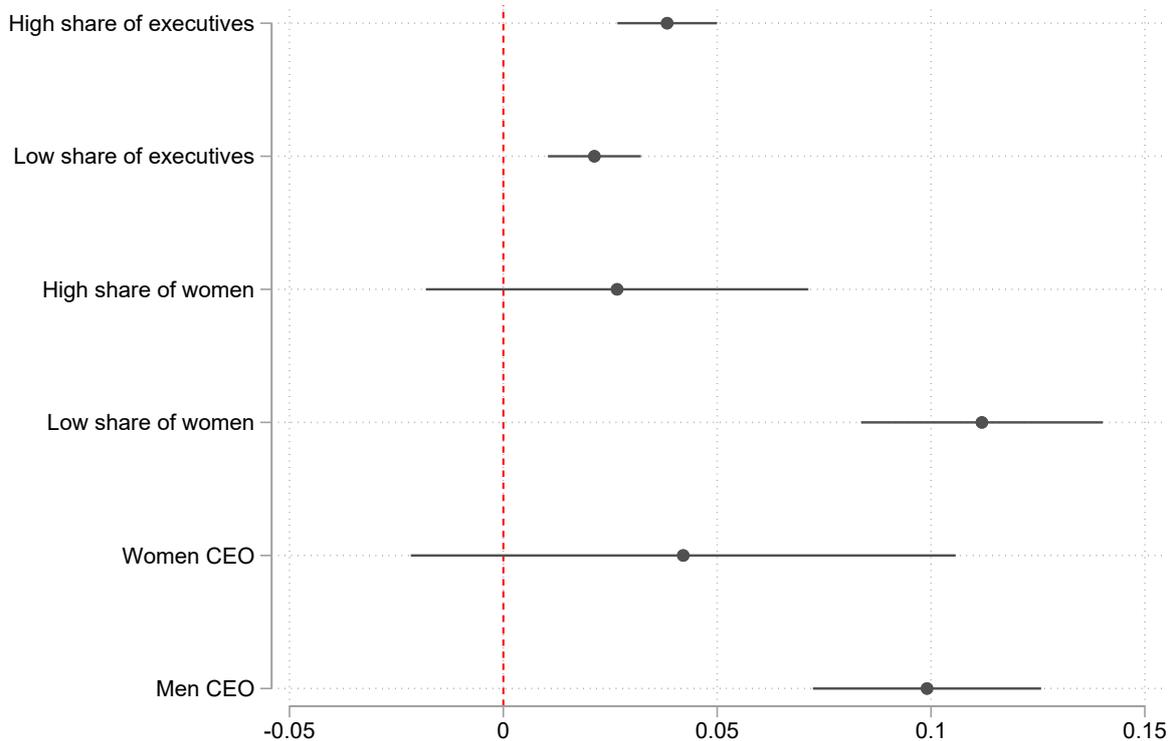
Note: The table shows the OLS-estimated coefficients from Equation (2) for different types of movements. Clustered standard errors at the establishment level are presented in parentheses. * $p < 0.05$, ** $p < 0.01$, *** $p < 0.001$.

This means that the shift in norms sparked by the #MeToo movement appears to have had the greatest impact on women’s decision to flee from toxic workplaces, reinforcing the double penalty of women having to quit their jobs to escape toxic behavior. If #MeToo had resulted in an increased awareness against toxic behaviors on the part of men or firms, we might have expected a relative decrease in women’s exits and layoffs in high-risk establishments compared to low-risk establishments. Men would either harass less (improving working conditions for women) or firms would punish men more (by laying them off more compared to women). Those results are consistent with a study by [Idås et al. \(2020\)](#), conducted in Norway shortly after #MeToo, which found that victims’ most common reactions were to change jobs or consider doing it. This is consistent with a scenario in which women become more sensitive to their unfavorable working conditions and decide to leave.

4.3 Heterogeneity effects of #MeToo on exits

Figures 6, C.1 and C.2 investigate the heterogeneity of the effect of #MeToo on worker flows interacting the treatment in equation 2 with establishments' characteristics. Figure 6 shows that the exit share effect is greater in establishments with a male CEO compared to establishments with a female CEO; however, the difference is not statistically significant due to the large standard error for the female CEO interaction coefficient. This is because there are not enough establishments with a female CEO. The effect on women's exit seems also greater in firms that have a higher share of executives, which is consistent with anecdotal evidence that the #MeToo movement reached primarily women executives. The exit effect is also greater in establishments with a lower proportion of women, where harassment may be more prevalent as shown in Section 2.2.

Figure 6: Heterogeneity on the exit share by establishments' characteristics



Source: 2016 Working Conditions Survey, DADS 2015, and DMMO 2016-2018.

Note: The figure plots the coefficients β_{gk} obtained with the OLS estimation of equation 2 and their 95% confidence intervals.

Figure C.1 shows that the effect on exits appears to increase as the establishment's

size goes up to 200-499 employees, but then declines and becomes insignificant for establishments larger than 1,000 employees. This could be explained by the fact that women in very large organizations can avoid sexual harassment by switching jobs within the same company, or by the fact that their larger human resources departments are better equipped to deal with toxic behaviors.

The heterogeneity by sector in Figure C.2 shows that the effect of women's exits out of high-risk firms is greater in some male-dominated sectors such as manufacturing of transportation vehicles or industrial products. We also observe a large impact in the sector of information and communication, which includes the audiovisual and film industries, which were particularly under the spotlight during #MeToo. Finally, the effect on exits is non-significant in the French public sector, where women are less likely to be harassed and civil servants are guaranteed their jobs for life, making it more cost-effective to request a transfer than to lose such a status.

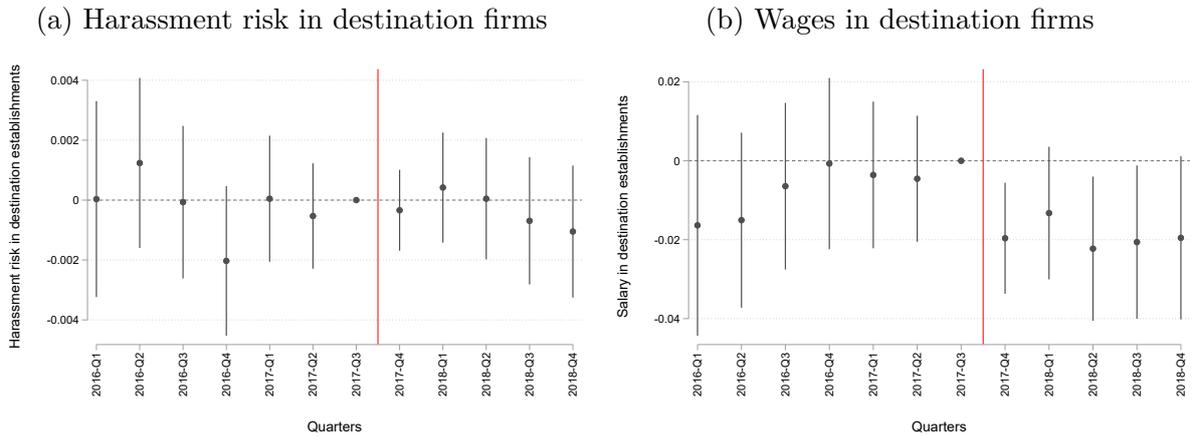
4.4 Do women go to lower risk establishments after #Metoo ?

