



**HAL**  
open science

## The “gender face” of job insecurity in France: an individual- and organizational-level analysis

Clotilde Coron, Géraldine Schmidt

► **To cite this version:**

Clotilde Coron, Géraldine Schmidt. The “gender face” of job insecurity in France: an individual- and organizational-level analysis. *Work, Employment and Society*, 2021, 36 (6). halshs-03117970

**HAL Id: halshs-03117970**

**<https://shs.hal.science/halshs-03117970>**

Submitted on 26 Dec 2023

**HAL** is a multi-disciplinary open access archive for the deposit and dissemination of scientific research documents, whether they are published or not. The documents may come from teaching and research institutions in France or abroad, or from public or private research centers.

L’archive ouverte pluridisciplinaire **HAL**, est destinée au dépôt et à la diffusion de documents scientifiques de niveau recherche, publiés ou non, émanant des établissements d’enseignement et de recherche français ou étrangers, des laboratoires publics ou privés.

# The “gender face” of job insecurity in France: an individual- and organizational-level analysis

Clotilde Coron, IAE Paris – Sorbonne Business School

Géraldine Schmidt, IAE Paris – Sorbonne Business School

Version accepted by *Work, Employment and Society*

Coron C. et Schmidt G. (2022), « The “gender face” of job insecurity in France: an individual- and organizational-level analysis », *Work, Employment and Society*, vol. 36, n° 6, p. 999-1017

## **Abstract:**

Admittedly, women have a more precarious situation on the job market than men, which would suggest that they feel more insecure. However, literature on subjective job insecurity (JI) is contradictory about the effect of gender on JI. This could be explained by both individual characteristics and labour market gendered segregation – the companies in which women and men work do not have the same characteristics, particularly in terms of strategy and workforce management. Previous literature on JI rarely addresses this phenomenon. We propose to better understand the “gender face” of subjective JI combining individual and organizational characteristics. We utilize data from the 2017 REPONSE survey and generalized linear models, notably multi-level models. Our findings reveal that, although women hold more precarious jobs, they work in more protective organizations. Consequently, while women report an average lower level of JI, this difference disappears when controlling for individual and organizational variables.

**Keywords:** gender, job insecurity, occupational segregation

Clotilde Coron, IAE Paris – Sorbonne Business School

8bis rue de la Croix Jarry, 75013 Paris

[coron.iae@univ-paris1.fr](mailto:coron.iae@univ-paris1.fr)

Géraldine Schmidt, IAE Paris – Sorbonne Business School

8bis rue de la Croix Jarry, 75013 Paris

[schmidt.iae@univ-paris1.fr](mailto:schmidt.iae@univ-paris1.fr)



## Introduction

Regardless of their triggers and manifestations, economic crises rekindle the fear of losing one's job in a climate of increased uncertainty. For more than thirty years, social scientists have sought to understand the details of what they have formalized around the concept of job insecurity (JI). In particular, several of them call for a distinction to be made between objective and subjective JI: the first refers to the degree of *actual* job insecurity (the precarious nature of the employment contract); the second refers to “the *perception* of contingency in employment” (Choonara, 2019). There is some evidence to support the notion that subjective JI has different and potentially stronger detrimental effects than objective JI (or even than effective job loss) on individual health and well-being (Burchell, 2010; Hellgren & Sverke, 2003), on employees' attitude and behaviors, as well as on organizational climate and performance (De Witte & Näswall, 2003; Lozza et al., 2013; Hebling & Kanji, 2018; Ma et al., 2019). Despite the abundant literature devoted to identifying causes and effects of subjective JI, conclusions still remain controversial on some points, especially on the antecedents of JI (Keim et al., 2014).

The sex variable<sup>1</sup> has been widely tested in JI studies, but conclusions are divergent (Jiang & Lavaysse, 2018; Lee et al., 2018; Probst et al., 2014; Shoss, 2017). One explanation could be that JI is measured in various ways; another explanation could be that the sex variable is itself linked to other factors, particularly at the individual and organizational levels. It has been empirically shown that women are more represented than men in some types of jobs, in some employment contracts, in some industry sectors, and so forth (e.g., Jackson (2004) in Canada; Milewski et al. (2005) in France). More precisely, the gender occupational segregation phenomenon refers to the fact that women are more likely to work in precarious conditions than their male counterparts (Young, 2010): this would suggest that women's subjective JI would be higher than men's. Empirical research on JI is not conclusive on this point, however. The corollary of occupational segregation is that the companies in which women and men work do not have the same characteristics, particularly in terms of strategy and workforce management: these characteristics, in turn, are likely to have an influence on subjective JI. Multi-level statistical analyses are needed in order to better grasp the individual and organizational factors leading to subjective JI (Moulet & Salibekyan, 2019; Renkema et al., 2016).

In the same way that Gallie et al. have studied the “hidden face” of JI (Gallie et al., 2017), we thus propose to better understand the “gender face” of subjective JI. To do so, we selected

a set of data from the database of the extensive REPONSE<sup>2</sup> survey conducted by the French Ministry of Labour and Employment in 2017. The French context seems interesting to analyse since it is at an intermediate level in terms of gender equality at work (European Institute for Gender Equality, 2019) but at a high level in terms of JI (Erlinghagen, 2007).

We bring new evidence about the relative weight of sex and other variables in explaining subjective JI differentials. If only individual variables are included in the model, women have a lower JI, and when organizational variables are added to the model, this difference disappears. Among the organizational variables, organizational performance and, even more so, workforce management are significant. Gender differences do exist on both levels, and the organizational level explains almost one-fifth of the variation of subjective JI. This leads us to question the “gender role theory” arguments that are generally used to explain the gender differential in JI, as we show that this differential disappears when taking into account the organizational level.

In the next sections, our research proposal based on a short review of the literature is developed (I); our research approach, our data and our statistical procedures are then presented (II); the results of our multi-level analyses are detailed (III) and discussed in light of the existing literature (IV). Finally, some implications that this research may have for managers and public authorities are identified.

## **I. Literature review and research proposal**

### **I.1. JI: multiple definitions, causes and effects**

The concept of JI has begun to attract the attention of a growing number of researchers, gradually replacing the concept of “job security” as the unemployment rate increased significantly, and as employment became more precarious (Sverke et al., 2006). However, this idea of growing precariousness seems less simple than it is usually presented, and it requires detailed analyses that take into account contextual and institutional factors as well as individual factors (Choonara 2019, 2020). Hence the need to distinguish between on the one side the broad term of “precariousness” which designates “*an experiential state that permeates the entire lives of individuals*” (a vision developed by several French sociologists in the late 90s) and, on the other side, “employment precarity”, which refers to an actual situation of precarious employment (Bourdieu, 1997).

