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HUMAN RESOURCES MANAGEMENT

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MASTER THESIS

Savilyderystės įtaka inovatyviam darbuotojų elgesiui medijuojant darbuotojų įsitraukimui į darbą bei moderuojant saviveiksmingumui	**The mediating effect of work engagement and moderating effect of self-efficacy on the relationship between self-leadership and innovative work behavior**

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INTRODUCTION

Relevance of the topic. In nowadays organizations a lot of attention is given not only to the organization's aim and profit, but also to employees and their well-being. Although the main company objective still remains its results, the focus is more and more directed into the process, the workers orienting into goals' achieving and the needs of employees. Companies' leaders provide many benefits to ensure that talents would stay and engage longer at their organization: starting from financial motivation - bonus and reward systems, additional health insurance, additional annual holidays, various subsidies and ending with local and international trainings, professional and self-development, free sport activities, events and initiatives, modern and ergonomic offices, etc. However, companies are experiencing a work engagement crisis, which affects them through development and sustainability: employees turnover complicates, and delays business processes, has a big financial cost and impact to organization's image. It was shown by recent global surveys, which reported a decline in employees' work engagement (Basit, 2019).

Employees' engagement is like a facilitator to achieve companies' goals, which in last few decades became more and more ambitious, therefore requiring quick and innovative decisions. So, employees' innovative work behavior is one of the most desirable skills in nowadays modern firms. It helps to achieve a leading position in a competitive environment, better financial results and public recognition.

A lot of previous and recent research, based on quite old theories (starting from Bandura, Manz, etc.) implies that innovative work behavior is positively related to self-leadership strategies, more precisely employees, who have strong self-leadership skills, reinforce their innovative behavior at work. Integrating self-leadership strategies into the employees' working environment is a new area to focus on in order to empower an organization. Leadership and its relations with social sustainability is frequently prescribed for effective management (Aneeq, Jo, Adnan, Marium & Usama, 2023).

Based on the above-mentioned theories and research, the benefits of innovation and employee's initiative behavior for organizations is clearly visible as well as positive relations between innovative behavior, self-leadership and work engagement. Although previous research established the relationship between self-leadership and work engagement, the literature is still sparse and this relation attracted too little attention (Bakker, Breevaart, Demerouti & Derks, 2016), so there is a need to bridge this research gap (Knotts and Houghton, 2021), furthermore, there is sparse information about how these two concepts together affect employees' innovative work behavior.

Novelty of the topic. Building on these observations, this Master's Thesis seeks to address the identified gaps in the literature by exploring the relationship between self-leadership, self-efficacy, work

engagement and innovative work behavior. Notably, much of the existing research has been conducted outside the European context, leaving a void in understanding these dynamics within the region.

This study aims to contribute to the existing body of knowledge by conducting a recent scientific review grounded in theoretical foundations, coupled with empirical research in the European region—specifically Lithuania. By doing so, it seeks to provide fresh insights into the role of self-leadership and self-efficacy in fostering employee engagement and innovation, offering practical recommendations for organizations to thrive in today's competitive landscape.

The problem of the Master thesis. How does self-leadership impact the innovative work behavior of employees through the mediating role of employees' work engagement and the moderating role of employees' self-efficacy?

The aim of this study is to reveal the relationship between self-leadership, self-efficacy, employees' engagement and innovative work behavior.

Due to this aim, **the objectives** are:

1. Review scientific literature related to self-leadership, self-efficacy, employee work engagement, and innovative work behavior.
2. Develop a conceptual framework that integrates self-leadership, self-efficacy, employee work engagement, and innovative work behavior and examine the relationships among these concepts as explored in prior research studies.
3. Conduct empirical research using the conceptual framework and present the findings.
4. Provide conclusions and recommendations based on the results of the empirical research.

This is a quantitative research, which includes a Schaufeli et al.'s Work and Well-Being Survey (UWES), a Houghton et al.'s 9 items of the Abbreviated Self-Leadership Questionnaire (ASLQ), which is a short version of the 35-item Revised Self-Leadership Questionnaire (RSLQ) to measure self-leadership, self-efficacy is measured by Schwarzer and Jerusalem scale and innovative work behavior will be rated by the scale of Janssen. **The structure of the Master thesis** consists of literature review, starting from theoretical foundation about the main four constructs (innovative work behavior, self-leadership, work engagement and self-efficacy) and then moving to previous research analysis about these concepts' interrelationship; empirical research methodology and results; conclusions.

1. CONCEPTS' ORIGINS AND SUPPORTIVE THEORIES

Social cognitive theory, started and developed in public by Albert Bandura from 1986, implements triadic reciprocal system, which involves interrelationships between individuals' internal processes, external behaviors and external environment. This system has a strong impact for all the individuals (Bandura and Wood, 1989) and in other words could be named behavior modification theory, suggesting to regulate individuals their own behaviors (Courtright, Stewart and Manz, 2011). Individuals' past experiences also allow them to generate behavioral actions in the workplace. On the other hand, organizational environment influences the individuals' learning process and that helps employees to make energetic decisions and act creative (Bandura, 1986).