This analysis also allows us to examine whether women move to firms with less toxic behaviors after #MeToo. We estimate equation 2 with the harassment risk in the destination establishment of outflows within the firm as the dependent variable.²⁴ As shown in Figure 7a, after #MeToo, women compared to men in higher risk establishments do not seem to move to firms where they face a lower risk of harassment. This seems to indicate that sexual harassment risk is not easy to evaluate and women might under-evaluate the harassment risk in other establishments when switching jobs. Importantly, these moves seem to be associated with a wage penalty. Figure 7b shows that, relative to men, women in high-risk establishments compared to women in low-risk establishments move to firms that pay on average 2% less after #MeToo. This effect is probably driven by the fact that #MeToo precipitated women's change of jobs. This estimate should also be taken as a

²⁴To do so, we build a database with the departure and arrival establishments for each worker outflow from 2016 to 2018 in the DADS. Our analysis is thus restricted to movers between establishments and we do not observe women that become unemployed. Using the same probit model as in equation 1, we then compute a harassment risk measure for each establishment from the first semester of 2016 to the last one of 2018 and merge this information with the previous database.

lower-bound of the true effect as our effect is measured only on the sample of movers that find a job within a year. We hence do not observe women that move into unemployment, exit the labor force or take more than a year to go back to the labor market and whose earnings decrease substantially more accordingly.

Figure 7: Dynamic effects for outflows



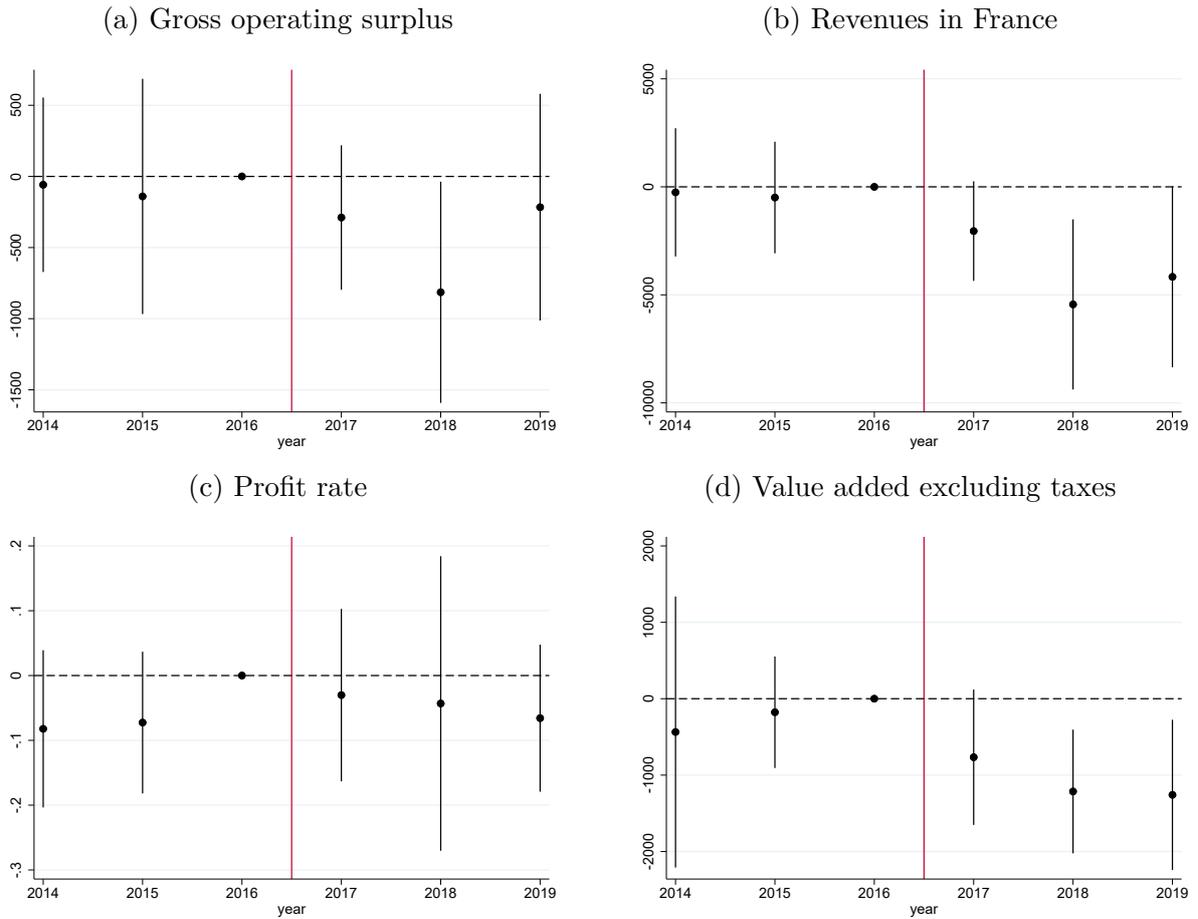
Source: 2016 Working Conditions Survey, DADS 2015, and DMMO 2016-2018.

Note: The figure plots the coefficients β_{gt} obtained from the OLS estimation of equation (2) where the outcome variable is the harassment risk in the destination firm for outflows in 7a and the mean wage in the destination firm for outflows in 7b.

4.5 Effects on high harassment risk firms

We also look at the effects on firms output to verify high harassment risk firms are penalized by the increased exit rate of women. For that, we use the FARE database from 2014 until 2019, which contains information at the *firm* level on a wide range of measures such as revenues, profits and value-added. As the information is not available at the establishment level, we compute a firm harassment risk as the average of the harassment risk of their establishments, weighted by the number of employees in each establishment. We then implement a simple difference-in-differences strategy where we compare high harassment risk firms to low harassment risk firms before and after #MeToo. We use a similar specification as in equation 4, except the outcome variables are now measures of firms' revenues and profits.

Figure 8: Effects on high harassment risk firms



Source: 2016 Working Conditions Survey, DADS 2015 and FARE 2014-2019.

Note: The figure plots the coefficients of the following equation: $Y_{it} = \beta_2.HarrassFirm_i \times MeToo_t + \omega_i + \delta_t + \epsilon_{it}$, where the outcome variable can be the gross operating surplus, revenues, the profit rate or the value added excluding taxes.

Figure 8 shows that compared to low harassment firms, high harassment risk firms loose on average about 3,600 euros in revenues after #MeToo and their value added excluding taxes decreases by about 880 euros. The increased turnover seems hence to have very small impact on high-risk firms. Consistently, we find no effects on the profit rate nor on the gross operating surplus²⁵. This suggests that these losses in revenues are too small to impact firms' profitability. This could be due to the fact that our sample consists of firms above 50 employees. They might be better able to smooth the consequences of an increased turnover by temporarily transferring the extra work on the remaining

²⁵The results are robust when transforming the outcome variables with the asinh function or when setting the cutoff at the percentile 90. They are available upon request.

co-workers.

4.6 Robustness

As a robustness check, we perform a randomization inference procedure randomizing both i) the date of the shock and i) being above the cutoff of high harassment risk for an establishment. We thus generate 200 placebo treatment statuses distribution and re-run equation (2) on them. The resulting distribution of estimated coefficients for exits is presented in Figure B.5 and provides additional support for our main findings. The majority of randomized estimation coefficients are close to zero and non-significant, and they are all significantly different from the true estimation coefficient.