These thoughts are reflected in numerous debates on the definition of JI, its various dimensions and, consequently, on the means of grasping or measuring it. Previous research

tends to prove that objective employment precarity does not automatically result in perceived JI (De Witte & Naswall, 2003; Klandermans et al, 2010; Lozza et al., 2013, 2020; Felstead et al. 2018). For their part, Hebling & Kanji (2018) conclude that subjective JI has detrimental effects on various levels, whether or not individuals are in objectively precarious situations. This explains why the vast majority of academic empirical studies about JI are focused on subjective JI<sup>3</sup>. However, since Greenlagh and Rosenblatt's seminal article (1984), despite an abundance of research, no consensus definition has been reached (Cheng & Chan, 2008; Probst et al., 2014; Sverke et al., 2006). Shoss (2017) proposes a definition of JI that implicitly encompasses its subjective dimension and emphasizes three generally admitted points: (1) the existence of a threat, (2) a subjective experience and (3) the prediction of a future event.

The growing body of non-convergent academic literature has prompted some researchers to undertake useful meta-analyses (Cheng & Chan, 2008; Jiang & Lavaysse, 2018; Keim et al., 2014; Lee et al., 2018) and more traditional literature reviews as well (Probst et al., 2014; Sverke et al., 2006) about the antecedents of JI. Three categories of factors may influence JI: contextual or environmental factors (such as law, unemployment rate, and economic crisis); organizational factors (such as performances, implementation of changes, layoffs announcements, and union activism); and individual factors (such as demographic characteristics, personality, type of contract, and self-esteem) (Shoss, 2017; Sverke et al., 2006).

Among the antecedents usually included, organizational antecedents remain underexplored. Notable exceptions must be mentioned: Gallie et al. (2017) place emphasis on the organizational context (advanced technology, HRM practices, organizational restructuring, and the degree of employees' participation) and explore the effects on job tenure insecurity and on job status insecurity; Kinnunen et al. (2000) also include the managers' role, corporate communication, or type of restructuring practices. In their literature review, Probst et al. (2014), for their part, highlight the role of organizational factors, mentioning organizational change (layoff announcement, restructuring, merger or acquisition, to name a few), job technology changes, organizational performance. More globally, they insist on the intricate set of socioeconomic, individual and organizational factors that may influence JI, and advocate for the use of multi-level approaches, which can lead to a better understanding of the explanatory mechanisms of JI.

## **I.2. Gender and JI: empirical and theoretical debates**

Statistical studies have long proved that female employees do not work in the same kinds of jobs as men, especially regarding the degree of precariousness of work, the use of employment contracts and the degree of qualification. This phenomenon is referred to as gender occupational segregation and has been extensively studied since the massive entry of women into the labour market (Glass, 1990; Stier & Yaish, 2014): men and women do not have equal opportunities and women face difficulties in their careers. This would suggest that women feel more insecure in their jobs.

However, scholars have not reached any consensus about the role of gender in explaining JI (Shoss, 2017). Some authors show that JI is higher for women than for men (Mauno & Kinnunen, 2002; Stier & Yaish, 2014), whereas others show that gender has no effect on JI (Esser & Olsen, 2012; Gallie et al., 2017). Conversely, many studies find that women report lower JI (Charles & James, 2003; Gaunt & Benjamin, 2007; Keim et al., 2014; McGuinness & Wooden, 2009). We therefore endorse the suggestion by Adekiya (2018), who calls for further investigations of gender as an antecedent of JI.

It is noticeable that, while gender matters both at the individual and organizational levels, previous research has focused mainly on the individual level. Notably, in this debate, some scholars refer to the preference approaches (Hakim, 2006), which focuses on the individual level and posits that women prefer to be engaged in occupations that compensate poorer employment conditions with other characteristics such as job security, autonomy, time flexibility, and high interest. This is grounded in social identity or gender role theories. To put it briefly, social identity theory postulates that, overall, men value their job more than women because their professional life is a more central dimension of their identity, hence men have a tendency to be more sensitive to the threat of losing their job. The gender role theory (Gaunt & Benjamin, 2007) also supports the idea that “*traditional men experience greater JI than traditional women*” but that “*egalitarian men and women exhibit similar degrees of JI*”, where “*traditional*” is defined as individuals who accept and/or reproduce gendered differences. Gender role theories also argue that women feel more concerned about work conditions and work content, whereas men are more preoccupied by financial rewards (compensation and promotions). Beyond the preference approaches, some other individual determinants can also influence perceived JI. First, women and men differ in their educational attainment: while men have historically received more education than women, this gap has

reversed in the recent decades (Van Bavel et al., 2018), knowing that educational attainment tends to decrease JI (Moulet & Salibekyan, 2019; Näswall & De Witte, 2003). Despite this higher educational attainment, women still face more precarity in their professional lives (Stier & Yaish, 2014). They are overrepresented in fixed-term contract or temporary positions (Steinþórsdóttir et al., 2019) and in part-time jobs (Young, 2010). The effect of fixed-term positions on JI is uncertain. Some studies show that this type of precarity tends to increase JI (Gallie et al., 2017; Näswall & De Witte, 2003), whereas others underline non-significant effects (Greenhalgh & Rosenblatt, 2010). Part-time jobs are shown to increase JI (Gallie et al., 2017; Keim et al., 2014). Women are underrepresented among managers and executives, and are promoted less or have less access to training (Gorman & Kmec, 2009). Yet, the level of responsibility and access to training tend to decrease JI (Stier & Yaish, 2014; Moulet & Salibekyan, 2019). Women are also generally less inclined to join trade unions, although this trend is changing (De Witte, 2017; Kirton, 2017). The literature is uncertain about the role of unionization: in the US, the presence of unions in organizations is seen as a protection against precarious employment (Young, 2010), whereas in France, it increases JI (Moulet & Salibekyan, 2019). To sum up, the majority of those individual factors seem to converge on the fact that women would report a higher JI. However, as underlined above, in a lot of studies, women declare a lower JI (Keim et al., 2014; McGuinness & Wooden, 2009).

