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CRITICAL UPWARD COMMUNICATION, UNCERTAINTY, JOB CRAFTING, AND PROACTIVE PERFORMANCE: A MODERATED MEDIATION MODEL

Master's Thesis
Work and Organizational Psychology

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I declare that the I have compiled the paper independently and all works, important standpoints and data by other authors have been properly referenced and the same paper
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ABSTRACT

This research examined the relationship between critical upward communication, uncertainty, job crafting, and proactive performance. Considering the transition of organizations from industrial manufacturing to knowledge and service based companies, the author aimed to investigate factors contributing to proactive performance expected of the modern employee. Drawing sample from several knowledge and service based organizations located in the Baltic region, the survey yielded several significant models. Job crafting mediated the positive relationship between critical upward communication and both individual and team proactive performance. It was also found that critical upward communication promotes individual proactive performance, mediated by one dimension of job crafting: increasing challenging job demand; this relationship was furthered by uncertainty as a moderator between critical upward communication and job crafting: increasing challenging job demand. The theoretical explanation of models and discussion on particular subscales of these primary constructs were detailed, followed by limitation of the current research as well as future research possibilities. Finally, practical implications and value of the models constructed in this research were discussed.

INTRODUCTION

Modern organizations face problems unique to their time due to technological and economic advancements. Traditional industrialized economy is gradually adapting to today's diversified, IT-reliant, and competitive free market environments. Not only does this new focus applicable to knowledge-based industries such as IT and service sectors, but also critical infrastructures such as transportation, firefighting and nuclear power plants which rely on info communication technologies to maintain safety and stability in complex operations. Transformation toward service and knowledge-based economy, in developed as well as developing countries alike, necessitates a re-examination of organizational structure, jobs, and individual competencies.

New organizational nature is a major factor to consider in current industrial psychology field. Free market economy has led to smaller, leaner companies to multiply in face of traditional large organizations. Small to medium sized companies (SMEs) are now the focus of government and private investors not only in Western economies, but in developing Asian economies as well. European nations, despite varying degrees of market freedom, are gradually converging to this new industrial reality. Former Soviet bloc countries, while traditionally operate in centralized economic model, are now transitioning rapidly into IT and service related economies.

The Baltic States, for instance, underwent perhaps the most rapid transitions within the EU, from former Soviet centralized economy to the new NATO free market reality, fueled by globalization and IT innovations. Although stages of development differ between Estonia, Latvia, and Lithuania, these new members of the European Union are subject to similar labor regulations and market processes like neighboring Finland. Whether in advanced economies like Nordic Finland or new digital societies like Estonia, the process of transformation from industrial economy to knowledge based economy is pertinent for industrial psychologists to capture.

The promotion toward knowledge-based economy among the Baltic States inadvertently pushes for drastic socio-economic changes. Service industries, in contrast to manufacturing and construction, have been the fastest growing sector in Baltic economies since early 2000s (Supe &

Jurgelane, 2017). For organizations, sustainability, human resource development, and innovation, are just some new aspects of focus in the workplace in these countries (Krisciunas & Cizauskaite-Butkaliuk, 2014). With economic performance remaining below the EU average, the Baltic States are very much alive in the process of public-private integration, forging high quality, flexible workforce in a competitive global context.

Employee behaviors in the context of knowledge and service based economies thus differ from their traditional counterparts in manufacturing and physical jobs. From an organizational perspective, human resource management is no longer simply administrative. Rather, strategic human resource management is preferred nowadays to align recruitment, training, and management of workers with business goals. In innovative organizations, a commitment based human resource management which invests in health relationships and long term development of employees, has been shown to promote knowledge exchange and synthesis (Collins & Smith, 2006). Employees in SMEs as well as autonomous teams in large organizations alike are often expected to be adaptable, innovative, and proactive. Strong commitment and motivation based on loyalty rather than bureaucratic transaction or control, are additional desirable qualities of knowledge workers.

Employee proactive performance is essential for knowledge intensive companies to succeed in today's business environment. Organizations in general face much environmental uncertainty due to market volatility, technological innovation, or complexity of operations. Internal uncertainty is also common, caused by events such as mergers or reforms. Under such circumstances, individual agency, preferences and strengths are often factored in in modern organizations to maximize flexibility and efficiency. For innovative companies, employee proactivity is not only relevant for the organization, but also for the creative nature of work which constantly demands original input.

A precursor to proactive performance would be how much autonomy knowledge workers possess at workplace. Job crafting (JC) refers to employee behaviors which customize their tasks, environment, and relationships at work (Wrzesniewski & Dutton, 2001). This relatively new concept has become a popular research topic in the field of human resource, industrial

psychology, and management. In contrast to standardized manufacturing work in the industrial age, crafted jobs in today's innovative companies is not only more relevant, but also more inevitable. In close-knitted teams with a commitment based human resource principle, the freedom and autonomy for employees to design their work and leisure is arguably one of the most important agencies to ensure sustainable and effective organizational performance.

A visible hallmark of small flat innovative organizations, compared to large hierarchical ones, is the communication dynamics. Instead of traditional top-down, one way communication from managers to workers, small innovative companies experience less power distance between supervisors and employees. Although the importance of feedback has been frequently mentioned in industrial psychology and management science, it often address supervisor-to-employee performance appraisal, often in a formalized setting. Employees voicing their different opinion than managerial decisions, by contrast, is a traditionally shunned communicative behavior at workplace. In knowledge-based innovative companies, however, employee participation in decision making and strategy formulation is often crucial to performance outcome. In a dynamic, innovative, and competitive environment, supervisors much detect and plan for potential contingencies. The possibility for critical upward communication (CUC) also forges a trust culture within small teams. The possibility for employees to address concerns and problems upward makes small teams more responsive and effective.

The aforementioned characteristics of knowledge and service based organizations led the present study to speculate how CUC can promote proactive performance of employees. The potential role of uncertainty and JC in this relationship were also investigated. The research hypothesized on the mediating and moderating role of uncertainty and JC in the primary causal relationship between CUC and proactive performance. More specifically, the research aimed to find out whether CUC directly contributes to proactive performance, and whether uncertainty, and/or JC play a mediating or moderating role between the independent and dependent variables.

1. LITERATURE REVIEW

1.1 Proactive Performance as the New Standard

While industrialized organizations in the 20th century require pre-determined skill sets from workers, and standardized performance criteria to ensure product homogeneity, today's knowledge and service industries rely on decentralized individual capacity, operating in smaller companies or interdependent small units. Employees are no longer expected to simply follow a given set of procedure for work, but rather, align their effort with the overall business goal of organization. Proactive performance has been associated with greater knowledge transfer, organizational learning, and overall organizational performance (Meutia, 2017), and widely expected as a core element of job performance (Crant, 2000). Innovation has been shown to benefit from proactive behavior (Maden, 2005, Crant, 2000). Proactivity, therefore, constitutes a core demand of the modern worker.

Proactivity is defined as self-initiated efforts to make progress, predicting and managing problems, as well as capturing opportunities (Parker, Bindl & Strauss, 2010). Belschak & Den Hartog (2010) claimed that there are three dimensions of proactive behavior: pro-self proactivity which aims to improve one's own career prospect and advancement, prosocial proactivity that improves colleagues' work performance and interpersonal relationships, and finally, pro-organizational proactivity that contributes to the company's effectiveness.

These three dimensions suggests that different reasons could contribute to proactive behavior at workplace. The precursor for proactive performance has been widely studied in literature. One existing focus of antecedent to proactive performance is a proactive personality. This personality or trait perspective can be traced back to Bandura's social learning theory (1977), whereby individuals have the capacity to actively engage and transform environment. Bateman & Crant (1993) pioneered the construct of the proactive trait, in contrast to the long established Big Five personality dimension. The proactive trait is a valid construct in predicting proactive behavior. Innovation has been shown to benefit from proactive personality (Kong &

Li, 2018). Workplace proactive performance, therefore, can partially be driven by such predisposition.

More recent literature, on the other hand, has been arguing for situational precursors of proactive behavior. Despite predisposition, situational factors such as future rewards and personal career advancement, can lead to proactive behavior. Morrison (1993) suggested that socialization is a major component of proactive behavior. Employees might step out of their designated role in order to form closer interpersonal relationships with coworkers and supervisors. Similarly, Thompson (2005) found out that proactive performance contributes to better work outcome by means of social capital expansion. Proactive behavior with a social agenda resonates with the pro-self and pro-social dimensions proactivity proposed by Belschak & Den Hartog (2010).

Parker (1998, 2000) explained proactive behavior similarly from a predispositional perspective. Role-breath self-efficacy and flexible role orientation are intrinsic factors contributing to the worker's motivation toward proactive behavior. These two factors proposed by Parker describe an individual propensity to actively go beyond prescribed technical requirement of a job, to assume responsibility of contextual requirements at workplace. These two precursors of proactivity, however, differ in nature. While flexible role orientation reflects more on disposition, role-breath self-efficacy reflects individual capacity that can be acquired via learning, social support, and resource sufficiency at work.