The results are also robust to using alternative measures of flows as a dependent variable in equation 2. Figure B.2 shows that the results remain similar when using the probability of at least one worker flow in the establishment as the dependent variable.²⁶ The results are also robust to using alternative cutoffs to differentiate high and low-risk establishments, for instance using a cutoff at the 90th percentile of the harassment risk distribution as reported in Table B.3.²⁷

To check whether the results hold for each question used to construct our sexual harassment variable, we run the probit, cutoff search, and equation 2 based on the answers to each question separately. We find a positive and significant effect on the exit rate for three out of four questions, in particular for “*always or often hearing derogatory remarks or jokes about women at work*” in Table B.4, “*being told obscene or degrading things by colleagues*” in Table B.5, and “*being made insistent sexual propositions by colleagues*” in Table B.6. As only less than 1% of women report “*being physically or sexually assaulted by colleagues or superiors*”, there does not appear to be enough power to detect an effect on exits. This indicates that #MeToo increases women’s exit from firms with a higher risk of different types of toxic behaviors and that even in firms with a higher risk of derogatory remarks and jokes about women, which may be considered a less toxic practice, we observe

²⁶Results using the inverse hyperbolic sine of the share of flows defined as $(\log(x_i + \sqrt{x_i^2 + 1}))$ remain similar to the logarithm of the share of flows and are available upon request.

²⁷The results are also robust to setting arbitrarily the cutoff at the percentiles 75, 80, or 85 of the distribution of harassment risk. They are available upon request.

an increase in women’s exits after #MeToo.

Finally, the analysis is reproduced with the harassment measurement modified to include not only toxic behavior from coworkers and superiors but also toxic behavior from clients. Table B.8 reveals similar results regarding the effect on exits as the analysis using only toxic behaviors perpetrated by colleagues and superiors, as well as the fact that quits seem to be the predominant type of exit.

5 Conclusion

Toxic behaviors and violence against women are serious issues in the workplace, frequently resulting in a double penalty for women who are forced to change jobs as a result. The #MeToo movement brought these issues to light and sparked heated debates in an effort to modify attitudes and behaviors in the workplace and society.

We study the impact of the #MeToo movement on workplace behaviors by conducting an event analysis on worker flows in French establishments. Worker flows are a proxy for the quality of working conditions, and their evolution for women and men following #MeToo can reveal much about the movement’s impact on women’s working conditions and, more broadly, on the consequences of violence against women in the French labor market.

The results provide evidence that the #MeToo movement increased women’s awareness and desire to avoid toxic workplace behaviors, resulting in a higher exit rate, mostly driven by quits, for women compared to men in establishments with a high risk of toxic workplace behaviors. Our results also suggest that women are willing to forego earnings to escape those toxic working environments. There is no evidence that #MeToo significantly improved firms’ or men harassers’ accountability, implying that this social movement did not appear to have altered the norms surrounding the “culture of abuse” that predominates in some workplaces, at least in the medium-run. This demonstrates, however, that a social movement can still contribute to raising awareness and pushing women out of toxic situations where they would have remained for longer if the movement did not exist.

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Appendices

A Descriptive Statistics

Table A.1: Descriptive Statistics

	Not Harassed	Harassed	Difference
Age	41.084	40.890	0.194
Monthly income	1620.814	1569.425	51.389
Income decile	4.566	4.492	0.162
Private sector	69.050	74.133	-5.082*
Firm size	646.0263	662.999	-16.972
Share of women	65.531	57.085	8.446***
Share of CEO women	39.220	34.033	5.187
Observations	6,412	839	7,251

Source: 2016 Working Conditions Survey, DADS 2015.

Note: * $p < 0.1$, ** $p < 0.05$, *** $p < 0.01$. This table reports the difference between the mean of each group. We also report whether the difference is significant with a two-sample t-test.

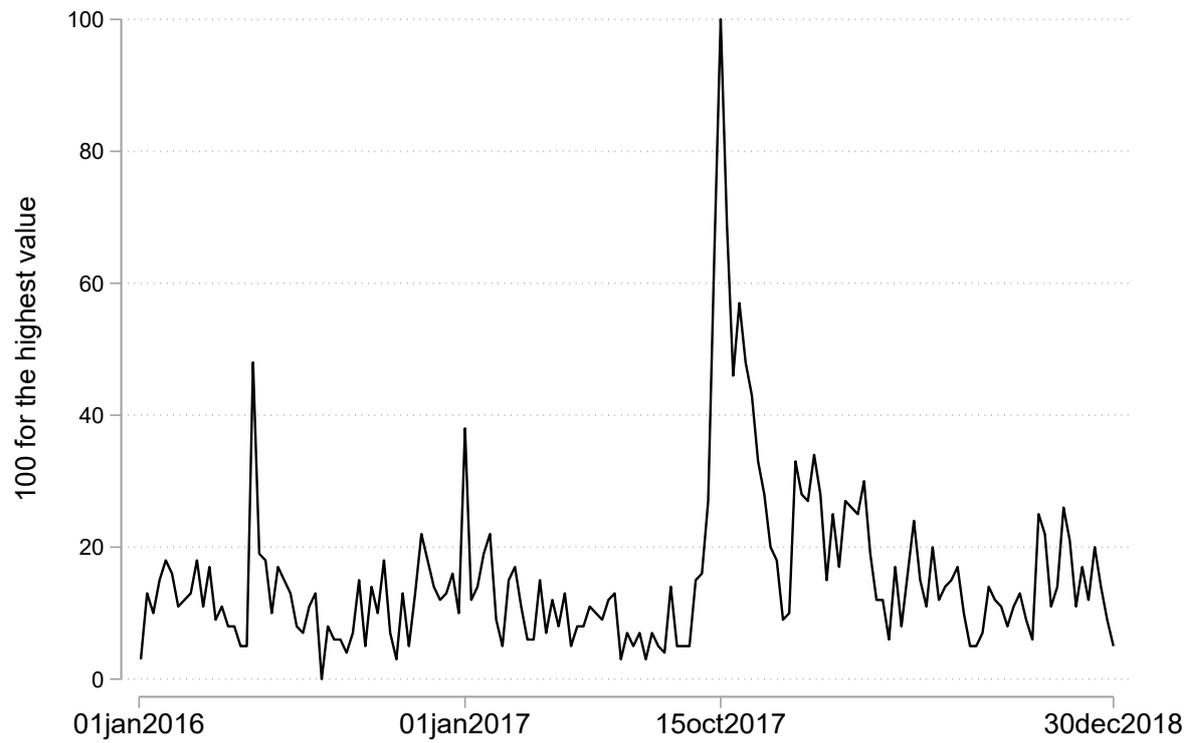
Table A.2: Descriptive Statistics - Sector

Sector	Harassment likelihood
Mean	11.4
Other service activities	8.9
Public administration, education, human health and social work	8.6***
Scientific and technical activities; administrative and support services	10.9
Real estate activities	20.8
Financial and insurance activities	15.9
Information and communication	12.4
Accommodation and catering	22.1*
Transport and storage	16.6
Trade; repair of automobiles and motorcycles	12.2
Construction	16.9
Extractive industries, energy, water and pollution control	46.4*
Other industrial product manufacturing	10.3
Manufacture of transport equipment	26.8*
Manufacture of electrical, electronic and computer equipment	10.0
Food, beverage, and tobacco product manufacturing	12.4
Agriculture, forestry and fishing	10.7

Source: 2016 Working Conditions Survey, DADS 2015.

Note: * $p < 0.1$, ** $p < 0.05$, *** $p < 0.01$. This table reports whether the difference between the mean of each group and the mean for the full sample used in our empirical analysis is significantly different using a two-sample t-test.

Figure A.1: Google searches for "harcèlement sexuel" surged after October 2017



Source: Google trends.

