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SELF-EFFICACY AND JOB SATISFACTION DURING ORGANIZATIONAL CHANGE – THE GENDER DIFFERENCE

Key Words

Self-efficacy
Job satisfaction
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Abstract

This study contributes to our understanding on gender when it comes to perceived levels of self-efficacy and job satisfaction that are decisive to drive an organisational change within local authorities' transport departments successfully. Data was gathered from 71 individuals working in the transport or mobile departments of seven local authorities participating in the H2020 CIVITAS SUITS and TINNGO projects, from 6 different countries, Greece, Spain, Italy, Romania, United Kingdom and Lithuania. Our results show that women require higher levels of self-efficacy during change to perceive the same levels of job satisfaction as men. This result leads to clear managerial implications for the management of change within organizations to be able to implement change successfully.

1. INTRODUCTION

In recent years, mobility planning has emerged as one of the key topics for local authorities [e.g. 1, 2]. In particular local authorities' mobility or transport departments have been challenged by a variety of political and societal changes regarding future sustainable mobility planning. The mobility field has becoming increasingly complex with new partners entering the market, offering new products and services.

Additionally societies' requirements towards a sustainable and liveable future have also become a decisive challenge for future mobility planning [e.g. 3; 4]. Scholars [2] demonstrate clearly that citizens favour sustainable thinking, prefer resource efficient travelling and wider accessibility and inclusivity nowadays. Accordingly, many local authorities, especially in small to medium cities are facing challenging situations, affecting and disrupting their business model and their institutional logic. This threatens public sector employees in a number of substantive ways [5]. The changes require new organizational structures and processes within the local authority and challenge their employees with new ways of working, including techniques and tools they have not used before. Further, new roles and responsibilities are needed [especially if a city commits to producing a SUMP], which may make former routines obsolete and require increased flexibility and motivation [6, 7]. Thus, organizational change can be viewed as a critical event, which has the potential to evoke stress and other negative consequences in employees. Since organizational change by its very nature is non-linear, the most frequent psychological state resulting from organizational change is uncertainty [e.g. 8, 9, 10, 11]. Indeed, employees are likely to experience uncertainty over many different facets of a changing work environment.

One of the most cited reasons for change failure is resistance and a lack of support from employees [12, 13]. Research indicates negative consequences of employee resistance towards change such as decreased employee morale, psychological wellbeing, satisfaction, and productivity, and increased turnover, absenteeism, and theft [14, 15, 16, 17]. Due to the pivotal role of employees in the implementation of change projects, many scholars are calling for a shift towards a more person-centred focus in the analysis of change [18]. Based on the idea of demography theory [19], we want to extend our knowledge about this person-centred perspective by investigating gender as key factor that may affect employees' perceived job satisfaction during organisational change. Demography Theory is defined as "an important, causal variable that affects a number of intervening variables and processes, and through them, a number of organizational outcomes" [19], such as gender.

When studying gender, past research often used a minority perspective. By and large, research findings have shown that being a minority is especially disadvantageous for women, having a negative impact on their job attitudes, self-efficacy or self-image [20, 21, 22, 23]. As our study is focused on the experiences of employees in nine local authorities in the mobility or transport field, that are undergoing organisational changes. Transport is a fundamental sector in the European economy but also one of the most gender - segregated in terms of both labour occupancy and the incorporated gender culture and roles. Beside traditional gender stereotypes and prejudices, problems reconciling family- and professional life, as well as safety and security, the literature highlights that women must often perform better than men in a male-dominated working environment to be accepted within the workplace- all reasons for women's underrepresentation in this sector [24].

Data was gathered during intensive cooperation with the local authorities of six European cities and their wider stakeholders in the H2020 CIVITAS SUITS project.

Supporting Urban Integrated Transport Systems [SUITS] was a four-year research and development project, aiming to increasing the capacity of small to medium cities to plan and implement sustainable mobility measures. The project addresses the comprehensive organisational changes within the organisations in the transport sector which require new work processes, with new partners, regulations, new modes of transport and notably, and innovative technologies [see www.suits-project.eu].

Thus, with this study, we aim to add to the existing change and gender research base by using both the general gender literature and research on minority groups to look at the differences in the perception of self-efficacy and job satisfaction. More specifically, we investigate whether the influence of a perceived level of self-efficacy on job satisfaction is moderated by gender during organisational change.