Regardless of proactive predisposition, contextual factor such as long-term rewards plays a role in proactive behavior. Beltrán-Martín et al. (2017) found that in a high performance work system, whereby workers are rewarded proportionate to performance, contributes to high proactive behavior. This relationship was found to be mediated by Parker's role-breath self-efficacy, but not flexible role orientation. Similarly, Batistič et al. (2016) discovered that proactive behavior is stronger when organizations adopt a market pricing climate, which is characterized by mutually benefited interpersonal relationship, efficiency utilization of personal resource, and helping behavior which is more economic than moral in nature.

1.2 Linking Critical Upward Communication and Proactive Performance

Similar to proactive behavior, CUC is essential for effective and efficient operation in modern organizations. Tourish (2005) claimed that management tends to make hash decisions without adequately considering all factors of interest. CUC improves decision making process in organizations by making aware the potential overlooked problems more tangible to workers than supervisors. CUC does not only entail speaking out concerns and problems, but more importantly, speaking up with difference in opinions. Closeminded supervisors negating opposite views in order to commit to an already made decision puts the organization at risk of misaligned strategy.

The interpersonal dynamics in innovative and service companies are determined very much by its leadership and climate. In terms of SMEs or small units in large organizations, the structure of organization tend to be flat with low power distance. In such flat structures, an innovative climate is characterized by decentralized power and delegation of responsibility; individual workers are encouraged to focus on organizational objectives beyond their own task objectives in order to survive the fast changing environment (De Cock et al., 1984).

An innovative culture, on the other hand, facilitates knowledge sharing, expedites the unfree-change-refreeze process for companies to quickly reorient itself to new market realities (Kalyani, 2011). Kamal Kumar & Kumar Mishra (2017) identified factors affecting whether employees will actually carry out upward communication – the perceived supervisor power, company politics, and their own social skills. Although individual political skills differ, supervisor leadership style and office political climate are very much determined by climate and culture. In the case of innovative companies, knowledge workers are essentially in charge of productivity with supervisors functioning in a supportive role. The importance of CUC, therefore, is as much to individual worker clarity as to organizational effectiveness.

In addition to an innovative, supportive culture and leadership, employees are more likely to give CUC when they perceive their feedback potentially leading to tangible changes, as well as the leadership's power to handle the necessary strategic management and contingencies.

(Detert & Treviño, 2010). In traditional, large organizations where deciding power is truncated by hierarchy, Detert & Treviño stated that employee expectation of the effectiveness of their CUC largely depends on whether CUC is given to the right supervisor – sometimes skipping hierarchical levels. However, communication, in additional to serving as information exchange, also functions as a community building agent (Elving, 2005). In small teams bonded by close interpersonal relationships, employees would more likely to give critical upward feedback when their opinion is valued as part of strategic information

Another underlying drive for CUC to occur is perceived team consensus. Individual employee is more likely to speak up when they believe their opinion is shared by other team members; conversely, the perception that particular opinions are not supported by others will lead to silence (Bowen & Blackmon, 2003). Employees who are afraid to speak up to supervisors, or believe that speaking up will make no change, are likely to remain silent or acquiesce with what they actually disagree with (Van Dyne et al., 2003). Tourish & Robson (2006) argued that the lack of CUC can produce iatrogenic problems in the organization, that is, problems due to internal management rather than market factors. Innovative marketplace is characterized by new opportunities and new challenges. Information sharing and collective learning contribute to the survival of knowledge based organizations in the marketplace. Top-down information blindness, or wishful thinking, can be detrimental to strategic positioning of companies by promoting a homogenous, convergent groupthink (Bénabou, 2013), rather than divergent innovation.

The current research is interested in how CUC and proactive behavior relate with each other. CUC by itself can be a form of proactive behavior, as employees step out of their subordinate role and venture to offer constructive criticism or suggestions to their supervisors. CUC is also a form of interpersonal activity, with both the speaker's voicing behavior based on perception of the supervisor, and the team. The social nature of proactive behavior aligns with that of CUC; in other words, healthy CUC could be a form of social capital needed for proactive behavior to occur. Organizational contexts such as employer expectations and employee self-advancement are also plausible mechanisms whereby CUC possibility allows for proactive input

for pro-self as well as pro-organizational performance. Therefore, the first hypothesis of the current research is as follows:

Hypothesis 1: Critical Upward Communication leads to Proactive Performance

1.3 The Role of Uncertainty

Aside from cultural, leadership, and employee personality, proactive behavior is also affected by perceived uncertainty. Both internal change, such as merger and downsizing, and external volatility in the marketplace and economic cycle, can generate employee perception of uncertainty (Juanchich, Gourdon-Kanhukamwe & Sirota, 2017). Today's industries face fierce competition and pressure to keep up with constant technological innovation. In addition to market forces, unpredictable economic circumstances often mean organizational reform and renovation. The escalation in competition and innovation is especially true when the number of SMEs increase in recent decades, gradually overtaking the less vulnerable, traditional large firms; while large organizations constantly face external threats from the smaller new entrants that capitalize on particular niches.

Dess & Beard (1984) spelt out three dimensions of perceived uncertainty: capacity, complexity and dynamism. These dimensions of uncertainty, or dimensions contributing to perceived uncertainty, reflects the Job Demands-Resource Model (Bakker & Demerouti, 2007), in that they represent different types of resources available to the organization and employees, from financial, human, to social resources. Freel (2005) categorized these resources as firm level (internal), market level (demand, technology, competition), and economic level (growth vs. depression).

Uncertainty, therefore, can be conceptualized as a precursor of innovative use of resources to mitigate internal and environmental uncertainty. Wernerfelt & Karnani (1987) states that under uncertainty, organizations tend to channel resources strategically in order to maximize flexibility. For knowledge and service based organizations, uncertainty from customer behavior, market volatility, and competition levels, collectively contributes to higher job demand from employees. In order to stay on top of organizational performance, newer, more efficient ways of

working have to be thought out to contain numerous contingencies and capture new opportunities.

Perceived uncertainty, whether from environmental volatility or internal organizational reform, often leads to an increase in organizational communication. Berger & Calabrese (1975) explained this behavior as a drive toward uncertainty reduction. Employees communicate with one another and supervisors in order to clarify current situation and future directions during times of internal change as well as external unpredictability. Using uncertainty reduction theory, Malik & Kabiraj (2010) classified three levels of communication within an organization during times of uncertainty: organizational specific, interdepartmental, and functional. Reducing uncertainty in each of these levels necessitates information and knowledge sharing, with the common goal of keeping the organization alive and effective.

It follows that uncertainty plausibly play a role in upward communication. Employee voicing behavior has been observed to increase when uncertainty level is high, whether due to internal administrative process (eg. shorter tenure), or ambiguity of organizational goals (Takeuchi, Chen & Yin Cheung, 2012; Detert & Trevino, 2010). Horizontal communication between colleagues and departments might help ease feelings of uncertainty about the overall organizational future, but upward communication is essential for workers to understand the functional role expected of them by supervisors.

On the one hand, CUC is likely to be higher during times of uncertainty, when employee's expectation needs to be clarified by supervisors, and the team as a whole need to decide on more innovative measures to cope with increasing job demands with limited resources. On the other hand, uncertainty requires extra job demand from employees to manage possible contingencies and seize potential opportunities, and mutual support, which align with aforementioned proactive behaviors.

Hypothesis 2: Critical Upward Communication promotes Proactive Performance to a higher degree when perceived uncertainty is high.

1.4 The Role of Job Crafting under Uncertainty

Despite a universal increase in communication, uncertainty has different types of impacts on organizational goals. While some companies are inclined to innovate under uncertainty, others prefer to stick to existing norms (Jahanshahi, Zhang & Brem, 2014). The precise culture, leadership, and phase of organizational development certainly play heavy roles on which type of behavior is exhibited when organizations face uncertainty. One reason for a proactive, rather than conservative response to uncertainty, is individual degree of freedom to initiate actions.

JC occurs when individual worker actively tailor work according to personal ability, preference, or needs (Wrzesniewski & Dutton, 2001). Often perceived as a proactive behavior, it focuses on the individual level of deviating from prescribed standard of workflow in order to achieve more efficiency. Maden (2016) found that a high need-supply fit for individual resource at workplace leads to higher proactivity, mediated by improved work engagement.

However, not all JC behaviors are proactive in nature. Bruning & Campion (2018) examined the role-crafting aspect of JC, and found that while a more approach based role crafting leads to role and social expansions, an avoidance based role crafting behavior can lead to withdrawal from responsibility. In an innovative, competitive environmental context, the former form of role crafting is needed for proactive behavior, especially when an expansionary role crafting beyond designated worker function aligns with role breath self-efficacy and flexible role orientation (Parker 2000).