Table A.3: Descriptive Statistics - Occupation

Occupation	Harassment likelihood
Mean	11.4
Agricultural workers	14.1
Unskilled workers	13.1
Skilled workers	18.3*
Direct service personnel	14.0
Commercial workers	13.6
Administrative employees of companies	10.2
Public servants	9.9
Foremen and supervisors	3.8***
Technicians	14.1
Intermediate administrative and commercial professions in companies	13.8
Intermediate occupations in education, health, public service	8.4**
Company executives	11.5
Public service executives, intellectual and artistic professions	10.1

Source: 2016 Working Conditions Survey, DADS 2015.

Note: * $p < 0.1$, ** $p < 0.05$, *** $p < 0.01$. This table reports whether the difference between the mean of each group and the mean for the full sample used in our empirical analysis is significantly different a two-sample t-test.

B Probit

Table B.1: Probit estimation of toxic behavior against women

<i>Dependent variable: sexual and sexist harassment</i>	(1) Probit
Age	-0.000794* (-2.12)
Wage decile	0.000850 (0.47)
Private sector	0.0188 (1.70)
Firm size	0.00000249 (1.55)
Share of women	-0.00105*** (-4.97)
Women CEO	0.000677 (0.08)
<i>Type of jobs</i>	
Civil servants, intellectual and artistic professions	0.0290 (0.30)
Company executives	0.0220 (0.23)
Intermediate occupations in education, health, public service	0.0387 (0.40)
Intermediate administrative and commercial occupations in enterprises	0.00834 (0.09)
Technicians	0.0126 (0.13)
Foremen, supervisors	0.0337 (0.32)
Public service employees	0.0433 (0.45)
Business administration employees	0.00135 (0.01)
Commercial employees	0.0382 (0.40)
Employees in direct services to individuals	0.0528 (0.54)
Skilled workers	0.0568 (0.59)
Unskilled workers	0.0505 (0.52)
Agricultural workers	0 (.)
<i>Sector</i>	

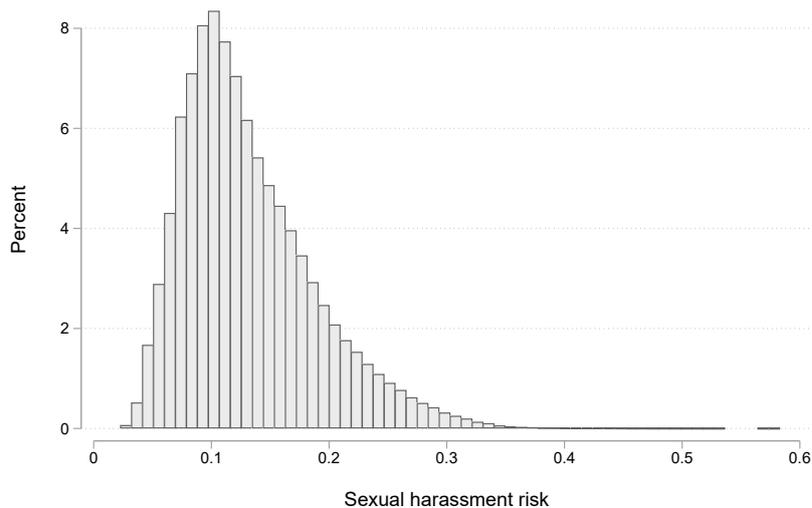
Agriculture, forestry and fisheries	0.0722 (0.47)
Manufacture of food products, beverages and tobacco products	-0.0436 (-1.08)
Coking and refining	0 (.)
Manufacture of electrical, electronic, computer equipment, machinery	-0.0198 (-0.35)
Manufacture of transport equipment	-0.00324 (-0.06)
Manufacture of other industrial products	-0.0710* (-2.04)
Mining, energy, water, waste management and remediation	-0.0574 (-1.00)
Construction	-0.0862 (-1.96)
Trade; repair of motor vehicles and motorbikes	-0.0332 (-0.94)
Transport and storage	0 (.)
Accommodation and catering	-0.0144 (-0.33)
Information and communication	-0.0737 (-1.87)
Financial and insurance activities	-0.0122 (-0.29)
Real estate activities	-0.0756 (-1.46)
Scientific and technical activities; administrative and support services	-0.0533 (-1.51)
Public administration, education, human health and social work	-0.0669* (-1.99)
Other service activities	-0.0795* (-2.10)
<i>Region</i>	
Guadeloupe	0.110* (2.19)
Martinique	0.102* (2.24)
Guyane	0.0106 (0.20)
La Réunion	0.0668 (1.62)
Île-de-France	0 (.)
Centre-Val de Loire	-0.00311

	(-0.14)
Bourgogne-Franche-Comté	-0.0342 (-1.95)
Normandie	-0.0218 (-1.17)
Hauts-de-France	0.0177 (1.08)
Grand-Est	0.00440 (0.27)
Pays de la Loire	-0.0188 (-1.17)
Bretagne	0.00591 (0.31)
Nouvelle-Aquitaine	0.00786 (0.48)
Occitanie	-0.00148 (-0.09)
Auvergne-Rhône-Alpes	-0.00661 (-0.43)
Provence-Alpes-Côte d'Azur	-0.0184 (-0.97)
<hr/>	
<i>Observations</i>	7251
<hr/>	

Source: 2016 Working Conditions Survey

Note: The table shows marginal effect of the probit estimation of Equation 1. T statistics are in parentheses. * $p < 0.05$, ** $p < 0.01$, *** $p < 0.001$.

Figure B.1: Distribution of establishments' harassment risk



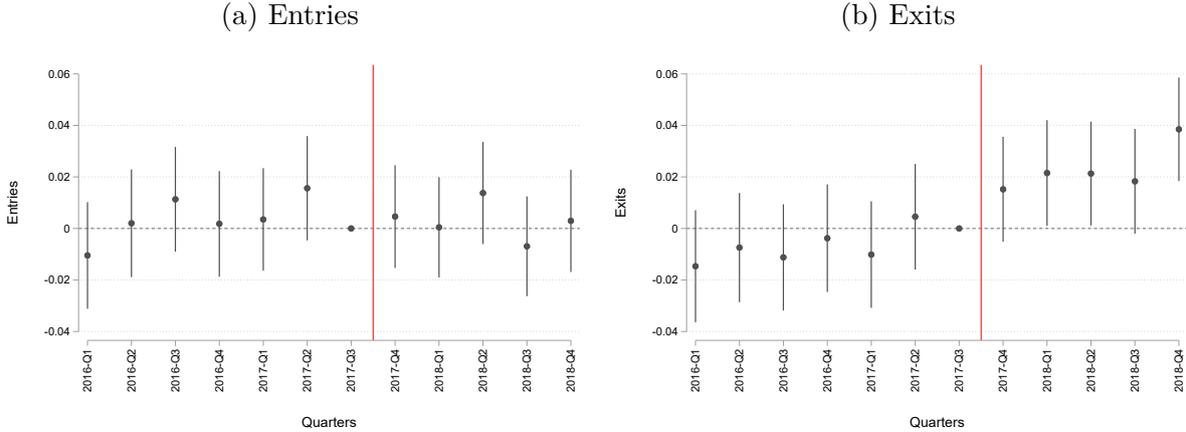
Source: 2016 Working Conditions Survey, DADS 2015.

Note: The figure plots the distribution of the mean harassment risk obtained for each establishment based on the prediction from the probit model.