At the organizational level, occupational gender segregation also results in the fact that the companies in which women and men work do not have the same characteristics, particularly in terms of strategy and workforce management (Cha, 2013; Charles, 2005; Stier & Yaish, 2014). This can explain a part of the gender differential of JI: *“Gender differences in work experiences might often be overestimated because other important structural factors (e.g., working organization, occupational segregation or socioeconomic status) are not controlled in the analyses”* (Mauno & Kinnunen, 2002, p. 309). For example, in most developed countries, women are overrepresented in the public sector (Llorens et al., 2008) or in sectors such as personal care, retail or housekeeping (Charles & James, 2003). This may result in differences in organizational performance and strategy and in workforce management (for example, whether there have been workforce reductions in the past): women and men may not be present in organizations with the same strategy or the same workforce management. This may explain part of the gender differences in JI. Previous research has already outlined that these organizational variables can influence JI. Notably, organizational performance tends to decrease JI (Debus et al., 2014; Probst et al., 2014; Shoss, 2017), whereas changes tend to



increase JI (Gallie et al., 2017). Workforce management, notably past employment reduction and recourse to temporary contracts, tends to increase JI (De Cuyper et al., 2009; Gallie et al., 2017; Shoss, 2017).

### **I.3. Research proposal**

We suggest that organizational dimensions may contribute to the gender differential of JI, and that gender role theories and men's so-called breadwinner identity should be questioned as valuable justifications, especially since it is undoubtedly less relevant today due to social and societal changes. In line with Muñoz de Bustillo & de Pedraza (2010), we assume that women are not less or more insecure per se but that the entanglement between their situation in the labour market and the characteristics of the organizations where they are employed makes them feel less or more insecure.

We thus propose a multi-level research model that encompasses both individual and organizational variables in an attempt to clarify the debate about gender and JI. We hypothesize that individual variables are not sufficient to explain the gendered differential of JI, although these variables reduce this differential. Our expectation is that additional organizational variables (about workplace performance, corporate strategy, and workforce management) help explain this gendered differential. Arguably, we do not need either the gender role theory or the social identity theory mentioned above—or more generally the idea that women and men react differently to the same situations—to explain the gendered differential.

## **II. Method**

### **II.1. Data**

The data used in this study were drawn from the French REPONSE survey conducted in 2017 by the French Ministry of Labour and Employment, a nationally representative survey of French workplaces with 10 or more employees (excluding public sector), inspired by the British survey Workplace Employment Relations Survey (WERS). This survey is interesting because it combines data at the individual level (questionnaire conducted with employees) with data at the organizational level (questionnaire conducted with employers or HR managers). For each workplace, there are several answers at the employee level and one only answer at the organizational level. The results can be extrapolated by using employee weights, as the sample is a stratified random sample with weights.

The survey covers a wide range of topics (work conditions, job satisfaction, HR function, social climate, ...). The whole sample size was 21,413 employees. After deleting non-responses for the main variables of interest, we obtained a sample of 16,367 employees (7,143 females and 9,224 males). Appendix A1 gives more details about the missing data.

## **II.2. Measures and variables**

JI was measured thanks to a single question: *“Do you think there is any chance at all of you losing your job in the next 12 months?”*, similar to the one used by other researchers (Gallie et al., 2017). Respondents could rate it on a Likert scale (1: “high risk”—4: “zero risk”). The usual estimation strategy used in this case is the ordered probit or logit estimator (Gallie et al., 2017). Other research uses a dichotomous variable (Erlinghagen, 2007; Esser & Olsen, 2012). However, a traditional multiple linear regression estimator can be used once the dependent variable has been transformed into a “pseudo-continuous” variable, following Van Praag’s approach (Van Praag & Ferrer-i-Carbonell, 2006). This probit OLS (POLS) approach is useful for at least two reasons. First, the estimated coefficients can be interpreted as marginal effects (unlike ordered probit estimators). Second, the percentage of variation that is attributable to the higher-level source of variation (in our case, the organizational level) only makes sense for simple variance components, notably when the response is continuous (Goldstein et al., 2002). This strategy has been used in several studies about JI (Moulet & Salibekyan, 2019; Origo & Pagani, 2009) and is explained in detail in a technical appendix provided by Origo and Pagani (2009)<sup>4</sup>. Hence, after inverting the order of the responses (1: “zero risk”—4: “high risk”) to make the results more easily readable, we transformed our variable into a pseudo-continuous variable following Van Praag’s approach (Van Praag & Ferrer-i-Carbonell, 2006). The choice to use only one question can be debated (Kinnunen et al., 2014; Probst et al., 2014; Rose, 2003). However, this decision corresponds to the choice made in some studies about JI (Erlinghagen, 2007; Esser & Olsen, 2012; McGuinness & Wooden, 2009).

At the individual level, this study analysed several variables that were supposed to affect JI and to differ between female and male populations: education (in the French educational system, in increasing order: no educational qualification, brevet, CAP-BEP, Bac/high school diploma, Bac+2, Bac+3-4/undergraduate diploma, Bac+4/graduate); type of contract (permanent contract, fixed-term employment, other-interim, etc.), which refers to the objective dimension of job insecurity; part-time contract (full-time, part-time); function

(production, maintenance, accounting/finance, R&D, other); occupational category (specialized worker, skilled worker, employee, technician, engineer/manager, other); promotion during the last 3 years (yes, no); training funded by the employer during the last 3 years (yes, no); union membership (yes, no but I have been once, no never); and union representative (yes, no, purposeless because the workplace does not have employee representatives).

Some control variables supposed to affect JI were added: age (in years) and workplace tenure (in years). We also controlled for the type of employment (ordinary employment vs. student employment such as internship or apprenticeship) because, even if internships are fixed-term contracts, they do not represent the same level of precariousness as fixed-term contracts for workers (non-students).

The detailed list of individual variables is presented in Table A2 in appendix, together with some descriptive statistics.