To understand this dual nature, JC itself is a complex behavior which requires articulation. JC behavior has been well defined by Tims, Bakker & Derks (2012). The multi-study conducted by authors found out four dimensions of JC: increasing social job resources, increasing structural job resources, increasing challenging job demands, and decreasing hindering job demands. These dimensions are aligned with the Job Demands-Resources Model

(Bakker & Demerouti, 2007), showing that JC, in general, is a resource optimizing behavior to mitigate increasing job demand.

Current literature theorizes that JC usually occurs in stable, supportive environment (Freel, 2005), and is a sought after behavior as it has been shown to boost employee engagement and satisfaction levels, as well as reducing turnover rate for the organization. Uncertain, turbulent environment, therefore, seems to prevent JC behavior. Certain stability has been shown to contribute to JC behavior, such as employee work experience (Niessen, Weseler & Kostova, 2016) and positive relationship with superiors and colleagues (Dutton & Heaphy, 2003).

When uncertainty is the norm in knowledge and service industries, however, it could function as a precursor for increasing recourse crafting to cope with contingencies and maximize efficiency. Under innovative and supportive climate, JC improves person-job fit (Tims & Bakker, 2010), which might not be optimized by preset rules and procedures. JC can occur on both individual and team levels. For individuals, proactive personality and high level of preexisting person-job fit are antecedent to JC behaviors (Wrzesniewski & Dutton, 2001); regulatory focus on promotion, rather than prevention, as well as work autonomy, are also factors contributing to JC (Tims & Bakker, 2010). On a team level, a supportive culture and teamwork engagement can lead to collective JC behavior, thereby improved performance (Tuan, 2017).

The current research argues that JC behavior in today's business environment has evolved from individual worker's tailoring of work to improve satisfaction and wellbeing. But rather, performance and survival of organization, as well as advancement of one's own career, often relies on designing one's own work in order to improve organizational effectiveness. While both top down endorsement and button up feedback are critical to work design and redesign, JC rests within individual worker's bottom-up innovative behavior, and is not always made aware to supervisors (Hornung et al., 2010). The intrinsic need to have autonomous power over one's work has been long correlated with proactive performance (Hackman & Oldham, 1975).

Although existing literature suggests that stable environment fosters JC, it is important to make a distinction between environmental volatility and perceived uncertainty at work. CUC can articulate areas of uncertainty, prompt proactive engagement and contingency planning, thus reducing perceived uncertainty within an organization. The lack of internal perceived uncertainty is often why JC remains a tentative option for employees. Acknowledging internal uncertainty often requires more psychological capital from employees. Very often, internal uncertainty communication requires employees to use self-referent words, such as "I" feel uncertainty (Juanchich, Gourdon-Kanhukamwe & Sirota, 2017), admitting personal opinion that might be perceived as undesirable. The organizational norm of CUC, therefore, encourages employee voice in times of uncertainty, allowing employees to confirm how to utilize their resources to meet challenging demands from an uncertain environment.

In other words, aspects of uncertainty - complexity, capacity and dynamism of an uncertain situation (Dess & Beard, 1984) – can be addressed by CUC, leading to lower perceived uncertainty, thus promoting perceived stability and JC behavior. Barrett (2018) found that healthcare professionals, during the transition from pen-and-paper system to electronic health record system, were more likely to integrate the new system in their work when communication with management and experts occurred. When employees are encouraged to speak up about concerns and doubts and reciprocated with top-down clarification, an uncertain situation is perceived as less complex, more manageable, and more predictable.

Considering the existing findings of CUC, uncertainty, and proactive performance, JC arguably plays a role in hypothesized relationships between these variables. JC is a dynamic construct which is based of self-efficacy of individual employees (Tims Bakker & Derks, 2014). By self-initiating change in how structural, social and cognitive resources are manipulated to meet the challenging demands in a turbulent business environment, knowledge and service workers can expand their role breath self-efficacy and role flexibility, which preludes proactive performance. Uncertainty provides the pressure for workers to seek innovative solutions and workflows, but only when actual uncertainty is translated into low perceived uncertainty via CUC. The freedom and empowerment derived to offer CUC is essential in predicting individual

engagement to JC and overall proactive performance. Subsequently, another hypothesis is formulated:

Hypothesis 3: CUC positively contributes to Proactive Performance via Uncertainty and JC.

The focus of current research aims to investigate hypothesized relationships between CUC and proactivity, by means of uncertainty and JC behavior. Since CUC generally reflects the level of flatness in knowledge and service organizations and supportiveness of their culture, it is deemed by present author to be the driving force toward proactive performance. Uncertainty as an extrinsic factor to employees' perception of work can either elicit efforts to craft one's work more efficiently, or suppress deviation from established norms – the direction of which very much depends on top-down endorsement, as reflected by a culture of CUC. JC, in turn, is the specific mechanism by which initiated workers can produce proactive behavior, which leads to overall proactive performance.

2. METHODOLOGY

2.1 Sample and Survey Procedure

The research drew sample from a number of innovative and service based organizations from the Baltic region, namely Estonia, Finland, and Lithuania. Types of companies represented IT, education, finance, transportation, and entertainment industries. A total of 83 valid responses were collected. All responses were anonymous and processed only in aggregate format. In addition, due to the sensitive nature of certain questionnaires regarding the workplace interpersonal dynamics, all questionnaires are administered on a voluntary basis. For electronic format, repeated participation was prevented through cookie settings.

Respondents were composed of 27 males and 46 females, with 64.4% within age range 18-35 years old, 30.1% 36-50 years old, and 5.5% more than 50 years old. 34.9% of respondents worked in the field with regular customer contact, 32.6% were office workers, and 4.3 % worked

in management. Majority of respondents had working experience in similar industries less than six year 71.2 % (34.2 % less than three years), and 28.7 % more than seven years (12.3% more than 12 years). In terms of educational level, 66.7 % of respondents had higher educational degrees, with 33.3 % having high school degrees.

The questionnaire were distributed both electronically, through LimeSurvey, and via pen-and-paper copies where respondents. The format of administering survey depended on convenience of employees who work in different settings, such as office and field workers. In addition to the default English version of questionnaire, Estonian and Finnish versions were made available.

2.2 Survey Items

A total of 39 items were included in the questionnaire. Target variables of this research, namely CUC, uncertainty, JC, and proactive performance, along with other potential interest variables regarding different types of performance levels, gender, department type, age, and experience are incorporated into the survey questionnaire. Other than demographic information items, all items were based on various point Likert scale in ascending order (Appendix). The questionnaire took on average 10-15 minutes to complete. Data collection was extended over a period of five months from January to May, 2018. Aggregate data was processed via SPSS at the end of the data collection period.

Due to a lack of measurement scales in literature, three original items measuring critical upward communication (Cronbach's alpha = .92), such as "*I can express my disagreements with my boss freely*" and "*I can tell my boss when things are going wrong*" were incorporated in the questionnaire.

Three items measuring uncertainty (Cronbach's alpha = .87) were adopted from Colquitt et al. (2012). Sample items included "*There is a lot of uncertainty at work right now*" and "*I cannot predict how things will go at work.*"

Items measuring JC were adopted from the study by Tims, Bakker & Derks (2012), with 21 items in total (Cronbach's alpha = .68). The JC scale consists of four subscales (Cronbach's alphas > .70): increasing structural job resources (five items), decreasing hindering job demands (six items), increasing social job resources (five items), and increasing challenging job demands (five items). Both overall average JC score and individual subscale averages were factored in subsequent analysis with regard to hypotheses.

Proactive performance was measured with the performance model scale designed by Griffin, Neal & Parker (2007). A total of six items were used. Three items were present in each of two subscales – individual proactive performance (Cronbach's alpha = .87) and team proactive performance (Cronbach's alpha = .91). Items entailed description of behaviors carried out by respondent in the past month, such as "*Come up with ideas to improve the way in which your core tasks are done*" and "*Developed new and improved methods to help your work unit perform better*."

In addition, gender, age and working experience, educational level were used to measure demographics. Age was coded by three ranges: "18-35", "36-50", and "50+" years old; while working experience by four: less than "3 years", "3-6 years", "7-12 years", and "more than 12 years". Question on the department of employee was presented in free answer format, and later coded into three categories: field employee, office employee, and management. Education level, likewise, was coded for high school, college, master and PhD (or equivalents).

2.3 Statistical Analyses

A multilinear regression was carried out first to preliminarily investigate variable correlations and potential models. Said variables and demographics were tested as potential IV, against proactive performance as the DV. In particular, CUC and proactive performance was tested to see if they have a direct relationship. Uncertainty and JC, including subscales, were tested to find out potential direct relationships with proactive performance. Other correlation findings were also investigated as part of the results.