Table B.2: Distribution of cutoffs by groups of region and sector

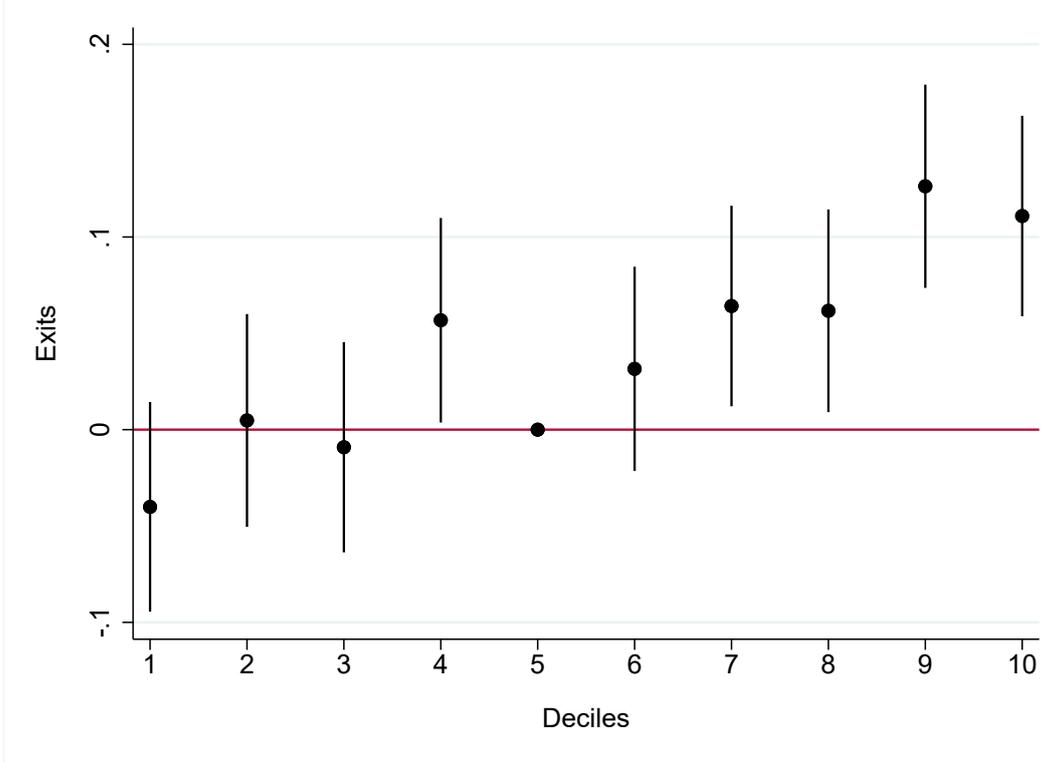
Region	Sector	Cutoff
Ile-de-France	Industry, agriculture, construction	63
Ile-de-France	Services, trade, accommodation and catering	65
Centre-Val de Loire	Industry, agriculture, construction	70
Centre-Val de Loire	Services, trade, accommodation and catering	98
Bourgogne-Franche-Comté	Industry, agriculture, construction	65
Bourgogne-Franche-Comté	Services, trade, accommodation and catering	90
Normandie	Industry, agriculture, construction	83
Normandie	Services, trade, accommodation and catering	52
Hauts-de-France	Industry, agriculture, construction	72
Hauts-de-France	Services, trade, accommodation and catering	52
Loire Atlantique	Industry, agriculture, construction	63
Loire Atlantique	Services, trade, accommodation and catering	81
Pays de la Loire	Industry, agriculture, construction	77
Pays de la Loire	Services, trade, accommodation and catering	67
Bretagne	Industry, agriculture, construction	73
Bretagne	Services, trade, accommodation and catering	63
Nouvelle-Aquitaine	Industry, agriculture, construction	92
Nouvelle-Aquitaine	Services, trade, accommodation and catering	82
Occitanie	Industry, agriculture, construction	61
Occitanie	Services, trade, accommodation and catering	97
Auvergne-Rhône-Alpes	Industry, agriculture, construction	95
Auvergne-Rhône-Alpes	Services, trade, accommodation and catering	54
Provence-Alpes-Côte d'Azur, Corse	Industry, agriculture, construction	77
Provence-Alpes-Côte d'Azur, Corse	Services, trade, accommodation and catering	55
Mean cutoff: 70		

Figure B.2: Dynamic effects of the triple difference on the relative quarterly probability of entry and exit



Source: 2016 Working Conditions Survey, DADS 2015, and DMMO 2016.
 Note: The figure plots the coefficients β_{gk} obtained with the estimation of equation $Y_{igt} = \sum_{k=-7}^4 \beta_{gk} \cdot HarrassFirm_i \times women_g \times \mathbf{1}\{t = k\} + \omega_{ig} + \delta_{it} + \mu_{gt} + \epsilon_{igt}$ and their 95% confidence intervals. Y_{igt} is the relative quarterly probability of entry in (a) and exit in (b).

Figure B.3: Triple difference estimation of women’s relative exit rate before and after #MeToo by decile of harassment risk



Source: 2016 Working Conditions Survey, DADS 2015, and DMMO 2016.
 Note: The figure plots the coefficients β_d obtained with the estimation of equations $Y_{igt} = \beta_d \cdot HarrassFirm_{i,d} \times MeToo_{gt} + \omega_{ig} + \delta_{it} + \mu_{gt} + \epsilon_{igt}$ and their 95% confidence intervals for each $d=1, \dots, 4, 6, \dots, 10$. Y_{igt} is the relative quarterly probability of exit and $HarrassFirm_{i,d} = 1$ if firm i is in the d^{th} decile of harassment risk and 0 if the firm is in the 5th decile.

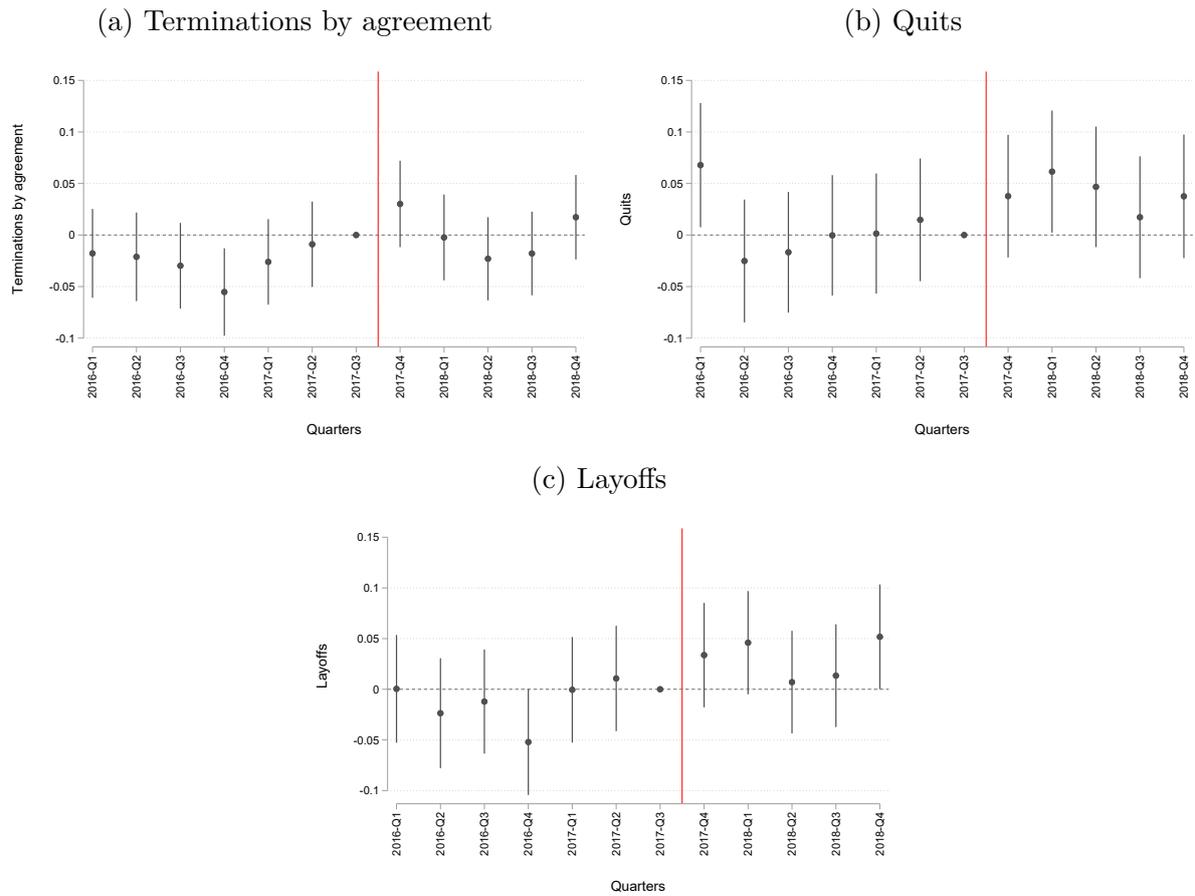
Table B.3: Triple difference estimation of women’s relative workflows in high-and low-risk harassing establishments before and after #Metoo (Equation (2)) with a cutoff at 90% (Probit)