2. THEORETICAL BACKGROUND

2.1. Self-efficacy and job satisfaction during organizational change

The general idea of efficacy has been measured differently across disciplines and ranges from mastery, or personal control [25], to self-efficacy [26], to self-directedness [Kohn and Schooler 1983]. Despite this ongoing interest in human agency, self-efficacy seems underutilized as a theoretical concept. According to the theory of social learning [28], self-efficacy refers to an individual's belief in his or her capability to execute a course of action needed to meet the demands of a particular situation. Thus, in the context of organizational change, change-related self-efficacy can be defined as an employee's perceived ability to function well on the job, despite the demands of a changing work environment [e.g. 1, 27]. Employees who doubt their ability to respond to the demands of a specific organizational change event are likely to focus attention on their feelings of incompetence, which will be accompanied by feelings of psychological distress, and a failure to deal with the situation [28]. In contrast, employees who have high levels of change-related efficacy are unlikely to be distressed by feelings of inadequacy and, for this reason, are expected to persist in their efforts to manage the organizational change process.

Job satisfaction has been one of the most common and most investigated concepts and is described as the degree to which an individual has positive and negative feelings about a job, other workers and work environment [29], thus in our study primarily related to positive or negative feelings towards the organisational change. Job satisfaction is prevalently known as an internal reaction against the work conditions [30]. The internal reaction is emotional and attitudinal response [29].

2.2. The role of gender regarding self-efficacy and job satisfaction

Research suggests that gender is strongly related to higher self-efficacy levels found for males compared to females [26, 58]. Additionally, social cognitive theory suggests that gender is mainly driven by a variety of social influences that are

associated with a particular gender such as male, female or diverse [31]. Thus, scholars suggest that girls are less likely to develop a positive sense of their mathematical abilities as a result of their parents overestimating the difficulties they will experience in such endeavours [e.g. 72]. In turn, parents' beliefs about their children's abilities their children's interest and self-efficacy in science [32]. Further, research has found associations between the stereotypical male characteristic of instrumentality and greater social self-efficacy and, indirectly, to higher levels of perceived job satisfaction [58].

3. HYPOTHESES

3.1. The positive influence of self- efficacy on job satisfaction during organisational change

Literature has already shown that self-efficacy is consistently associated with job satisfaction [33, 34]. Self-efficacy affects job satisfaction mainly through its association with practical success on the job which is mandatory for a successful implementation of organisational change that is comprising technical and behavioural changes [33]. In fact, people high in self-efficacy deal more effectively with difficulties, persisting in the face of failure [35] which is very important during changes within an organisation [36]. Further individuals high in self-efficacy are more likely to attain valued outcomes according to their personal standards, from which they derive more satisfaction with the job. Additionally, the regulatory skills underlying self-efficacy make employees confident to solve conflicts that may occur with colleagues as responsibilities and tasks are changing, to overcome frustrations when changes are not perceived as benefit, to remain calm and in a good mood to stay motivated to implement organisational change, deriving more satisfaction from their work [58]. Thus, individuals who are confident in their abilities and competence to perform a job will be more satisfied. In the same vein, a meta-analysis of self-efficacy and organizational performance showed that self-efficacy was positively correlated with job satisfaction [37] and finally, scholars [38] reported, based on their study in a health care firm, the direct effect of self-efficacy on job satisfaction. Organizational change research showed that employees' coping efficacy was positively related to the appraisal of changes associated with an organizational merger [39, 40]. Thus, we assume that a higher level of job self-efficacy is likely to result in higher levels of perceived job satisfaction by employees during change.

H1. Higher levels of perceived self-efficacy lead to higher levels of job satisfaction for employees.

3.2. The moderating role of gender between self-efficacy and job satisfaction

Although evidence suggests a slight shift away from traditional sex-role stereotypes [41, 42, 43], it appears that some negative beliefs about a female's ability to perform certain tasks are deeply rooted and resistant to change [44, 45, 46, 47]. Research

demonstrates that women are still often viewed as less effective leaders, and men are viewed as better suited for decision-making tasks for example during organizational changes [48].

Although some progress has been made in the integration of women into non-traditional careers, inequities persist. Most inequalities exist in upper-level managerial and executive positions where pay is highest [49, 50]. One barrier facing women who seek non-traditional roles is the existence of sex-based stereotypes consisting of undesirable traits. These are problematic because they are overgeneralizations that are often inaccurate, leading those in powerful organizational positions to limit the opportunities of females [51, 48]. A related concern is that women could internalize these negative beliefs, leading them to lack confidence in their ability to perform challenging tasks. Research suggests that women may lack confidence in their ability to successfully complete non-traditional tasks [52, 53]. This lack of confidence may have far reaching consequences because individuals who believe they lack the skills to master certain tasks may avoid these and turn to less challenging tasks [28]. In organizational settings, such low self-efficacy could damage a female's career advancement, in particular in industries that are characterized by male dominance, such as the transport sector. A woman who fears that she lacks the ability to perform such roles may avoid these assignments or turn them down. This is supported by research that shows self-perceived ability to perform tasks is a determinant of task choice [52, 54]. How far reaching are the effects of low self-efficacy? Research suggests that it has a significant impact on job satisfaction. Theoretically, self-efficacy can serve as a guiding force for behaviour intended to overcome performance obstacles [55]. Some researchers believe that self-efficacy and job satisfaction as a performance factor have a cyclical relationship. High self-efficacy facilitates job satisfaction, and high levels of job satisfaction nurture self-efficacy [55, 56]. Thus, raising self-efficacy has practical consequences for the perceived job satisfaction in organisations. Negative beliefs about one's abilities may result in reduced willingness to take risks, reduced desire to be visible, and negative self-presentation, which hinders career progress [51, 57]. This lowered self-efficacy may lead women to avoid activities that could further one's career [58]. Thus, we assume that high levels of perceived self-efficacy are more important for women to perceive high levels of job satisfaction than men.