Subsequently, mediation and moderation analyses were carried out using PROCESS macro by Hayes (2013) in SPSS. More specifically, uncertainty was tested as the mediator and moderator between CUC and proactive performance. Likewise, JC was tested between CUC and proactive performance. Uncertainty, in addition, was also tested between CUC and JC based on theoretical speculation.

Dual mediation analysis followed, investigating the potential dual mediating effect of uncertainty and JC between CUC and proactive performance. Finally, a moderated mediation model was tested, incorporating uncertainty and JC as potential moderator and mediator between CUC and proactive performance.

3. RESULTS

3.1 Multilinear Regression Analyses

Using CUC, uncertainty, and overall JC (average of all subscales) as IVs, multilinear regression analyses was carried out to predict proactive performance as the DV. Each regression analysis was used to predict individual proactive performance and team proactive performance, respectively. Analyses were conducted with a 1,000 sample bootstrapping method with bias-corrected confidence intervals of 95%.

In predicting individual proactive performance based on CUC alone, a significant regression equation was found ($F(1, 81) = 7.393$, $p < .05$), with an R^2 of .084. The model predicted individual proactive performance is equal to 2.531 + .262(CUC). When prediction was based on both CUC and uncertainty, analysis showed that uncertainty did not contribute to the model. When adding overall JC to CUC as IVs, a significant regression equation was found ($F(1, 81) = 20.689$, $p < .000$), with an R^2 of .203. Individual proactive performance is equal to .594 + .696 (overall JC), while CUC was excluded. Both CUC and overall JC, therefore, predicted individual proactive performance. However, overall JC alone accounted for the most variance.

Subsequently, in predicting team proactive performance using overall JC, uncertainty, and CUC, two significant regression models emerged. The first model ($F(1, 81) = 15.199$, $p < .000$) had an R^2 of .156, and predicted that team proactive performance equals to .203 + .753(overall JC). The second model ($F(2, 80) = 21.214$, $p < .000$) had an R^2 of .218, and predicted that team proactive performance equals to -.179 + .555(overall JC) + .302(CUC). Uncertainty alone did not significantly predict variance in team proactive performance. In predicting team proactive performance, overall JC and CUC together accounted for the most variance.

Using six IVs which were CUC, uncertainty, and each of the four subscale of JC (increasing structural job resources, decreasing hindering job demands, increasing social job resources, and increasing challenging job demands) the next analyses were used to predict both individual proactive performance and team proactive performance.

When predicting individual proactive performance, only one significant model emerged ($F(1, 81) = 34.587$, $p < .000$), with an R^2 value of .299 and predicted individual proactive performance equals 1.343 + .527 (JC: increasing challenging demands).

In predicting team proactive performance, three significant models were found. The first model ($F(1, 81) = 18.112$, $p < .000$, $R^2 = .186$) predicted team proactive performance equals 1.256 + .513(JC: increasing challenging demands). The second model ($F(2, 80) = 13.986$, $p < .000$, $R^2 = .259$) predicted team proactive performance equals -.048 + .570(JC: increasing challenging demands) + .284(JC: decreasing hindering demands). The third model ($F(3, 79) = 11.091$, $p < .000$, $R^2 = .296$) predicted team proactive performance equals -.498 + .445(JC: increasing challenging demands) + .278(JC: decreasing hindering demands) + .246(CUC).

From these regression analyses, models which accounted for the most variance of DVs provided insights in the next steps of analyses. Individual proactive performance was best explained by JC: increasing challenging demands; while CUC only significantly predicted individual proactive performance when combined with overall JC. Team proactive performance was best accounted for by JC: increasing challenging demands, removing hindrance demands, and CUC. Uncertainty, on the other hand, did not show significant predicting power on DVs.

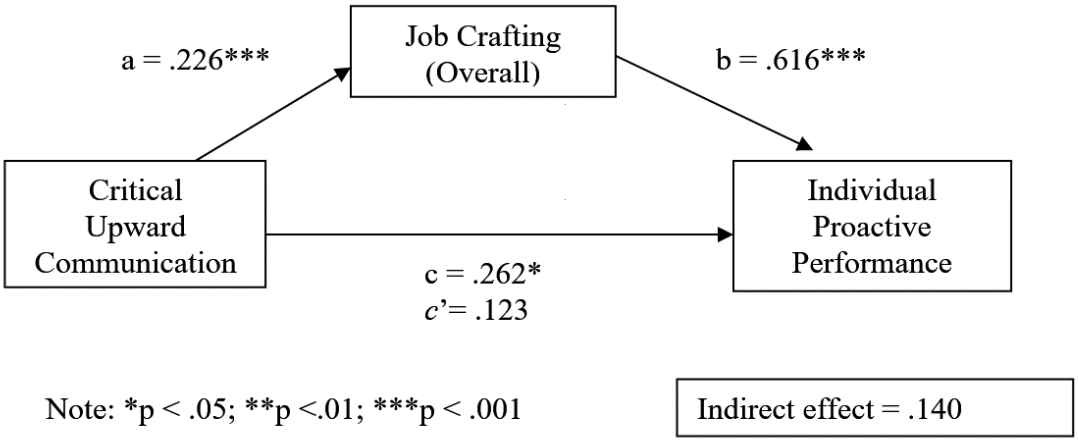
When demographic variables were factored into predicting individual or team proactive performance, they contributed to non-significant prediction of variance. However, some noteworthy correlations were found. Uncertainty negatively correlated with department hierarchical level (r = -.447, n = 83, p < .01) as well as with academic level (r = -.296, n = 83, p < .001), but not with years of work experience. CUC was positively correlated with department hierarchical level (r = .384, n = 83, p < .01), overall JC (r = .384, n = 83, p < .01), JC: increasing structural resources (r = .384, n = 83, p < .001) and increasing challenging demands (r = .384, n = 83, p < .05), but negatively correlated with uncertainty (r = -.581, n = 83, p < .001).

3.2 Mediation Analyses

Analyses were conducted using PROCESS macro (Hayes, 2013) in SPSS, using a 5000 sample bootstrapping method with bias-corrected confidence estimates. Bootstrap resampling procedures establish confidence intervals (Cls) set to 95% for testing statistical significance of indirect results.

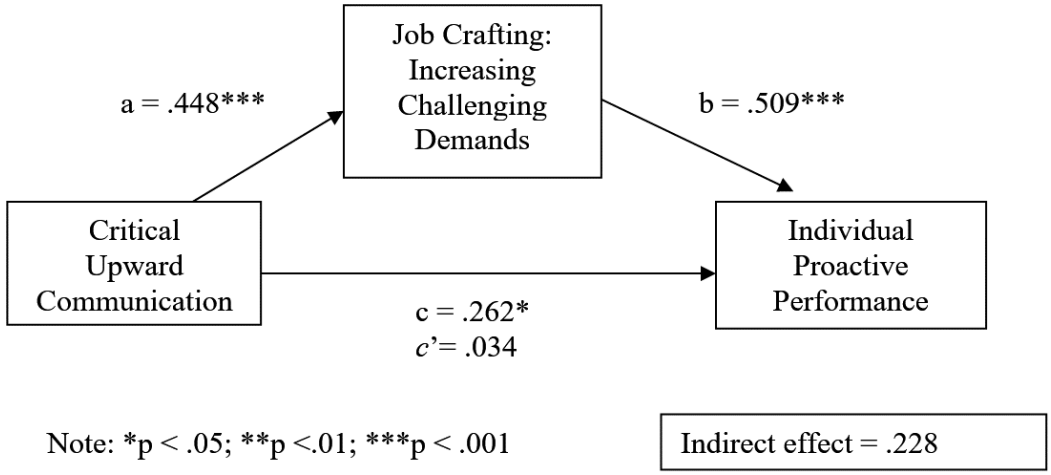
First of all, a mediation analysis between CUC as IV, overall JC as mediator, and individual proactive performance as DV yielded a significant relationship (*Figure 1*). CUC was positively associated with individual proactive performance (B = .262, t(81) = 2.225, p < .05). It was also found that CUC was positively associated with overall JC (B = .226, t(81) = 3.132, p < .001). Lastly, overall JC was positively associated with individual proactive performance (B = .616, t(80) = 3.647, p < .001). Results of the mediation analyses (conditional indirect effects) confirmed the mediating role of overall JC in the relationship between CUC and individual proactive performance, B = .140, CI [.049, .270]. In addition, results indicated that the direct effect of CUC on individual proactive performance became non-significant (B = .123, t(80) = 1.132, p = .261) when controlling for overall JC, thus suggesting full mediation.

Figure 1: CUC increases individual proactive performance, fully mediated by overall JC.