At the organizational level, variables assumed to affect JI and to differ according male and female distribution within organizations were included. A first set of variables was selected to account for corporate performance, changes and strategy: evolution of the business volume during the last three years (highly increasing, increasing, stable, decreasing, highly decreasing); difficulty anticipating the evolution of the business volume (very difficult, difficult, easy, very easy). The variable selected to identify changes was unusual variation of the business in 2016 (yes: an increase, yes: a decrease, no). The variables corresponding to corporate strategy were selected as follows: main dimension of the strategy (prices, innovation, product quality, service quality, other, purposeless); main determining factor of services' and products' prices (market, clients, production costs, competitors' prices, administrative rules, other, purposeless). These variables referred to an assumption drawn from the economics of conventions that identifies several "worlds of production" referring to "different rationalities of profitability", to different "work conventions" (Storper & Salais, 1997), and arguably to specific employment relationships that may in turn influence JI. They complemented information about companies' sectors, given that sector influences JI due to differences in labour market conditions (Gallie et al., 2017). The second set of variables concerned workforce management: evolution of the permanent workforce (increasing, stable, decreasing); recourse to temporary contract (yes, no); recourse to a job protection plan (yes, no); recourse to voluntary redundancy plan (yes, no); recourse to collective dismissals (yes, no); recourse to contractual terminations (yes, no); and recourse to partial unemployment

(yes, no). Finally, some control variables were also added: workforce (number of employees) in the company and in the workplace precisely; sector; and social climate (quiet, quite quiet, quite tense, tense).

The full list of organizational variables is presented in Table A3 in appendix, together with some descriptive statistics.

### **II.3. Statistical procedure**

Given the pseudo-continuous nature of the indicator chosen, multiple linear regression was privileged. In addition, in order to incorporate both individual and organizational levels, we used two strategies. The first one consisted of adding fixed effects at the organizational level (each workplace represents a parameter to estimate). The second consisted of using hierarchical (multi-level) multiple linear regression, as suggested in previously published research (Debus et al., 2014; Probst et al., 2014; Stier & Yaish, 2014). Stier & Yaish (2014) advocate for the use of multi-level modelling for researchers who wish to explain gender differences in job quality (here, JI) by individual and occupational (here, organizational) characteristics. More generally, Renkema et al. (2016) underline that multi-level modelling is very useful when phenomena can be explained both at the individual and at the organizational level. Specifically, our study was based on two levels of analysis: individuals are embedded in organizations. Multi-level model effects allowed us to determine the percentage of variation explained by our models at the organizational level (Goldstein et al., 2002) and were an efficient means to combine two levels of analysis within the same framework (Smyth & Steinmetz, 2008). We used SAS software and the mixed procedure. Thus, we tested 3 models: 1) multiple linear regression with individual variables and fixed effects at the organizational level; 2) hierarchical (multi-level) linear regression with only the individual variables; and 3) hierarchical (multi-level) linear regression with the individual and organizational variables.

We did not add interaction effects with sex in our models, although this has often been done in previous research (Adekiya, 2018; Gaunt & Benjamin, 2007). Indeed, as mentioned in our research proposal, the main rationale of this study was to show that we did not need either the gender role theory or the social identity theory mentioned above—or more generally the idea that women and men react differently to the same situations—to explain the gender differential of JI. That is why we chose not to use interaction effects, which would have been useful if we had used a theoretical framework stating that women and men react differently to the same factors.

### **III. Main results**

#### **III.1. Descriptive statistics**

First, t-tests and chi-square tests were used to tests identify the main differences between the female and male samples. Table A4 in appendix presents the full list of individual variables, indicating whether there is a significant difference between females and males.

Significant differences between women and men were identified for all the individual variables. These differences were consistent with the literature. Women were overall more educated than men. They were also more likely to have precarious jobs and less likely to have managerial responsibilities, and to be promoted and trained. They were also less unionised. Besides, women reported lower JI. Thus, this corresponds to a paradox: women report lower JI whereas they face more precarious employment conditions, which tend to increase JI. For example, in our sample, part-time employees reported a higher JI than full-time employees, and the employees who had been promoted or trained reported a lower JI than the other ones (Appendix, Table A6). However, this could be due to the function or the occupational category. Indeed, the highest level of JI was found for the occupational category “Specialized worker”, where women were less present than men. This led us to use organizational variables to understand this paradox.

Table A5 in appendix presents the full list of organizational variables, indicating whether there is a significant difference between females and males. There existed significant differences between women and men for all the organizational variables, except the recourse to contractual terminations and the size of the company workforce. Women were less present in companies that faced economic difficulties (business volume decreasing, unusual decrease of the business) and where it was difficult to anticipate the evolution of the business volume. They were also more present in businesses whose strategy was based on the service quality and where pricing was based on administrative rules. They were less present in businesses that tended to reduce their workforce. Finally, women were more present in teaching and health and less present than men in industry. Those sex differences can explain part of the paradox mentioned above. Indeed, employees working in companies that faced economic difficulties (where men were overrepresented) reported higher JI, as well as employees working in companies that had reduced their workforce management in the last years, where men were also overrepresented (Appendix, Table A6). One of the highest levels of JI was found in the industry sector, where women were less present than men.

Thus, the paradox mentioned above (i.e., women report a lower JI whereas they face more precarious employment conditions) could be explained by the organizational level. We used several models to investigate this avenue.

### **III.2. Models**

We estimated 3 models. Model 1 is a multiple linear regression model with individual explanatory and control variables and fixed effects at the organizational level, which aim is to estimate the effect of sex on JI after controlling for individual characteristics but also organizational level. Model 2 is a multi-level multiple linear regression model with only individual variables. Model 3 is a multi-level multiple linear regression model with individual and organizational variables. Multi-level models allowed us to measure the weight of the organizational level but also to give unbiased estimates for the effects of the individual and organizational variables. The differences of results between the three models could help us understand better the effect of gender and the contradictory results given by the academic literature. The results are reported in Table 1.

*TABLE 1 here*

In Model 1, sex was not a significant explanatory variable when controlling for the organizational level (as a fixed effect) and for individual variables. Concerning the other explanatory individual variables, fixed-term contracts increased JI whereas temporary employment decreased it. The absence of promotion and training increased JI, and union membership increased it. Those results seem consistent with part of the academic literature (Gallie et al., 2017; Moullet & Salibekyan, 2019; Näswall & De Witte, 2003). However, this model did not indicate whether the non-significance of sex was due to the fact that we controlled for individual variables, or to the fact that we controlled for both individual variables and organizational level. That is why we estimated models 2 and 3.

Model 2 gives results that are partly consistent with the literature concerning the effects of individual variables. The absence of training and promotion increased JI, as well as union membership. Fixed-term contract increased JI. However, part-time, function, occupational category, and temporary employment did not significantly influence JI; these findings are contrary to some studies (Gallie et al., 2017; Näswall & De Witte, 2003) but in line with Greenhalgh & Rosenblatt (2010) and more recently Choonara (2019, 2020). Despite the explanatory and control variables, sex was a significant variable: women reported lower JI

than men. The share of organization-specific variation is approximately 19 % after controlling for the individual variables. This indicates a relatively strong effect of the organizational level on JI and encourages us to explore more thoroughly the effects of organizational variables. Besides, the fact that sex has a significant effect shows that individual variables are not sufficient to explain differences in JI between women and men.