Hypotheses 2. The relationships between perceived self-efficacy and job satisfaction is moderated by gender in the way that women have to perceive higher levels of self-efficacy to perceive the same levels of job satisfaction as men.

4. METHOD AND ANALYSIS

4.1. Sample and Procedures

Data were gathered during the H2020 CIVITAS SUITS and TINNGO projects. Participants in this study were 71 individuals working in the transport or mobile departments of seven local authorities from 6 different countries, Greece, Spain, Italy, Romania, United Kingdom and Lithuania. In all, 71% were male and the

average age was 38.9 years [standard deviation [SD]= 11.406]. Participants were asked to respond to an online questionnaire, that was distributed with support from the transport departments in the local authorities in Rome, Torino, Valencia, Kalamaria, Palanga, West Midlands and Alba Iulia in 2017 from February to May. In a first step, personalized mailings were sent to all members of the selected transport departments asking them to participate in our study. Each mailing included a short summary of the proposed research and a link to the appropriate questionnaire. Two reminders were sent after one and three weeks. To rule out non-response bias, we compared early [the first 25%] and late [the last 25%] responders on a number of demographic variables, such as gender, age, and work experience. A multivariate analysis of variance identified no significant differences [Wilks' Λ =.10, F =.10, p =.98], indicating that non-response bias should not be a serious concern for our study [60]. To minimize the threat of common method variance, we implemented several procedural remedies. We included reverse-coded items, assured our respondents of their anonymity, and provided them with detailed instructions on how to fill out the survey [59].

4.2. Measures

A cross-sectional design was implemented. Participants were asked to complete demographic questions [age, team tenure, department tenure, organisation tenure, qualifications, department and role] and two scales online.

Self-efficacy was assessed according to Fugate's scale [61, 40] on change related self-efficacy based on the conceptual understanding of self-efficacy by key scholars in the field [28, 62]. The scale comprises four items such as "Whatever is changing around here, I am sure I can handle it" or "I get nervous that I may not be able to do all that is demanded of me by this change". A scale that has been adopted several times already in literature [e.g. 63, 64].

Job Satisfaction was assessed by a two item scale that includes "overall, I am satisfied with my job" and "I am satisfied with the way that I conduct my job" [65].

Gender was asked by answering the question whether the participant is male, female or other.

5. RESULTS

An exploration of the differences in change self-efficacy and job satisfaction scores between male and female was performed using an independent-samples t-test. There was a significant difference in the scores of job satisfaction between male and female [$t(70)=1.723$, $p=.023$], with males indicating a higher level of job satisfaction [$M=5.902$, $SD=.800$] than female [$M=5.350$, $SD=1.113$]. Contrastingly there were no significant differences between male [$M=5.235$, $SD=.798$] and female [$M=4.870$, $SD=.706$] in change self-efficacy [$t(70)=2.022$, $p=.094$].

Results of the linear regression indicated job satisfaction was a significant predictor of self-efficacy [$t(70)=5.148$, $p<0.01$, $R^2=.278$]. This is consistent with hypothesis 1

according to which self-efficacy is positively associated to high levels of job satisfaction.

The moderation effect of the relationship between change self-efficacy and job satisfaction was conducted using the PROCESS mediation macro in SPSS [see Hayes, 2013, Preacher and Hayes, 2004]. The moderation model showed to be significant [$R^2=.356$, $F= 12.321$, $P<.01$] with the significant interaction between self-efficacy and gender [$b=.583$, $SE= .255$, 95% CI [.025, .075], $t=2.289$, $p<.05$] revealing that the relationship between self-efficacy and job satisfaction was moderated by gender. These results support hypothesis 2 which states that gender moderates the relationship between self-efficacy and job satisfaction.

From the slope analysis, it is possible to conclude that for high levels of change self-efficacy women tend to feel more satisfied than men. Contrarily for low and moderate levels of change self-efficacy men tend to be more satisfied. However, for both genders higher levels of change self-efficacy result in higher levels of job satisfaction.