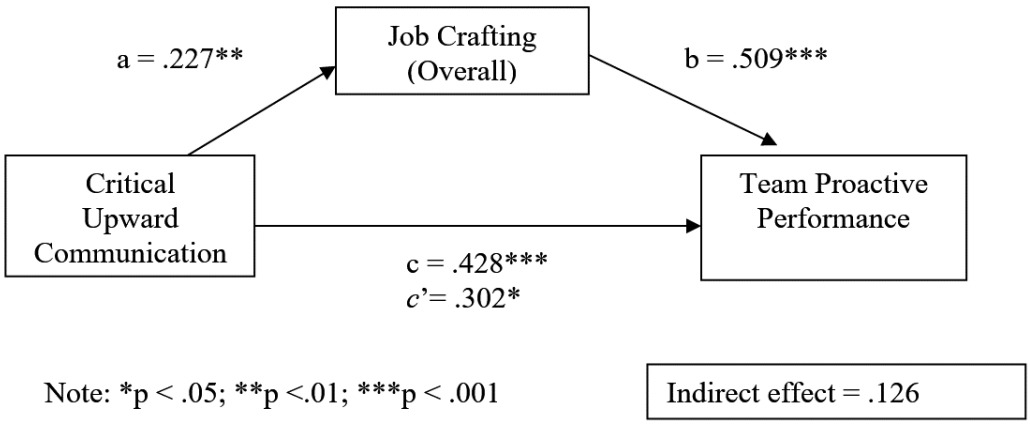
Another significant mediation finding showed that CUC (IV) was associated with individual proactive performance (DV), via JC: increasing challenging demands (mediator). CUC was positively associated with individual proactive performance (B = .262, $t(81) = 2.225$, $p < .05$) and with increasing challenging demands (B = .448, $t(81) = 4.175$, $p < .001$). Increasing challenging demands was positively associated with individual proactive performance (B = .509, $t(80) = 5.336$, $p < .001$). Results of the mediation analyses (conditional indirect effects) confirmed the mediating role of JC: increasing challenging demands in the relationship between CUC and individual proactive performance, B = .228, CI [.104, .409]. Results also indicated that the direct effect of CUC on individual proactive performance became non-significant (B = .034, $t(80) = .324$, $p = .747$) when controlling for JC: increasing challenging demands, thus suggesting full mediation (*Figure 2*).

Figure 2: CUC increases individual proactive performance, fully mediated by JC: increasing challenging demands.



Finally, a partial mediating relationship was found between CUC (IV), overall JC (mediator), and team proactive performance (DV). CUC was positively associated with proactive team performance (B = .428, $t(81) = 3.441$, $p < .001$), and was positively associated with overall JC (B = .227, $t(81) = 3.131$, $p < .01$). Results of the mediation analyses (conditional indirect effects) confirmed the mediating role of overall JC in the relationship between CUC and team proactive performance, B = .126, CI [.030, .299]. In addition, the direct effect of CUC on team proactive performance becomes weaker (B = .302, $t(80) = 2.314$, $p < .05$) when controlling for JC, suggesting partial mediation (*Figure 3*).

Figure 3: CUC increases team proactive performance, partially mediated by overall job crafting.



3.3 Moderated Mediation Analysis

Analysis also revealed significant conditional indirect effect of CUC on individual proactive performance through JC: increasing challenging demands for three values of uncertainty: one standard deviation below the mean, the mean, and one standard deviation above the mean. Analysis showed that uncertainty enhanced the indirect effect of CUC on individual proactive performance through higher JC: increasing challenging demands on average levels of uncertainty, B = .205, CI [.064, .432] and high levels of uncertainty B = .330, CI [.172 to .521], but not in low levels of uncertainty, B = .079, CI [-.117, .405]. It can be observed from the coefficients that higher levels of uncertainty contributed to stronger effect of CUC on individual proactive performance through increased JC: increasing challenging demands.

The moderated mediation model indicating the direct and indirect mediated paths is displayed in *Figure* 4. A Jeremy Dawson graph representing the two levels of uncertainty in its moderating role between CUC and JC: increasing challenging demands is presented in *Figure 5*, showing positive relationships under both average and high levels of uncertainty. However, the crossed slope suggests that the effect of this relationship is different depending on the strength uncertainty. The positive relationship is higher under higher levels of uncertainty, implying that CUC is more likely to elicit JC: increasing challenging demand as uncertainty level rises.

Figure 4: CUC increases individual proactive performance via JC: increasing challenging demands, when uncertainty level increases from average to high.

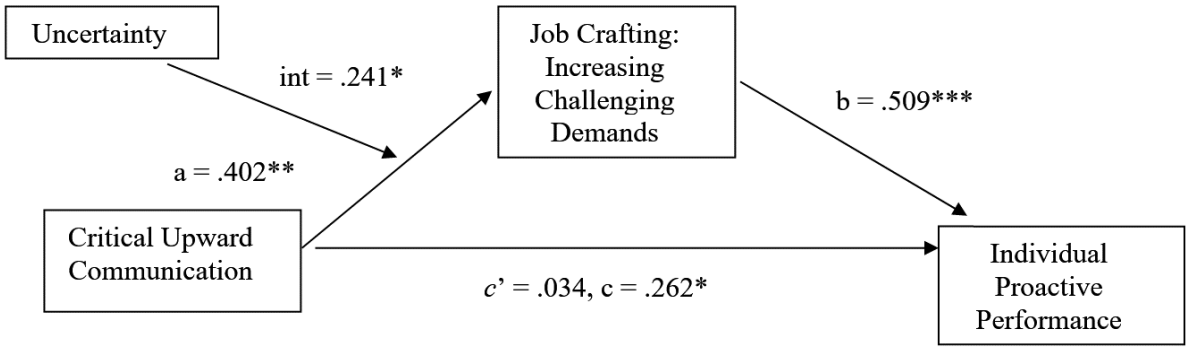
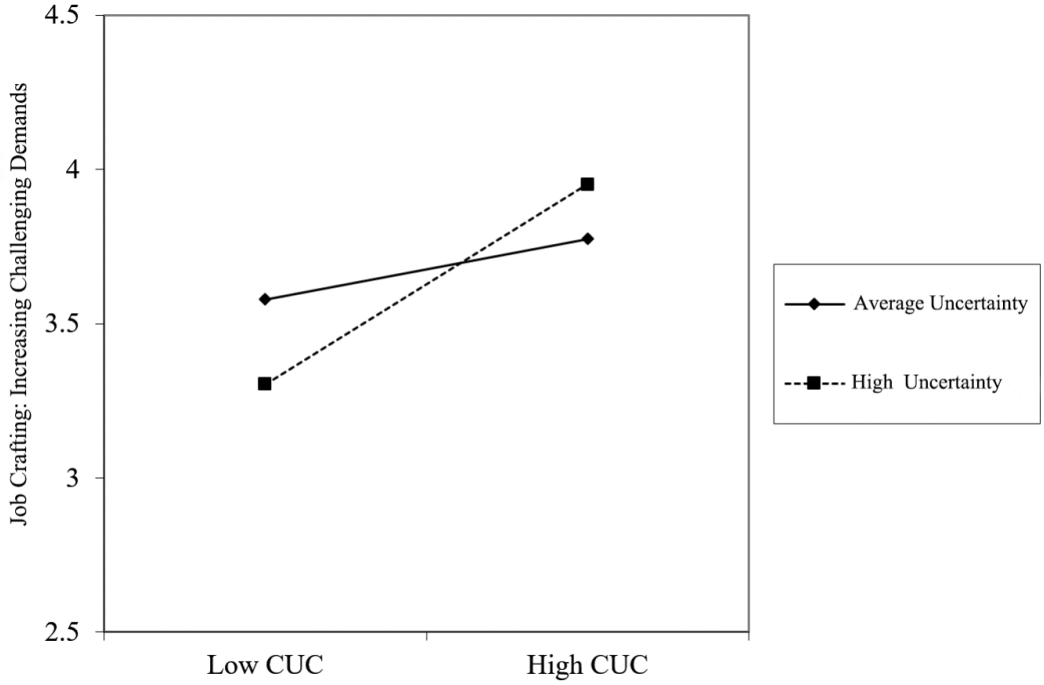


Figure 5: Two levels of uncertainty in its moderating role between CUC and JC: increasing challenging demands.



4. DISCUSSION

4.1 Findings and Hypotheses Testing

Multilinear regression analyses revealed preliminary causal relationships between variables of interests in order to guide subsequent mediation and moderation analyses. While CUC alone accounted for some variance in individual proactive performance, CUC and overall job crafting accounted for the strongest predicting power of individual performance. Likewise, team proactive performance was best predicted by CUC and overall JC together, instead of by CUC alone. Uncertainty, similar to the previous analysis, did not show any significance predicting power on team proactive performance. These preliminary finding added to the speculation stated in Hypothesis 1 that CUC positively contributes to proactive performance, in

this case, on both individual and team levels; however, overall job crafting combined with CUC was a better predictor to proactive performance. Hypothesis 2 was weakened by the fact that uncertainty did not show any account for variance in proactive performance, whether on individual or team level.