Model 3 gives results that are consistent with the literature concerning the effects of organizational variables. Employees working in companies that faced difficulties (decreasing business volume) reported higher JI, which is consistent with previous research (Debus et al., 2014; Probst et al., 2014; Shoss, 2017). The effects concerning changes (difficulty to anticipate and unusual variation of the business) and concerning company strategy were not significant, whereas those for workforce management were. In companies that had reduced their workforce during the preceding years, employees reported higher JI, which is in line with previous research (De Witte et al., 2010; Gallie et al., 2017; Shoss, 2017). Sex did not have a significant effect: women and men did not report different levels of JI after controlling for the organizational characteristics linked to performance, strategy and workforce management. This means that the fact that women reported lower JI (descriptive statistics and model 2) could be partly explained by the organizational level and the fact that they worked in more protective organizations than men, as shown with the descriptive statistics.

#### **IV. Concluding discussion**

Our findings highlight that, on average, women report lower JI than men. Adding individual variables is not enough to remove or explain this gender difference (model 2). However, adding a fixed effect for the organizational level (model 1) or organizational variables (model 3) shows that sex is no longer a significant predictor of JI. Among the organizational variables, organizational performance and workforce management are significant, whereas company strategy is not.

These results shed light on the contradictory results observed in the literature on gender and JI (Shoss, 2017). The central argument of our research was based on occupational segregation, reflected in the fact that the companies in which women and men work do not have the same characteristics, particularly in terms of strategy and workforce management. We assumed that this could explain part of the gender differential. Our evidence provides support for this assumption, as the sex variable is no longer a significant predictor of JI when adding the organizational level as a fixed effect or organizational explanatory variables. This

is consistent with studies that find no differences between women's and men's JI (Esser & Olsen, 2012; Gallie et al., 2017). Overall, we show that JI is simultaneously explained by individual variables and organizational variables, and that there are gender differences on both levels. In other words, our findings reveal that, although women hold more precarious jobs, they work in more stable and more protective organizations, which ultimately leads to a level of JI that is fairly close to that of men when controlling for both individual and organizational variables.

Our research calls into question the idea that women report lower JI because of the male breadwinner ideology, which is sustained by gender role theory (Gaunt & Benjamin, 2007). We show that while gender differences do exist when considering only individual variables, those differences disappear when controlling for a combination of individual and organizational characteristics. Hence, we do not need an assumption about gender differences in ideology (Gaunt & Benjamin, 2007) or in preferences (Hakim, 2006): women and men report different levels of JI because they are not placed in the same situations due to gender occupational segregation (Muñoz de Bustillo & de Pedraza, 2010; Stier & Yaish, 2014).

Our findings also contribute to the literature about gender occupational segregation (Stier & Yaish, 2014). The implications of this occupational segregation (in terms of corporate performance, corporate strategy or workforce management) have been scarcely explored in the literature. We show that, even if women face more precarious employment conditions (non-permanent and part-time jobs), they are overrepresented in organizations that are more protective of their workforce. Unfortunately, it is not possible with our data to know whether it is due to preferences that differ according to gender (Hakim, 2006)—for example, because women make a trade-off between money and other employment characteristics, such as employment security or work-family balance (Grönlund & Öun, 2018; Stier & Yaish, 2014). Another explanation could be that more protective organizations are also less discriminatory against women and thus tend to recruit more women than men.

In addition, model 3 shows that corporate strategy variables do not have a significant effect on JI, whereas company performance (measured by the business volume) and workforce management do (with relationships that are consistent with the literature). Overall, characteristics linked to company performance, corporate strategy and workforce management vary between women and men, but corporate strategy does not influence JI, contrary to characteristics linked to company performance or workforce management. We expected that the strategic dimensions would have an effect on JI, in the sense that they would mirror different “worlds of production”, distinct rationalities of productivity, and different



“work conventions” (Storper & Salais, 1997). The available items in our dataset were probably reductive and unable to grasp the complexity of those worlds of production.

The use of multi-level modelling also brings new insights into the literature about JI. These models allow researchers to include the fact that individuals can be embedded in various levels (Stier & Yaish, 2014; Probst et al., 2014) and they allowed us to determine the percentage of variation explained at the organizational level (Goldstein et al., 2002). This variation is 19% when not controlling for organizational variables, and it is 14% when adding organizational variables (models 2 and 3). This underlines the influence of the organizational level, and this also means that an important fraction of this influence remains unexplained by the inclusion of organizational variables, which may be due to other variables such as human resource practices (Gallie et al., 2017) or managerial practices (Moulet & Salibekyan, 2019) or even unobservable variables, e.g. ambiance and solidarity. This is in line with studies that advocate a deeper exploration of organizational-level variables (Probst et al., 2014) and with a meta-analysis by Keim et al. (2014) that underlines the difference between objective and antecedents of JI.

Our results have potentially important implications both for government policy and management and advocate for managerial and political efforts to reduce gender occupational segregation. First of all, our results highlight, like many other existing studies before, the existence of occupational segregation in France, and this at two levels: that of the types of job and employment contract, but also that of the type of employing organizations. This implies that public policies, hitherto essentially oriented towards the first level, should also consider measures to limit the segregation that exists according to the type of company. Indeed, although our data indicate that women work in organizations that are globally more protective — thus potentially corroborating trade-off approaches and preference theories (Hakim, 2006), this does not mean that this is favourable globally and in the long term in terms of gender equality (Cech, 2013). Second, the characteristics of the organizations do have an impact of perceived JI of their members. Some of these characteristics, especially related to workplace climate, might be used as managerial levers to reduce or at least limit the feeling of insecurity among employees and, consequently, avoid potential corresponding detrimental effects for individuals as well as for the organization.