6. DISCUSSION

In line with the idea of this study to show whether gender may make a difference between the level of perceived self-efficacy during change and job satisfaction, this study contributes decisively to our knowledge on perceived change self-efficacy and job satisfaction with regards to gender differences. Our results show that women require higher levels of perceived self-efficacy related to change as men to achieve the same levels of job satisfaction. Herewith, we can contribute to the field of work research related to the management of organizational changes and gender. While we firstly provide further evidence that a positive relationship exists between perceived levels of change related self-efficacy and job satisfaction, our study additionally highlights that women need to perceive higher levels of self-efficacy during organisational changes at the workplace to perceive the same high levels of job satisfaction as men.

The question arises why women have to perceive higher levels of self-efficacy related to change than men to perceive the same level of job satisfaction. The answer to this question may be anchored in the long history of gender roles in our society. Gender roles are strongly linked to gender-specific stereotypes, which are formed through the observation of women and men. These roles include assumptions about how women or men should behave in relation to their gender in order to be accepted by society. Discrimination against women in the workplace or disadvantages in their careers often occurred due to the discrepancy between the ascribed gender-specific attributes of women and the requirements for management positions – something that becomes of even more relevance in the transport industry in which women present only a minority group. Data provided by the Statistics National institute [INE] Spain based on the national economic activity code [CNAE] shows for example that 5,2% of people are employed in the transport sector and that 19,35% of these are female. This gender gap has remained similar over the past 10 years, and was in fact widening in 2019 with 829.200 male employees in the sector

against and 198.900 female employees. A similar picture can be drawn in the other countries of this study, e.g. women in Italy represent 42,1% of the workforce, occupying the lowest position in Europe, for transport this is 21,9% [66]. As a result, studies [67, 68] have found that women are more likely to encounter challenges on their career path compared to men. Results in the public sector [e.g. 69] show that women often encounter subliminal, invisible barriers or disadvantages within the corporate culture, for example fewer career opportunities, promotion only up to a certain level in the hierarchy and a lower salary, despite the same position as their male colleagues. One key finding of these studies is that the micro-political processes in organisations seem to have a fundamental impact on careers, as they are part of the informal system that allows insiders and rules out other people which could be also a reason for the perceived differences in change related self-efficacy between women and men as studies show that women tend to orientate themselves towards work processes so that everything runs according to regulations and thus often ignore the importance of internal political processes for their own careers and thus fail to recognize career-relevant relationships and networks or are reluctant to get involved [70, 71, 72].

Organizations can be viewed like political arenas: In this social construct, one is in constant competition for limited resources, power and influence. Accordingly, to be successful, individuals must have a certain level of political skill in order to achieve the desired success. If professional success can be influenced by a special behaviour, women should develop and use this ability to build strategic networks and alliances as well as to identify, win over and influence the key players in the company.

What does this mean for women, and the management of organizational change in the transport workplace? Women can actively influence their careers and benefit from proactive behaviour, especially political skills and strategic career planning. Personal attitudes and thus self-efficacy have a major influence on professional success. Organisations can support women in this through targeted support measures and training as developed in the Horizon project 'Transport Innovation Gender Observatory - TInnGO' project [<https://www.tinngo.eu/>]. Education and good practices examples may encourage equality and diversity in various spheres of life and diminish the present stereotypes. Presenting existing cases of gender aspect integration in different fields, especially such male dominant as the transport sector, the future employees could be encouraged to work and pursue the career. In addition, it is also necessary to break down deeply anchored assumptions and gender stereotypes in our society and to create awareness of unconscious prejudices about gender. Gender discrimination could lead to further promoting socio-economic differences between women and men.

6.1. Limitations

As in other studies, we will now highlight the key limitations of our study. First of all, our study results are based on a cross-sectional sample. Thus, we cannot show any procedural change regarding the behaviour or perceived self-efficacy between

women and men during the organizational change. Future studies should try to observe potential changing attitudes and behaviours to enrich our knowledge on the relationships between self-efficacy related to change and perceived job satisfaction. Secondly, our sample is relatively small as it was very hard to get access to the transport departments in the local authorities that went through organisational changes that could be compared with each other. We were very pleased to get access to the local authorities through the H2020 CIVITAS SUITS and TINNGO projects that allowed us to collect this data. However, more comprehensive studies are needed in this field to demonstrate stronger results. Further, we encourage future research to highlight further minority groups such as transgender to understand the relationship between perceived level of self-efficacy during change and job satisfaction even more in detail.

7. CONCLUSION

This study highlights the relevance for the management of organisational change in the workplace to pay attention to gender when it comes to perceived levels of self-efficacy and job satisfaction that are decisive to drive a change successfully. Our study in different local authorities' departments in the transport field show that women require higher levels of self-efficacy during change to perceive the same levels of job satisfaction as men. This result leads to clear managerial implications for the management of change within organizations to be able to implement change successfully.

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