When breaking down JC into its four subscales, however, yielded a more convergent trend in prediction of variance in proactive performance. Factoring in CUC, the four JC subscales, and uncertainty, individual proactive performance was solely predicted by JC: increasing challenging demands. Model analysis on team proactive performance showed that JC: increasing challenging demands, decreasing hindrance demands, and CUC together constituted the strongest predictor, with JC: increasing challenging demands responsible for the most variance in team proactive performance. This leads the author to suspect that CUC could be responsible for proactive performance indirectly, through JC: increasing challenging demands as a potential intermediary variable. Hypothesis 3 which states CUC leads to proactive performance via both uncertainty and JC is partially encouraged by these regression findings; in particular, while uncertainty did not predict proactive performance, one aspect of JC – increasing challenging demands emerged as a potential mediator.

Indeed, mediation analyses confirmed the aforementioned speculation. Full mediation between CUC and individual proactive performance via overall JCs, as well as full mediation between CUC and individual proactive performance via JC: increasing challenging, showed that CUC only indirectly boosts individual proactive performance via either JC or JC: increasing challenging demands. Hypothesis 1 stating that CUC leads to proactive performance, therefore, is rejected. Similarly, Hypothesis 2 stating that CUC leads to proactive performance when uncertainty level is high is also rejected, since no significant results were found in mediation analyses involving uncertainty.

In addition, overall JC is also a full mediator between CUC and team proactive performance. Together with the first mediation model, analyses conclude that overall JC is a full mediator between CUC and proactive performance (on both individual and team levels), while

JC: increasing challenging job demand acts as a full mediator between CUC and individual proactive performance.

The absence of significance of uncertainty in mediation analyses led to further exploration. Moderated mediation analysis using uncertainty as moderating variable indeed yielded significance on top of established mediating relationships. However, the only mediation relationship that accommodated uncertainty as a moderator is that CUC increases individual proactive performance via JC: increasing challenging demands. Hypothesis 3 stating that JC and uncertainty together contribute to CUC increasing proactive performance is therefore confirmed, despite only a dimension of JC (increasing challenging demands) and a dimension of proactive performance (individual) are applicable in this model.

This established moderated mediation model predicts that CUC will increase individual proactive performance via JC: increasing challenging demands, when uncertainty level is high, rather than low. The theoretical and practical implications, research limitations, and recommendations for future research are discussed in the following sections.

4.2 Theoretical Explanation of Results

4.2.1 Differentiating individual and team proactive performance

The most interesting model emerged from this research involved subscales of JC and proactive performance. Although mediations were discovered with both individual and team proactive performance via JC, the partial mediation from CUC to team proactive performance showed a less robust finding than the full mediating relationship with individual proactive performance. Individual proactive performance, in addition, also fit in the moderated mediation model. The fact that individual proactive performance repeated yielded significant results in analyses elicits questions on the nature of proactive behavior at workplace.

The two dimensions of proactive behavior, individual and team, are perhaps derived from different driving forces. As discussed earlier, predispositional factors such as proactive

personality could precursor proactive behavior. But exactly why individual proactive behavior focusing on self-improvement and work innovation, as opposed to team proactive behavior characterized by interpersonal relationship building, and interpersonal support, remain unanswered.

One reason for the mutual exclusivity of individual and team proactive performance can be attributed to difference in self-construals. Those with more independent self-construals tend to orient their behavior based on personal abilities and values, while those with interdependent self-construals tend to define their action as a function of interpersonal roles (Markus & Kitayama, 1991). Based on this theory, Wu et al. (2018) explored how self-construal differences between workers predict different types of proactive behaviors. Wu and colleagues found out that employees primed with interpersonal construals were more likely pro-work unit proactive behavior, or team proactive behavior; those with high independent self-construals, especially coupled with autonomous jobs, generally exhibited less team proactive behavior, but more career-oriented self-proactive behavior.

Although team synergy is essential in innovative and service companies, the reality that jobs are becoming more individualized and autonomous arguably contributed to individual employee's self-focus, rather than altruistic behavior toward team members. This explanation is supported with the precursor of JC in this research, whereby higher JC naturally allows for, and encourages employees to become more autonomous and self-oriented in workplace behavior, thus promoting individual proactive behavior.

The significance of uncertainty level exclusive to individual proactive behavior also suggests self-oriented value of making one's work and career prospect more proactive. The fact that team proactive behavior did not fit into the moderated mediation model suggests that under uncertain circumstances, workers are more likely to engage in self-preserving behaviors before initiating interpersonal supportive behaviors. Organizational citizenship behavior (OCB), a similar construct as proactivity, was explained by Smith, Organ & Near (1983) as extra-role behavior initiated by employees not formally rewarded by the system. Smith and colleagues found two dimensions of OCB – altruism and conscientiousness. Individual proactive behavior,

if motivated by self-interest, can prompt OCB that leans toward conscientious effort to secure and advance one's development.

Alternatively, cultural reasons might account for the lack of team proactive behavior in established models. The Baltic states, namely Estonia, Latvia, and Lithuania, contributed to a large portion of survey responses of current research. Luptáková, Vargic. & Kincel (2018) investigated the cultural dimensions of the Baltic states and found out that these national cultures give rise to a mid-range index on power distance, falling in between high and low power distance. This implies in Baltic workplace, employees receive top-down feedback approximately as much as they give upward feedback, and leadership style falls between autocratic and laissez-faire.

This mixed nature of Baltic office dynamic possibly explains the concentration of current results on individual proactivity. The average power distance and semi-autocratic leadership styles implies that employees need to receive instructions and top-down feedback to work effectively. Self-managed teams are perhaps still in the developing phase in the Baltic region. Renkema, Bondarouk & Bos-Nehles (2018) argued that the maximum flatness and leader empowerment of employees are the precursors of self-managed teams. The relatively average level of team autonomy, therefore, could have led to a lack of results in team proactive behavior.

There is also evidence that individual proactivity and team proactivity could be mutually exclusive under certain circumstances. Collins & Smith (2006) argued that a commitment based HR system promotes a climate of trust, cooperation, and knowledge sharing, which constitute team proactivity. On the other hand, Batistič et al. (2016)'s found out that a market pricing HR system with weak relational climate tends to foster individual proactive behavior. As discussed earlier, recent literature has been focusing on the contextual forces, rather than predispositional reasons, that produce proactive behavior. The precise nature of HR configuration in organizations, therefore, could determine which type of proactive behavior is more likely to form. In knowledge and service industries characterized by innovation, competition, and technological reliance, it is often a market pricing, rather than nurturing HR philosophy that is

employed. Thus it follows that organizations in this research such as IT and finance companies would more likely to foster individual proactive behavior.

4.2.2 Re-conceptualizing uncertainty

It is also interesting to see that uncertainty only played a moderating role when a single dimension of JC, increasing challenging demand, incorporated in the mediated relationship between CUC and individual proactive performance. The moderating effect only existed when uncertainty level is average or high. It has been the tacit assumption of this research that uncertainty is a source of insecurity and risk, which could prompt employees to seek clarification and assurance through CUC, thus motivating JC behavior such as managing demands and resources more efficiently to cope with possible contingencies. However, in view of the absence of uncertainty in predicting most of the hypothesized mechanisms, it is necessary to reflect an alternative understanding of uncertainty.

Uncertainty, as a matter of fact in knowledge and service industries, could be capitalized as a source of opportunity, rather than a hindrance to counter. Given that uncertainty moderated the mediating relationship which led to individual proactivity only, but not team proactivity, it can be argued that individual employees who aim to expand their competencies and performance may use uncertain situations to their advantage for growth. Should uncertainty be perceived as an environmental stressor rather than resource, team proactive behaviors such as interpersonal support and social capital expansion would possibly have been the outcome.

Escrig-Tena et al. (2018) found that in innovative organizations, soft quality control based on learning, problem solving, and horizontal communication, instead of hard quality control based on technical requirement and benchmarking, predicts innovative success via proactive behavior. Given the nature of products in knowledge and service companies, such as customized IT solutions, educational programs, and personal finance services, often being more applicable to soft quality control, rather than subject to clear-cut technical benchmark, a high level of fluidity and uncertainty is the norm, and the capacity to resolve uncertain situations is

part of core competencies of these employees. Therefore, it is plausible to explain the moderating role of increasing level of uncertainty in the model.

This explanation is further supported by the fact that the particular dimension of JC, increasing challenging demand, is the only facet of JC applicable in the moderated mediation model. Employees facing perceived uncertainty are likely to capitalize on uncertain situation as opportunities to increasing challenging demands, rather than decreasing hindering demands. Using the Job Resource-Demand model, CUC possibly provides employees with information and social support, which translate to greater resources available to address the increasing challenging demands brought about by uncertain situation. It was also discussed earlier that job crafting behavior is not always proactive; employees could craft their role and workflow to reduce their responsibilities in certain situations. It is therefore logical to see JC: increasing challenging demand being in the model predicting individual proactive behavior.