	(1)	(2)	(3)	(4)
	Baseline	Terminations	Quits	Layoffs
	(exits)	by agreement		
$HarrassFirm_i \times MeToo_{gt}$	0.07482***	0.00514	0.05220**	0.01496
	(0.01920)	(0.01240)	(0.01754)	(0.01641)
<i>Observations</i>	619,320	619,320	619,320	619,320
R^2	0.699	0.643	0.736	0.687

Note: The table shows the OLS-estimated coefficients from Equation (2) for different types of movements. Clustered standard errors at the establishment level are presented in parentheses. * $p < 0.05$, ** $p < 0.01$, *** $p < 0.001$.

Reading: After #Metoo, The relative share of women exiting high-risk establishment compared to low harassment risk establishments increased by 7.48%.

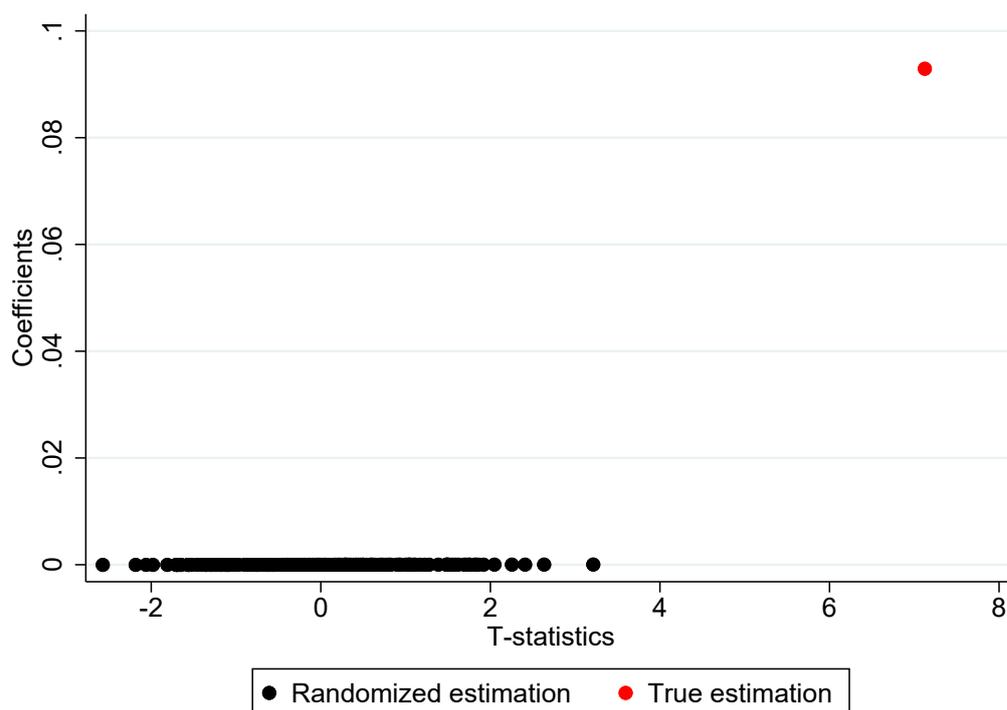
Figure B.4: Dynamic effects of the triple difference (Probit)



Source: 2016 Working Conditions Survey, DADS 2015, and DMMO 2016.

Note: The figure plots the coefficients β_{gk} obtained with the estimation of equation $Y_{igt} = \sum_{k=-7}^4 \beta_{gk} \cdot HarrassFirm_i \times women_g \times \mathbf{1}\{t = k\} + \omega_{ig} + \delta_{it} + \mu_{gt} + \epsilon_{igt}$ and their 95% confidence intervals.

Figure B.5: Randomisation inference results for exit



Source: 2016 Working Conditions Survey, DADS 2015, and DMMO 2016-2018.

Note: The figure plots the coefficients β_{gt} obtained from the OLS estimation of equation (2) for 200 random distributions for $HarassFirm_i$ and $MeToo_{gt}$ and compares it to the “true” coefficient in red.

Table B.4: Triple difference estimation for *always or often hearing derogatory remarks or jokes about women at work* (Equation (2))

	(1)	(2)	(3)	(4)	(5)
	Entries	Exits	Terminations by agreement	Quits	Layoffs
$HarassFirm_i \times MeToo_{gt}$	0.00470 (0.01271)	0.08973*** (0.01309)	0.02624** (0.00882)	0.04831*** (0.01191)	0.02498* (0.01065)
<i>Observations</i>	619,320	619,320	619,320	619,320	619,320
R^2	0.727	0.699	0.643	0.736	0.687

Note: * $p < 0.05$, ** $p < 0.01$, *** $p < 0.001$. Standard errors are presented in parentheses.

Table B.5: Triple difference estimation for *being told obscene or degrading things by colleagues* (Equation (2))

	(1)	(2)	(3)	(4)	(5)
	Entries	Exits	Terminations by agreement	Quits	Layoffs
$HarrassFirm_i \times MeToo_{gt}$	-0.01527 (0.01449)	0.06428*** (0.01469)	-0.00044 (0.00957)	0.03661** (0.01356)	0.02292 (0.01239)
<i>Observations</i>	619,320	619,320	619,320	619,320	619,320
R^2	0.727	0.699	0.643	0.736	0.687

Note: * $p < 0.05$, ** $p < 0.01$, *** $p < 0.001$. Standard errors clustered at the establishment level are presented in parentheses.

Table B.6: Triple difference estimation for *being made insistent sexual propositions by colleagues* (Equation (2))

	(1)	(2)	(3)	(4)	(5)
	Entries	Exits	Terminations by agreement	Quits	Layoffs
$HarrassFirm_i \times MeToo_{gt}$	0.00857 (0.01845)	0.08059*** (0.01897)	0.01044 (0.01304)	0.03215 (0.01803)	0.0322* (0.01594)
<i>Observations</i>	432,600	432,600	432,600	432,600	432,600
R^2	0.736	0.709	0.651	0.748	0.700

Note: * $p < 0.05$, ** $p < 0.01$, *** $p < 0.001$. Standard errors clustered at the establishment level are presented in parentheses.