Finally, our study suffers from several limitations and offers some perspectives for further research. First, this study is based on only one measure of JI, which captures mostly quantitative JI (De Witte et al., 2010) and, unfortunately, does not allow us to obtain more precise insights about potential differences between tenure JI and status JI (Gallie et al.,

2017). Our dataset has been collected in the French context only, whereas the national context may have important implications for JI and for the relationship between gender and JI (Erlinghagen, 2007; Keim et al., 2014; Sender et al., 2017). Besides, the REPONSE survey does not include public sector. Future research should compare the “gender face” of JI in different institutional, economic and cultural contexts in a multilevel approach including individual, organizational and socio-economic dimensions (Greenhalgh & Rosenblatt, 2010; Green, 2009; Lee et al., 2018), in the same vein as recently published research (see Sverke et al., 2019; Dixon 2020). Third, a longitudinal approach could allow us to better test causality and temporality (Greenhalgh & Rosenblatt, 2010; Keim et al., 2014; Sverke et al., 2006), which seems possible since the REPONSE survey is conducted every six years: this longitudinal approach seems all the more important since previous research has shown the long-term adverse effects of JI on health outcomes, well-being and work-related attitudes (Låstad et al., 2016; Hebling & Kanji, 2018). Fourth, our data are sparse on individual factors, such as individual ability, motivation, and attitudes, and we are not able to correct for this bias by using panel data. This means that there are a lot of unobservable variables at the individual variables, which could influence significantly JI. A quasi-experimental research design might be helpful to include and test such variables.

At a time when the economic effects of the covid-19 epidemic have resulted in numerous job losses worldwide – in France, three times more social reduction plans from march to September 2020 than over the same period in 2019 in France—, the issue of JI in its objective and subjective dimensions is more topical than ever. In line with Choonara (2019, 2020), who analyzes the evolution of job tenure insecurity in the United Kingdom and distinguishes between generalized and acute JI, it would be interesting and useful to monitor these indicators during the current crisis and during the recessionary period that will follow, including comparison between women and men.

## **Fundings**

This work is supported by a public grant overseen by the French National Research Agency (ANR) as part of the “Investissements d’Avenir” programme (reference: ANR-10-EQPX-17 - Centre d’accès sécurisé aux données – CASD).

## Notes

<sup>1</sup> Throughout the article, we use the word “sex” to refer to the factual, statistical variable, and the word “gender” to refer to gender-related social phenomena.

<sup>2</sup> REPOSE: *Relations professionnelles et négociations d'entreprise* (Employment relations and corporate bargaining).

<sup>3</sup> In the remaining of the article, we will use “JI” for perceived or subjective job insecurity, and we will specify when we talk about objective JI or precarity.

<sup>4</sup> We performed post-hoc checks using the non-transformed variable with a linear approach, and the non-transformed variable with an ordered logit. They give consistent results.

## References

- Adekiya AA (2018) Effect of Self-esteem on Perceived Job Insecurity: The Moderating Role of Self-efficacy and Gender. *Naše gospodarstvo/Our Economy* 64(4): 10-22.
- Bourdieu P (1997) La précarité est aujourd'hui partout, *Rencontres européennes contre la précarité*. Grenoble, 12-13 September. [translated in English in Bourdieu P (1998) Job insecurity is everywhere. *Acts of resistance*, 81-88.]
- Burchell B (2010) A Temporal Comparison of the Effects of Unemployment and Job Insecurity on Wellbeing. *Sociological Research Online* 16(1): 9.
- Cech EA (2013) The Self-Expressive Edge of Occupational Sex Segregation. *American Journal of Sociology*, 119(3): 747-789.
- Cha Y (2013) Overwork and the Persistence of Gender Segregation in Occupations. *Gender & Society* 27(2): 158-184.
- Charles M (2005) National Skill Regimes, Postindustrialism, and Sex Segregation. *Social Politics: International Studies in Gender, State & Society* 12(2): 289-316.
- Charles N, James E (2003) The Gender Dimensions of Job Insecurity in a Local Labour Market. *Work, Employment and Society* 17(3): 531-552.
- Cheng GHL, Chan DKS (2008) Who Suffers More from Job Insecurity? A Meta-Analytic Review. *Applied Psychology* 57(2): 272-303.
- Choonara J (2019) *Insecurity, Precarious Work and Labour Markets: Challenging the Orthodoxy*. Berlin: Springer.

- Choonara J (2020) The evolution of generalised and acute job tenure insecurity. *Work, Employment and Society* 34(4): 713-725.
- De Cuyper N, Sora B, De Witte H, Caballer A, and Peiró JM (2009) Organizations' Use of Temporary Employment and a Climate of Job Insecurity among Belgian and Spanish Permanent Workers. *Economic and Industrial Democracy* 30(4): 564-591.
- De Witte H, De Cuyper N, Handaja Y, Sverke M, Näswall K, and Hellgren J (2010) Associations Between Quantitative and Qualitative Job Insecurity and Well-Being: A Test in Belgian Banks. *International Studies of Management & Organization* 40(1): 40-56.
- Debus ME, König CJ, and Kleinmann M (2014) The building blocks of Job Insecurity: The impact of environmental and person-related variables on Job Insecurity perceptions. *Journal of Occupational & Organizational Psychology* 87(2): 329-351.
- Dixon JC (2020) Understanding Perceived Worker Insecurity in Europe, 2002–2016: Economic Freedom and Neoliberalism as Alternative Theories?. *Sociological Perspectives* 63(1): 5-28.
- Erlinghagen M (2007) Self-Perceived Job Insecurity and Social Context: A Multi-Level Analysis of 17 European Countries. *European Sociological Review* 24(2): 183-197.
- Esser I, Olsen KM (2012) Perceived Job Quality: Autonomy and Job Security within a Multi-Level Framework. *European Sociological Review* 28(4): 443-454.
- European Institute for Gender Equality. (2019). *Gender Equality Index 2019*. European Institute for Gender Equality website: <https://eige.europa.eu/publications/gender-equality-index-2019-france>
- Felstead A, Gallie D, Green F, and Henseke G (2018) Insecurity at work in Britain: First findings from the Skills and Employment Survey 2017.
- Gallie D, Felstead A, Green F, and Inanc H (2017) The hidden face of Job Insecurity. *Work, Employment and Society* 31(1): 36-53.
- Gaunt R, Benjamin O (2007) Job Insecurity, stress and gender: The moderating role of gender ideology. *Community, Work & Family* 10(3): 341-355.
- Glass J (1990) The Impact of Occupational Segregation on Working Conditions. *Social Forces* 68(3): 779-796.
- Goldstein H, Browne W, and Rasbash J (2002) Partitioning Variation in Multilevel Models. *Understanding Statistics: Statistical Issues in Psychology, Education, and the Social Sciences* 1(4): 223-231.