4.2.3 Decreasing hindering demands in team proactive performance

It is also noteworthy to discuss the predicting power of a combination of JC: increasingly challenging demands, decreasing hindering demands, and CUC of team proactive performance. Although not manifested in PROCESS macro analyses, decreasing hindering demands accounted for some variance in team proactive performance in multilinear regression analysis. One explanation to the relevance of JC: decreasing hindering demands in improving tem proactive performance is that decreasing hindering demands, such as role ambiguity and role conflict, facilitates teamwork and proactive attitude. This explanation is supported by findings that role ambiguity and role conflict act as hindering stressors that could lead to disengagement with work (Pearsall, Ellis & Stein, 2009), and that task conflict due to lack of clarity can lead to a decrease innovative performance (O'Neill, Allen & Hastings, 2013). In conjunction with CUC, JC: decreasing hindering demands such as role ambiguity and conflict could this contribute to proactive team performance.

However, it is important to note that a decrease in role ambiguity and role conflict is not equivalent to an increase in role clarity. While the persistence of the former have been shown to

decrease team performance, role clarity was found to have no significant predicting power to team performance (Lynn & Kalay, 2016). It can be inferred that role clarity is different from the outcome of reducing role ambiguity and conflict. This could explain the presence of JC: increasing challenging demand in conjunction with JC: decreasing hindering demand and CUC. In other words, reducing hindering factors while increasing challenging demand by communicating with supervisor might be a mechanism leading to greater team proactive performance.

4.3 Limitations and Future Research

JC was conceptualized both as an overall construct, and each of the four subscales in this research. The 21 items adopted from Tims, Bakker & Derks (2012) were not intended by the original authors to use as a singular JC construct (Cronbach's alpha = .68); rather, the authors advocated the each of the four subscales as valid measurements of different dimensions of JC, with all four Cronbach's alphas greater than .70. It is thus vulnerable to utilize all subscales as one singular scale in constructing the models in the present research. Nonetheless, overall JC did fully mediate between CUC and individual proactive performance, as well as partially mediate between CUC and team proactive performance. However, low internal consistency of overall JC as one scale did not reveal further relationships when uncertainty was factored in, and expectedly so. Individual JC subscales, specifically increasing challenging demands and decreasing hindering demands, could be the focus of future research where JC plays a role.

The lack of results on team proactive performance prompts further research. The current JC scale is rather individual focused, which could explain the lack of mediating power on team proactive performance. Collective JC, for instance, could be tested against established moderated mediation model to reveal potential mediating effect on team proactivity under uncertainty. Subscales of JC, namely increasing structural resources and increasing social resources, also potentially have associations with proactive team performance, in which interpersonal assistance and social capital gathering play important roles.

The internal environment of an organization should also be factored in on top of established model. HR system of an organization, for example, defines rewardable and punishable behaviors of employees. While in innovative companies, a commitment based HR system has been shown to improve performance (Nieves & Osorio, 2017), literature also suggested a market pricing HR system combined with low nurturing climate can boost individual proactive behaviors. Whether a more relational based HR system and organizational climate could contribute to team proactive performance is yet another area of future research.

The respondents in this research also pose a limitation. The inclusion of Finnish samples and Baltic organizations with Finnish affiliations potentially constitutes a threat to the internal validity of data. Despite geographic proximity, differences in national as well as organizational cultures between Nordic and Baltic regions, as well as economic developmental stages, could have introduced confounding variables. The exact economic and employment situation across different national respondents could be controlled to mitigate this problem in future testing of established models. By extension, leadership styles across Nordic and Baltic organizations should also be investigated in the future. Variables such as CUC and JC: increasing structural resources depend on particular leadership styles to become possible. Leadership also directly shape organizational culture and climate, team dynamic, and reward systems, all of which are potential confounding or mitigating variables to control.

While demographic characteristics such as age and work experience did not reveal significant results in current research, they potentially affect JC and proactive behavior. Although it was the intention of current research to investigate on hierarchical levels and work experience as related variables to the primary constructs, the sample did not yield significant results. Fixed contract workers in dynamic IT companies, for example, could behave very differently from workers with longer tenure. By extension, perceived social and professional status could also contribute to CUC and JC, as well as proactive behavior through greater organizational commitment.

Demographic specifics might also influence the avoidant dimension of JC. Given that not all JC behavior are growth oriented, avoidant JC behavior can be further investigated in relation

to employee background in organizations. Rather than low levels of current JC scales, new scales measuring avoidant JC behavior as a separate construct could be used to test against conservative performance in to contrast established models in this research.

It is also interesting to recall that not all JC behaviors are made aware to superiors (Hornung et al., 2010). Under such condition, it would be productive to inquire if self-contained JC behavior still fit into the current model. The established model states that CUC is the precursor of JC. While it is plausible to argue that self-contained JC behavior can be explained by an employee's need to improve person-job fit, or match personal resource with job demand, the lack of organizational integration via upward communication might not lead to proactive performance. This concern prompts another area of fine-tuning of JC construct differentiation from proactive, avoidant, to disconnected JC behaviors.

The current model aligns with the assumption that proactive performance is a result of situational conditions. Given the possibility of CUC and JC, individual employees can be expected to produce proactive behavior under high uncertainty. The alternative explanation of proactivity based on predispositional factors such as personality and aforementioned self-construals, constitute a group of interesting variables to examine in relation to proactive behavior under uncertainty.

Finally, the precise nature of uncertainty needs to be better defined. Internal uncertainty such as personnel change, company merger, or system upgrades, could play out very differently from external uncertainty such as market volatility. Although both types of uncertainty ultimately lead to change in work, and possibly job, they could elicit very different affective responses from employees. While external uncertainty could be perceived as opportunity, internal uncertainty could easily become a hindering stressor when employees are uncertain about their career perspective. This distinction, in turn, could alter or negate the structure of the current model. A well-defined typology of uncertainty and respective measurement scales are needed for further testing.

4.4 Practical Implications and Research Value

In innovative and service industries, the ever-changing market and technological environments requires proactive employees to identify and engage with problems and opportunities beyond supervision. The model established in this research provides HR professionals and organizational psychologists to capitalize on, or design situational conditions at workplace to encourage proactive performance. The moderated mediation model is especially applicable in small, performance-based organizations, such as software companies, law firms, or entertainment industries, as well as small work units in large knowledge or service based organizations. For these workplaces, employees have significant roles in maintaining and expanding organizational effectiveness based on their specialized knowledge and skill sets. Individual proactivity is thus essential for organizational performance.

HR departments in these organizations could design high reward, high competition system to encourage individual expansion beyond their default role and tasks. A culture of open communication, specifically from the bottom-up, can encourage individual employees to go beyond expectation by innovatively apply their job resource to increasing challenging demands. Uncertainty from business environment as well as internal change, if presented as positive opportunities for profit or growth, is a positive element of individual proactive performance. Management, if equipped with the skills to communicate with subordinates about the possibility to autonomously perform their tasks, will motivate employees to align their task performance with organizational performance.

Employees who thrive in these conditions are also driven by certain predispositional factors, such as a proactively personality which drives individuals to step out of designated limits, to improve on their own as well as others' performance. HR system intervention can lead to the identification, and therefore profiling, of proactive employees who perform well in an innovative, open office climate. Behavioral anchors can be derived from these highly proactive employees for future recruitment and selection references.

Employee retainment is another area for management and HR professionals to pay attention to. Should proactive employees actively improves their own role, and those of

coworkers', as well as contributing to organizational objectives, a reciprocal gesture should be given from the top-down. Knowing the self-interest element of proactive behavior, it is important for organizations to reinforce such behavior with appropriate rewards and encouragements. Ignoring employee proactive performance or taking it for granted could lead to unhealthy job crafting behavior such as reducing one's job demand to relieve responsibilities, instead of increasing job resources and seeking out challenging demands.

The current research also implies that proactive performance can be developed further into unique employee strength. Proactive behavior through innovative job crafting and upward feedback is an opportunity to identify individuals with valuable insights into problem solving, innovative thinking for resource efficiency, or a strong team player capable to elicit team synergy. Employee proactive performance thus provides data for management to identify, develop, and retain talent.

The distinction between individually proactive employees and team proactive employees can also be utilized by HR professionals in team building and work role assignment. Employees high on individual proactivity and career self-management orientation can and should be allowed more autonomy, evaluated and rewarded according to performance. Opinions and feedback from such employees can be valuable to the organization if individual career advancement efforts align with business objectives. Meanwhile, employees exhibiting more team proactivity in the form of pro-social behaviors can be combined with newly boarded members of an organization. Team proactivity is undoubtedly a strong binding force for team members who have different levels of skills and experience. Proactive team members can improve colleague performance through social support, knowledge sharing, and horizontal feedback. Assigning the right individual into the right work role by HR professionals thus leads to collectively organizational improvement, as well as employee wellbeing.