Table B.7: Triple difference estimation for *being physically or sexually assaulted by colleagues or superiors* (Equation (2))

	(1)	(2)	(3)	(4)	(5)
	Entries	Exits	Terminations by agreement	Quits	Layoffs
$HarrassFirm_i \times MeToo_{gt}$	0.01852 (0.01563)	0.02329 (0.01592)	-0.00495 (0.01060)	0.00256 (0.01461)	0.01950 (0.01266)
<i>Observations</i>	445,152	445,152	445,152	445,152	445,152
R^2	0.734	0.706	0.650	0.746	0.698

Note: * $p < 0.05$, ** $p < 0.01$, *** $p < 0.001$. Standard errors clustered at the establishment level are presented in parentheses.

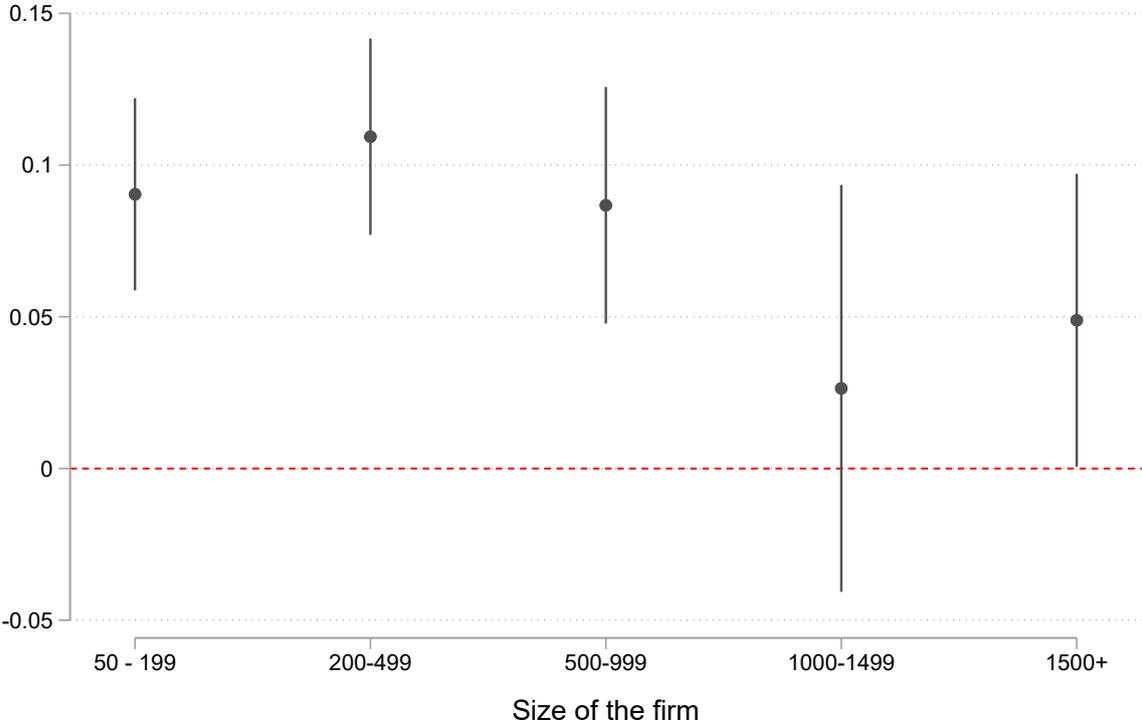
Table B.8: Triple difference estimation of women's relative workflows in high-and low-risk harassing establishments before and after #Metoo (Equation (2)) – Harassment by clients and colleagues

	(1)	(2)	(3)	(4)	(5)
	Entries	Exits	Terminations by agreement	Quits	Layoffs
$HarrassFirm_i \times MeToo_{gt}$	0.00846 (0.01369)	0.05250*** (0.01406)	0.00254 (0.00924)	0.04727*** (0.01287)	0.00843 (0.01141)
N	619,320	619,320	619,320	619,320	619,320
R^2	0.727	0.699	0.643	0.736	0.687

Note: * $p < 0.05$, ** $p < 0.01$, *** $p < 0.001$. Standard errors clustered at the establishment level are presented in parentheses.

C Heterogeneity

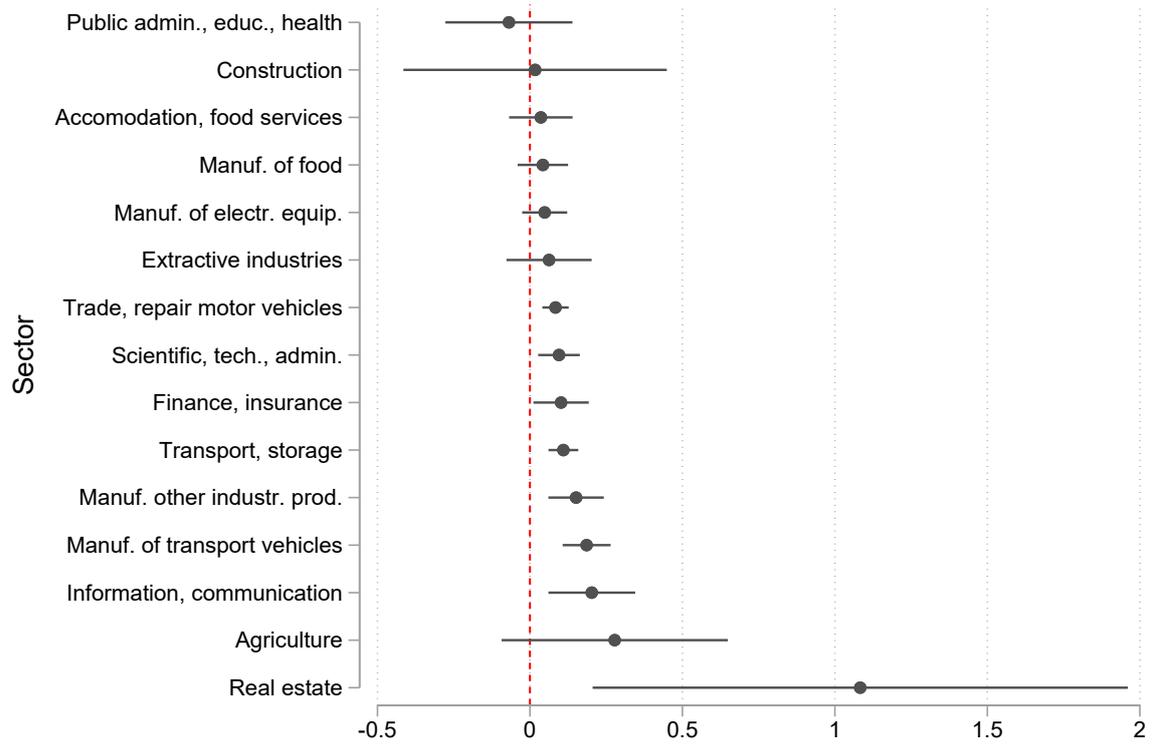
Figure C.1: Heterogeneity on the exit share by establishments' size



Source: 2016 Working Conditions Survey, DADS 2015, and DMMO 2016-2018.

Note The figure plots the coefficients β_{gk} obtained with the OLS estimation of equation 2 and their 95% confidence intervals.