Based on this interrelationship, it can be argued that individuals' internal processes can help to shape and transform individuals' external behaviors and even individuals' perceptions about their external environment. As a result of this relationship people can control their perception of external sources and their own ideas, insights, aims and have a control over their own performance goals (Houghton and Neck, 2006). Moreover, following this theory, individuals' cognitive abilities motivate them to implement uncertain and challenging tasks according to their expectations (Ban- dura, 1986), so in other words, individuals seek to reduce challenges that may stop them from reaching their goals. Here occurs self-leadership concept, which allows individuals to minimize causes, which may negatively affect their performance, by better focusing on the end goal and enhancing this self-regulatory process (Knotts and Houghton, 2021).

Bandura's social cognitive theory is closely related to social determination theory. This theory suggests that the experience of freedom in a job can change motivation from controlled to autonomous motivation (Gagné and Deci, 2005). Feelings of competence and self-control are essential for a self- leadership concept (Shukla and Shaheen, 2023). From that point of view, less external control and more autonomy at work leads to self-leadership behavior, therefore satisfies the basic need for autonomy and supports work engagement (van Dorssen-Boog, de Jong, Veld & Van Vuuren, 2020). Moreover, intrinsically motivated individuals focus more on intrinsic rewards, are more engaged in their work and perform better (Audebrand, Croteau, Jabagi & Marsan, 2019).

Another related theory is social exchange theory, which defines employees' engagement concept: employees' feelings of attachment to their organizations could lead to feeling of obligation to repay the organizations, following that one form of repayment can be employees' engagement to work: "after employees are attached to their organization, they could become attached to their work as well." (Kim et al., 2017, p. 367).

1.1. Innovative work behavior

The business environment is inherently uncertain, therefore organizations must constantly adapt to these changes, and they often do that through innovation (Li, Kang & Song, 2022). The researchers observed that innovation is one of the key elements for the organizations value creation, achieving sustainable competitive advantage, economic consequences, companies' success and assuring long-term survival in present growing global market and highly competitive business environment (Chughtai and Khalid, 2023). Innovativeness is defined as "willingness to support creativity and experimentation in introducing new products/services, and novelty, technological leadership and R&D in developing new processes" (Dess and Lumpkin, 2001, p. 431). Innovation also could be described as a process of ongoing interactions between individuals with experiences, knowledge and various goals. Innovations became mandatory when there appeared an attempt to manage occurred situations because of swift globalized change and even for the sustainability of organizations in the turbulent internal and external environment and competitive market (Choi, Lee & Kang, 2021). So, when organizations are failing to innovate, they are potentially diminishing ability to defeat the competition and increases risk of going out of the market at all, while organizations which is continually innovating achieves a higher level of organizational performance.

Innovation process is difficult (challenging and risky) for organizations employees and managers, so individuals, who could be described as more concerned about knowledge outputs rather with company performance results (Jin, Li, Sharif & Yang, 2022), need self-confidence and motivation as inner driving strength to accept this process.

Innovation mainly depends on employees' innovative work behavior, which generates higher quality performance, minimize flaws and enhances profitability (Anjum and Zhao, 2022). Innovative work behavior was defined already in the early 1990s by West and Farr as an intentional process of generating, realizing, operating, promoting an idea, which is a specific work function for group or organization and which benefits the job performance at the different levels: individual, group or organization (West and Farr, 1990). According to Scott and Bruce (1994) innovative work behavior is employees' ability to produce and execute new and valuable ideas at workplace during three steps: firstly, problem recognition and suggestion of solution and ideas; secondly, these ideas promotion; thirdly, prototype producing to realize the novel idea (Bruce and Scott, 1994; Farr, Sin & Tesluk, 2003). As an implementation of innovative work behavior concept was suggested four different dimensions of it (Janseen, 2000; De Jong and den Hartog, 2010):

- opportunity exploration - identification of opportunities to implement innovation in terms of ideas and solutions;
- idea generation - creating, associating, generating different opportunities, representation of the

idea interaction (visible, concrete or just abstract; completely new or adapted);

- idea championing - reflecting generated and anonymously accepted ideas from highly committed individuals;
- idea application - developing, testing, commercializing, executing generated ideas or translating innovative ideas into valuable and real results (Jansen, 2000).