- Gorman EH, Kmec JA (2009) Hierarchical Rank and Women's Organizational Mobility: Glass Ceilings in Corporate Law Firms. *American Journal of Sociology* 114(5): 1428-1474.
- Greenhalgh L, Rosenblatt Z (1984) Job Insecurity: Toward Conceptual Clarity. *The Academy of Management Review* 9(3): 438.
- Greenhalgh L., Rosenblatt Z (2010) Evolution of Research on Job Insecurity. *International Studies of Management & Organization* 40(1): 6-19.
- Grönlund A, Öun I (2018) The gender-job satisfaction paradox and the dual-earner society: Are women (still) making work-family trade-offs? *Work* 59(4): 535-545.
- Hakim C (2006) Women, careers, and work-life preferences. *British Journal of Guidance & Counselling* 34(3): 279-294.
- Helbling L, Kanji S (2018) Job insecurity: Differential effects of subjective and objective measures on life satisfaction trajectories of workers aged 27–30 in Germany. *Social indicators research* 137(3): 1145-1162.
- Hellgren J, Sverke M (2003) Does job insecurity lead to impaired well-being or vice versa? Estimation of cross-lagged effects using latent variable modelling. *Journal of Organizational Behavior: The International Journal of Industrial, Occupational and Organizational Psychology and Behavior* 24(2): 215-236.
- Jackson A (2004) Gender Inequality and Precarious Work: Exploring the Impact of Unions Through the Gender and Work Database. *Gender & Work: Knowledge Production in Practice* 1-28. Ontario, Canada.
- Jiang L, Lavaysse LM (2018) Cognitive and Affective Job Insecurity: A Meta-Analysis and a Primary Study. *Journal of Management*, 44(6): 2307-2342.
- Keim AC, Landis RS, Pierce CA, and Earnest DR (2014) Why do employees worry about their jobs? A meta-analytic review of predictors of Job Insecurity. *Journal of Occupational Health Psychology* 19(3): 269-290.
- Kinnunen U, Mäkikangas A, Mauno S, De Cuyper N, and De Witte H (2014) Development of perceived Job Insecurity across two years: Associations with antecedents and employee outcomes. *Journal of Occupational Health Psychology* 19(2): 243-258.
- Kinnunen U, Mauno S, Nätti JN, and Happonen M (2000) Organizational antecedents and outcomes of Job Insecurity: A longitudinal study in three organizations in Finland. *Journal of Organizational Behavior* 21: 443-459.

- Kirton G (2017) From 'a woman's place is in her union' to 'strong unions need women': Changing gender discourses, policies and realities in the union movement. *Labour & Industry: A Journal of the Social and Economic Relations of Work* 27(4): 270-283.
- Klandermans B, Hesselink JK, and Van Vuuren T (2010) Employment status and job insecurity: On the subjective appraisal of an objective status. *Economic and Industrial Democracy* 31(4): 557-577.
- Låstad L, Vander Elst T, and De Witte H (2016) On the reciprocal relationship between individual job insecurity and job insecurity climate. *Career Development International* 21(3): 246-261.
- Lee C, Huang GH, and Ashford SJ (2018) Job Insecurity and the Changing Workplace: Recent Developments and the Future Trends in Job Insecurity Research. *Annual Review of Organizational Psychology and Organizational Behavior* 5(1): 335-359.
- Llorens JJ, Wenger JB, and Kellough JE (2008) Choosing Public Sector Employment: The Impact of Wages on the Representation of Women and Minorities in State Bureaucracies. *Journal of Public Administration Research and Theory* 18(3): 397-413.
- Lozza E, Libreri C, and Bosio AC (2013) Temporary employment, job insecurity and their extraorganizational outcomes. *Economic and Industrial Democracy* 34(1): 89-105.
- Lozza E, Castiglioni C, and Bonanomi A (2020) The effects of changes in job insecurity on daily consumption and major life decisions. *Economic and Industrial Democracy* 41(3): 610-629.
- Ma B, Liu S, Lassleben H, and Ma G (2019) The relationships between job insecurity, psychological contract breach and counterproductive workplace behavior. *Personnel Review* 48(2): 595-610.
- Mauno S, Kinnunen U (2002) Perceived Job Insecurity among dual-earner couples: Do its antecedents vary according to gender, economic sector and the measure used? *Journal of Occupational and Organizational Psychology* 75(3): 295-314.
- McGuinness S, Wooden M (2009) Overskilling, Job Insecurity, and Career Mobility. *Industrial Relations: A Journal of Economy and Society* 48(2): 265-286.
- Milewski F, Dauphin S, Kesteman N, Letablier MT, Méda D, Nallet F, Ponthieux S, and Vouillot F (2005) *Les inégalités entre les femmes et les hommes : Les facteurs de précarité* [Mission report]. Ministère de la Parité et de l'Égalité professionnelle.
- Moulet S, Salibekyan Z (2019) Le sentiment d'insécurité de l'emploi en France : Entre déterminants individuels et pratiques managériales. *Economie et statistique* (507-508): 71-90.

- Muñoz de Bustillo R, De Pedraza P (2010) Determinants of Job Insecurity in five European countries. *European Journal of Industrial Relations* 16(1): 5-20.
- Näswall K, De Witte H (2003) Who Feels Insecure in Europe? Predicting Job Insecurity from Background Variables. *Economic and Industrial Democracy* 24(2): 189-215.
- Origo F, Pagani L (2009) Flexicurity and job satisfaction in Europe: The importance of perceived and actual job stability for well-being at work. *Labour Economic*, 16(5): 547-555.
- Probst TM, Jiang L, and Benson W (2014) Job Insecurity and Anticipated Job Loss: A Primer and Exploration of Possible Interventions. In: Klehe UC, Van Hooft M (eds.), *The Oxford Handbook of Job Loss and Job Search*. Oxford: Oxford University Press.
- Renkema M, Meijerink J, and Bondarouk T (2016) Advancing multilevel thinking and methods in HRM research. *Journal of Organizational Effectiveness: People and Performance* 3(2): 204-218.
- Rose M (2003) Good Deal, Bad Deal? Job Satisfaction in Occupations. *Work, Employment and Society* 17(3): 503-530.
- Shoss MK (2017) Job Insecurity: An Integrative Review and Agenda for Future Research. *Journal of Management* 43(6): 1911-1939.
- Smyth E, Steinmetz S (2008) Field of Study and Gender Segregation in European Labour Markets. *International Journal of Comparative Sociology* 49(4-5) : 257-281.
- Steinþórsdóttir FS, Smidt TB, Pétursdóttir GM, Einarsdóttir Þ, and Le Feuvre N (2019) New managerialism in the academy: Gender bias and precarity. *Gender, Work & Organization* 26(2): 124-139.
- Stier H, Yaish M (2014) Occupational segregation and gender inequality in job quality: A multi-level approach. *Work, Employment and Society* 28(2): 225-246.
- Storper M, Salais R (1997) *Worlds of production: The action frameworks of the economy*. Cambridge, Mass: Harvard University Press.
- Sverke M, Låstad L, Hellgren J, Richter A, and Näswall K (2019) A meta-analysis of job insecurity and employee performance: testing temporal aspects, rating source, welfare regime, and union density as moderators. *International journal of environmental research and public health* 16(14): 2536.
- Sverke M, Hellgren J, and Näswall K (2006) *Job Insecurity: A literature review* (Joint Programme for Working Life Research in Europe N° 2006-1: 32). National Institute for Working Life.