This research constructed a model which articulated the specific mechanism of how upward communication can lead to proactive performance via increasing challenging job demands, under high uncertainty context. The model acts as a bridge between communication and performance by means of environmental and personal influences. The field of leadership

research can benefit from this model by investigating the qualities of the ideal leader who is able to create a climate and culture that fosters open communication, perform trust and delegate responsibility, yet actively providing answers and visions when employee voice their concerns.

Leadership qualities such as active listening, optimism, and long term vision should be cultivated, especially in times of uncertainty. The moderating effect of high uncertainty between CUC and employee increasing their challenging job demand implies that an approachable leader capable of both support and advice can build a resilient organization. Uncertainty therefore can be adopted as opportunities for organizational advancement in competitive industrial landscape, rather than a risk factor prompting stricter adherence to rules and protocols. In innovative companies, such organizational resilience is immensely important.

Proactive performance is not only essential for performance in knowledge and service organizations, but also for employee wellbeing and job satisfaction, which create organizational citizenship behavior and less turnover. In an age of borderless career where jobs are becoming increasingly independent of organizational endorsement, a loyal team of proactive workers can collectively contribute to the long-term survival of the organization.

5. CONCLUSION

Transitioning economies such as those in the Baltic region necessitates research attention on employee behavior. Increasingly digitized and knowledge centered, many SMEs and small work units in large organizations are changing the way businesses are conducted, as well as expectation of the ideal employee profile. Changing philosophy on management means decentralization of power, and employee empowerment. With more knowledge and skills as well as delegated responsibilities, employees in the knowledge and service based companies are able and expected to perform autonomously and proactively. This research investigated factors contributing to proactive performance. By surveying a number of knowledge and service based organizations in the Baltic region, some significant models predicting proactive performance were established.

The current research explored a number of constructs highly relevant to this industrial context. Critical upward communication, a form of constructive bottom-up communication, contrasts traditional top-down only power dynamics. Organizations with the leadership and climate to encourage critical upward communication generally find themselves well within the modern organizational ideal. Managers, no matter how competent, do not always have the capacity to circumspect all contingencies and opportunities, and may not be aware of employee attitude, task challenges, and strengths. Employee input across hierarchical barrier thus adds value to organizational effectiveness. In turn, employees may clarify their own doubts, voice their attitudes and perceptions, as well as acquire crucial information from their supervisors via critical upward communication.

A flat structure and low power distance workplace dynamic as reflected by critical upward communication subsequently empower and encourage employees to job craft. Employees, who are generally the most aware of their own strength and weakness, their available resources and demands, can be in s good position to redesign their workflow, recombine information and knowledge to develop more efficient, productive capacities. Although not all job crafting behaviors aim to positively improve efficiency and effectiveness, a climate encouraging critical upward communication can tilt the direction of job crafting behavior toward the productive side, rather than avoidant direction.

Intrinsically an innovative behavior in resource channeling and workflow redesign, job crafting, in turn, leads to proactive performance. Employees would step out of their default scope of responsibility or comfort zone, performing tasks beyond their role in the office context. Individual proactive behavior has been associated with career advancement and self-enrichment, as working beyond one's parameter allows learning and social networking. Team proactive performance entails supporting coworkers and building interpersonal relationships at work, and has been theorized as a means to increase one's social capital. Both kinds of proactive behavior, if properly integrated with managerial vision, adds to organizational performance.

The precursors of proactive performance, in addition to predispositional factors such as proactive personality, self-efficacy in assuming a variety of task roles, or an orientation toward

role expansion, also include contextual factors such as job autonomy, positive work relationships, and more important to current research, uncertainty. Literature suggests that perceived uncertainty from turbulent business environment as well as from internal reforms could lead to an increase in proactive behavior. Meanwhile, there are also findings suggest the contrary pattern of reducing proactive behavior when uncertain is high.

In the interest of investigating factors leading to proactive performance, current research hypothesized that firstly, critical upward communication can increase proactive behavior. Secondly, critical upward communication, in conjunction with high perceived uncertainty, can increase proactive behavior. Thirdly, critical upward communication, high perceived uncertainty, and job crafting together increases proactive performance.

Results showed that the first two hypotheses were unsupported. Critical upward communication alone, or in conjunction with high uncertainty, did not predict proactive performance. However, further analyses showed that critical upward communication leads to both individual and team proactive performance when mediated by job crafting. However, the mediating effect is only partial toward team proactive performance. In addition, Critical upward communication predicts individual proactive performance when mediated by a specific dimension of job crafting – increasing challenging job demands. Uncertainty was found to have a moderating effect in said relationship; when uncertainty level is high, critical upward communication predicts individual proactive performance to a higher degree.

The findings implied that critical upward communication is more effective in predicting individual, rather than team proactive performance. Analyses also implied that the specific job crafting dimension, increasing challenging demands, is more relevant in the model than overall job crafting. Construct difference between individual and team proactivity, perception of uncertainty as an opportunity rather than a threat, and cultural specificity of the Baltic States are some reasons for explaining the lack of significant findings in team proactive performance and other dimensions of job crafting.

Although not significant in mediation or moderation relationships, an interesting role of another dimension of job crafting: decreasing hindering demands was revealed by multilinear analyses. In the multilinear regression model, decreasing hindering demands, increasing challenging demands, and critical upward communication together accounted for the most variance of team proactive performance. The author speculated that decreasing hindering demand can occur in the form of reducing role ambiguity and role conflict, thus improving team harmony and promoting team proactive performance. Critical upward communication is essential in removing such role hindrance. The exactly precursor to team proactive performance requires further understanding of interpersonal dynamics in teamwork, in addition to the individual and organizational contextual factors focused by this research.

Based on the moderated mediation model, the author recommends organizations to align individual proactive behavior to improve organizational performance. The author also recommends identifying and retaining talents through proactive performance. Top-down reciprocal rewards for proactive performance are also important in reinforcing proactive behavior and employee welling. Further research into different types of job crafting, the function of critical upward communication, intrinsic difference between individual and team proactive performance, the perception of uncertainty, as well as the desired leadership qualities in eliciting proactive behavior were proposed by the author.

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7. APPENDIX (Survey Questionnaire Items)

Critical upward communication

Please, check to what extent you are agreeing in the following sentences:

1. Completely disagree

2. Somewhat disagree

3. Partly agree, partly disagree

4. Somewhat agree

5. Completely agree

a. I can express my disagreements with my boss freely.

b. I can tell my boss when things are going wrong.

c. I feel free to comment with my boss about problems and difficulties I have in my work without fear.

Uncertainty (Colquitt et al., 2012)

Please, check to what extent you are agreeing with the following sentences:

1. Completely disagree

2. Somewhat disagree

3. Partly agree, partly disagree

4. Somewhat agree

5. Strongly agree

a. There is a lot of uncertainty at work right now.

b. Many things seem unsettled at work currently.

c. If I think about work, I feel a lot of uncertainty.

d. I cannot predict how things will go at work.

Job Crafting Scale (Tims, Bakker & Derks, 2012)

Think about your CURRENT Job and then indicate how much you agree or disagree with each of the following statements:

	Strongly disagree	**Moderately disagree**	**Slightly disagree**	**Slightly agree**	**Moderately agree**	**Strongly agree**
1. I try to develop my capabilities.						
2. I try to develop myself professionally.						
3. I try to learn new things at work.						
4. I make sure that I use my capacities to the fullest.						
5. I decide on my own how I do things.						
6. I make sure that my work is mentally less intense.						
7. I try to ensure that						

my work is emotionally less intense.						
8. I manage my work so that I try to minimize contact with people whose problems affect me emotionally.						
9. I organize my work so as to minimize contact with people whose expectations are unrealistic.						
10. I try to ensure that I do not have to make many difficult decisions at work.						
11. I organize my work in such a way to make sure that I do not have to concentrate for too long a period at once.						
12. I ask my supervisor to coach me.						

13. I ask whether my supervisor is satisfied with my work.						
14. I look to my supervisor for inspiration.						
15. I ask others for feedback on my job performance.						
16. I ask colleagues for advice.						
17. When an interesting project comes along, I offer myself proactively as project co-worker.						
18. If there are new developments, I am one of the first to learn about them and try them out.						
19. When there is not much to do at work, I see it as a chance to start new projects.						
20. I regularly take on extra tasks even though I do						

not receive extra salary for them.						
21. I try to make my work more challenging by examining the underlying relationships between aspects of my job.						

Proactive Performance (Griffin, Neal & Parker, 2007)

How often have you carried out the behaviour over the past month?

1. Very little

2. Occasionally

3. Sometimes

4. Often

5. A great deal

Individual task proactivity

1. Initiated better ways of doing your core tasks.
2. Come up with ideas to improve the way in which your core tasks are done.
3. Made changes to the way your core tasks are done.

Team member proactivity

1. Suggested ways to make your work unit more effective.

2. Developed new and improved methods to help your work unit perform better.
3. Improved the way your work unit does things.