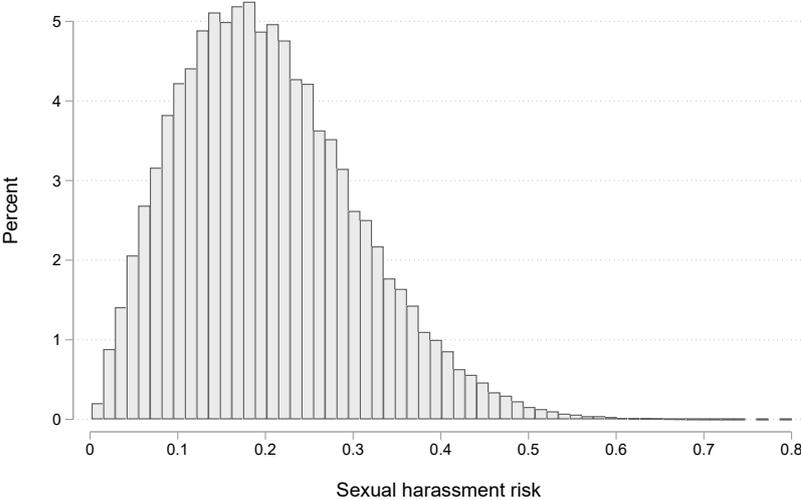
Figure C.2: Heterogeneity on the exit share by sectors



Source: 2016 Working Conditions Survey, DADS 2015, and DMMO 2016-2018.

D Random Forest

Figure D.1: Distribution of establishments' harassment risk – Random Forest

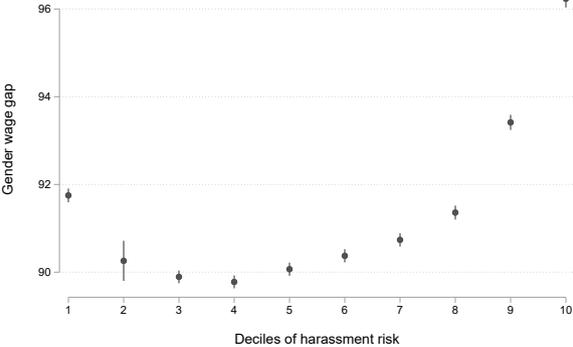


Source: 2016 Working Conditions Survey, DADS 2015.

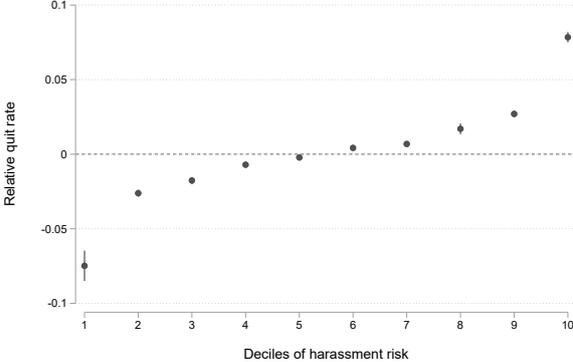
Note: The figure plots the distribution of the mean harassment risk obtained for each establishment based on the prediction from the random forest algorithm.

Figure D.2: Harassment of women, gender pay gap and quit rates – Random Forest

(a) Women's gender pay gap



(b) Women's relative quit rate



Source: 2016 Working Conditions Survey, DADS 2015, and DMMO 2016.

Note: Figure D.2a relates the deciles of estimated harassment risk with the gender pay gap. Figure D.2b shows women's relative quit rate according to the decile of estimated harassment risk in the establishment.

Table D.1: Distribution of cutoffs by groups of region and sector – Random Forest

Region	Sector	Cutoff
Ile-de-France	Industry, agriculture, construction	70
Ile-de-France	Services, trade, accommodation and catering	72
Centre-Val de Loire	Industry, agriculture, construction	90
Centre-Val de Loire	Services, trade, accommodation and catering	56
Bourgogne-Franche-Comté	Industry, agriculture, construction	85
Bourgogne-Franche-Comté	Services, trade, accommodation and catering	76
Normandie	Industry, agriculture, construction	59
Normandie	Services, trade, accommodation and catering	60
Hauts-de-France	Industry, agriculture, construction	53
Hauts-de-France	Services, trade, accommodation and catering	56
Loire Atlantique	Industry, agriculture, construction	57
Loire Atlantique	Services, trade, accommodation and catering	93
Pays de la Loire	Industry, agriculture, construction	96
Pays de la Loire	Services, trade, accommodation and catering	77
Bretagne	Industry, agriculture, construction	88
Bretagne	Services, trade, accommodation and catering	95
Nouvelle-Aquitaine	Industry, agriculture, construction	87
Nouvelle-Aquitaine	Services, trade, accommodation and catering	80
Occitanie	Industry, agriculture, construction	91
Occitanie	Services, trade, accommodation and catering	82
Auvergne-Rhône-Alpes	Industry, agriculture, construction	80
Auvergne-Rhône-Alpes	Services, trade, accommodation and catering	78
Provence-Alpes-Côte d’Azur, Corse	Industry, agriculture, construction	83
Provence-Alpes-Côte d’Azur, Corse	Services, trade, accommodation and catering	80
Mean cutoff: 75		

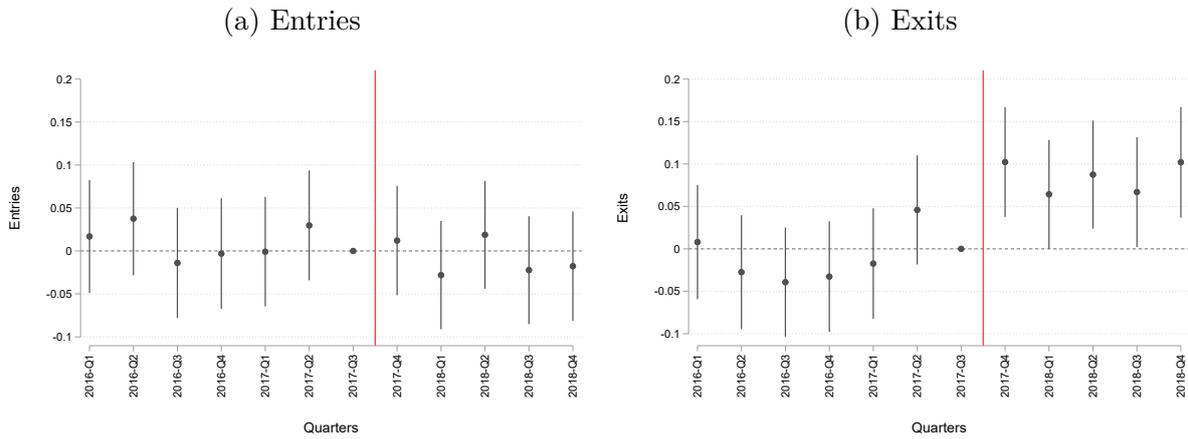
Table D.2: Triple difference estimation of women’s relative workflows in high-and low-risk harassing establishments before and after #Metoo (Equation (2)) – Random Forest

	(1)	(2)
	Entries	Exits
$HarrassFirm_i \times MeToo_{gt}$	-0.01754 (0.01352)	0.09373*** (0.01395)
<i>Observations</i>	620904	620904
R^2	0.72	0.69

Note: The table shows the OLS-estimated coefficients from Equation (2) for different types of movements. Clustered standard errors at the establishment level are presented in parentheses. * $p < 0.05$, ** $p < 0.01$, *** $p < 0.001$.

Reading: After #Metoo, The relative share of women exiting high-risk establishment compared to low harassment risk establishments increased by 9.37%..

Figure D.3: Dynamic effects of the triple difference – Random Forest



Source: 2016 Working Conditions Survey, DADS 2015, and DMMO 2016.

Note: The figure plots the coefficients β_{gk} obtained with the estimation of equation $Y_{igt} = \sum_{k=-7}^4 \beta_{gk} \cdot HarrassFirm_i \times women_g \times \mathbf{1}\{t = k\} + \omega_{ig} + \delta_{it} + \mu_{gt} + \epsilon_{igt}$ and their 95% confidence intervals.