- Van Bavel J, Schwartz CR, and Esteve A (2018) The Reversal of the Gender Gap in Education and Its Consequences for Family Life. *Annual Review of Sociology* 44(1): 341-360.
- Van Praag BMS, Ferrer-i-Carbonell A (2006) *An almost integration: Free approach to ordered response models* (Tinbergen Institute Discussion Paper N° 06-047/3: 1-32). Amsterdam and Rotterdam: Tinbergen Institute.
- Young MC (2010) Gender Differences in Precarious Work Settings. *Relations Industrielles / Industrial Relations* 65(1): 74-97.

## **Authors biographies**

### **Clotilde Coron**

Associate Professor, IAE Paris 1 Panthéon-Sorbonne (Sorbonne Business School)

**Biography:** Clotilde Coron, PhD, is an Associate Professor in Human Resource Management at IAE Paris – Sorbonne Business School. Her research, published in journal articles and books, deals with gender equality and the use of data in Human Resource Management.

### **Géraldine Schmidt**

Professor, IAE Paris 1 Panthéon-Sorbonne (Sorbonne Business School)

**Biography:** Géraldine Schmidt, PhD, is a Professor in Strategic and Human Resource Management at IAE Paris – Sorbonne Business School. Her research focuses on employment, restructuring practices, and job insecurity. She has published books and articles in several academic journals.



## Table

Table 1. Effects of individual and organizational variables

	<b>Model 1</b>	<b>Model 2</b>	<b>Model 3</b>
Intercept	-1.76***	-1.88***	-1.89***
<b>Individual variables</b>			
Gender: Female	-0.03	-0.05*	-0.04
Education (ref. CAP-BEP)			
No ed. qualification	-0.04	-0.05	-0.06
Brevet	-0.02	-0.03	-0.04
Bac (High school)	0.03	0.03	0.03
Bac+2	0.04	0.06	0.05
Bac+3 or 4 (undergrad.)	0.05	0.05	0.05
>Bac+4 (graduate)	0.01	0.02	0.00
Type of contract (ref. permanent)			
Fixed-term	0.14*	0.15*	0.16**
Other (temp. empl., etc)	-0.27*	-0.09	-0.12
Time (ref. Full-time)			
Part-time	0.00	-0.02	-0.01
Function (ref. Other)			
Production	0.02	0.03	0.00
Maintenance	0.00	-0.00	-0.01
Accounting/Finance	0.04	0.01	0.00
R&D	-0.04	-0.03	-0.05
Occupational category (ref. Technicians)			
Specialized worker	0.05	0.01	0.02
Skilled worker	0.02	-0.02	-0.01
Employee	0.04	-0.00	0.00
Engineer/Manager	0.04	0.04	0.05
Other	-0.03	-0.07	-0.05
Promotion (ref. Yes)			
No	0.18***	0.21***	0.21***
Training (ref. Yes)			
No	0.07***	0.10***	0.10***
Union membership (ref. No never)			
Yes	0.14***	0.15***	0.13***
No but I have been once	0.03	0.05	0.04
Union representative (ref. No)			
Yes	-0.06	-0.02	-0.03
Purposeless	-0.01	-0.04	-0.02
<b>Individual control variables</b>			
Age	0.07***	0.08***	0.08***
Age <sup>2</sup>	-0.00***	-0.00***	-0.00***
Workplace tenure	-0.01***	-0.00***	-0.01***
Type of employment (ref. Ordinary)			
Student	0.60***	0.38**	0.39***
<b>Organizational variables</b>			
Evolution of the business vol. (ref. Stable)			
High. increasing			-0.01
Increasing			-0.02
Decreasing			0.12***
High. decreasing			0.15*
Difficulty to anticipate (ref. Difficult)			
Very difficult			0.05
Easy			-0.04
Very easy			0.09
Unusual variation of the bus. (ref. No)			
Yes (increase)			-0.04

Yes (decrease)			0.00
Main element of the strategy (ref. Service quality)			
Prices			0.03
Innovation			0.07
Product quality			0.05
Other			0.02
Purposeless			-0.06
Main element pricing (ref. Market)			
Clients			-0.04
Production costs			0.00
Prices competitors			-0.00
Administrative rules			-0.02
Other			-0.06
Purposeless			0.04
Evolution of the workforce (ref. Stable)			
Increasing			0.01
Decreasing			0.18***
Recourse to temp. contract (ref. No)			
Yes			-0.01
Recourse to job protection plan (ref. No)			
Yes			0.23***
Recourse to vol. redundancy plan (ref. No)			
Yes			0.06
Recourse to collect. dismiss. (ref. No)			
Yes			0.14
Recourse to contractual terminations (ref. No)			
Yes			0.03
Recourse to partial unemployment (ref. No)			
Yes			0.16***
<b>Organizational control variables</b>			
Company workforce			-0.00***
Workplace workforce			-0.00***
Sector (ref. Industry)			
Commercial			-0.01
Teaching & health			-0.12
Services			0.05
Scientific activities			0.11**
Social climate (ref. Quiet)			
Quite quiet			0.02
Quite tense			0.18***
Tense			0.35***
R2	0.43	-	-
Adj. R2	0.23	-	-
-2*Log Likelihood		34280.1	33978.4
AIC		34284.1	33982.4
Variation explained by organizational level	-	0.19	0.14

*Significance levels: \*=0.01; \*\*=0.001; \*\*\*=0.0001*