Also, innovative work behavior could be described from an individual perspective, like the effort of changing the existing environment or even creating a new environment at an individual worker's level. It also could be interpreted as an individual effort to create a new situation rather than to adapt to the existing one. So, in general innovative work behavior refers to the creating, developing and implementing new useful ideas at the company and is vital for the workforce of all organizations, especially for innovation-oriented businesses (De Jong and Den Hartog, 2010). Innovative work behaviour is when "all employee behavior directed at the generation, introduction and/or application (within a role, group or organization) of ideas, processes, products or procedures, new to the relevant unit of adoption that supposedly significantly benefit the relevant unit of adoption" (De Spiegelaere, Hootegem & Van Gyes, 2012, p. 7). Also, innovative work behavior can facilitate innovation in the workplace with employees integration to development and implementation of innovation processes. Saeed et al. (2018) described innovative work behavior as an "initiation and intentional introduction (within a work role, group or organization) of novel and useful ideas concerning products, services and work methods, as well as set of behaviors needed to develop, launch and implement these ideas" (Afsar, Bin, Cheema, Javed & Saeed, 2018, p. 107). "Innovative work behavior is at the base of high-performance organizations through a broad set of behaviors: opportunity exploration, recognition of problem, transformation of ideas into tangible outcomes and strategically planning these outcomes integrated into organizational practice." (Kor, 2016) However, it is difficult to foresee difficulties, which can arise while promoting this behavior, and that makes it challenging to achieve the desired result (Messmann and Mulder, 2021).

Innovative behavior of employees is higher when employees' self-confidence about their creative and innovative skills is combined with self-motivation, self-control, self-management strategies. Previous studies also showed different factors making an impact on the innovative work behavior: stress (Anjum and Zhao, 2022), organizational climate, learning organizations (Chughtai and Khalid, 2022), different leadership styles (Chughtai et. al., 2023), organizational culture (when development of new products and processes are valued manager's support and reward, interaction with coworkers in the work environment, employees' self-efficacy and creativity (Bruce and Scott, 1994). Workers with high self-esteem tend to learn or seek change, extroversion is associated with innovative behavior (Laguna and Mielniczuk, 2020), positive people are highly likely to engage in innovative behavior (Houghton and Neck, 2006). "Employees' attitude of internal support for innovation like inspiring,

acknowledging, and rewarding innovativeness along with the provision of sufficient amount of such assets as staff, funding, and time" (Bruce and Scott, 1994, p. 267) are related to creativity behavior (Akbari, Bagheri, Imani and Asadnezhad, 2021). The main difference between innovative work behavior and creativity is that the former involves not only proposing a new idea, but also implementing it (De Jong and Den Hartog, 2010). Innovative work behavior is a multi-layered process, that issues all the aspects of innovation processes which fundamentally include creativity and application stages (Bruce and Scott, 1994). Akbari, Bagheri, Imani and Asadnezhad, 2021 suggest that creative self-efficacy, entrepreneurial leadership and support for innovation make a significant influence on the formation and development of employees' individual innovative work behavior (Akbari, Bagheri, Imani and Asadnezhad, 2021). Innovative work behavior is essential for revitalization, growth and sustainability of a business and for generating and implementing new ideas, intended to create and develop new products and services, so in other words - to gain a long-term competitive advantage (Khan, Li, Chughtai, Mushtaq and Zeng, 2023).

Innovation process has a significant relationship with a leadership and its support: creating the conditions required for innovation and as a direct contributor to innovation as an organizational outcome and leadership style has even higher impact that external support for innovation (Gumusluolu and Ilsev, 2009). Especially the transformational leadership style can make a huge impact on employees' innovative behavior by changing employees' value systems, motivating to achieve higher performance levels, stimulating to think creatively (Chow, Jung & Wu, 2003). Self-leadership is a way of thinking or a voluntary and proactive behavior and has an ability or tendency of individuals to lead themselves in challenging situations (Manz, 1986).

1.2. Self-leadership

Van Dorssen-Boog et. al. (2020) suggest that self-leadership theory is based on the early work by Deci (1975) as it acknowledges the difference between extrinsic and intrinsic motivation for behavioral outcomes and well-being (van Dorssen-Boog, de Jong, Veld and Van Vuuren, 2020). In a broader context it is accepted that the concept of self-leadership began to be studied and analyzed in the mid-1980s and it has theoretical roots in Bandura's (1977, 1986) social learning and social cognitive theories, in self-regulation theory (Carver and Scheier, 1981), in the concept of "self- management" (Manz, 1983) and is related to the concept of influencing oneself (Alves et al., 2006). Bandura (1989) described the self-leadership construct in general as a desire of an individual to lead because of his or her interest in assuming greater control over his or her behaviors. It also embraces the triadic reciprocity causation model, which says that individual's behavior influences and is influenced by personal mechanisms and by external environment factors (Courtright, Stewart & Manz, 2019).

However, Manz was the creator of this term and described it more precisely for the first time: “a comprehensive self-influence perspective that concerns leading oneself toward the performance of naturally motivating tasks, as well as managing oneself to do work that must be done, but is not naturally motivating” (Manz, 1986, p. 589). So true self-leadership by Manz is based on autonomous choices and intrinsic motivation (Manz, 1986; Manz, 2015).

An individual, who has strong self-leadership skills, independently from contextual control systems can autonomously define what to do, why to do, and how to do things, it means that he or she has clear understanding about standards, objectives, strategy and methodology (Manz, 1986; Courtright, Manz & Stewart, 2011). After several decades, this definition was specified by Manz and other researches as an individual's ability to accomplish or perform a specific task taking into account his or her personalized individual goal (Manz and Neck, 2010), representing self-leadership like autonomous functioning when one can fully endorse personal activities and act by higher order reflections (Manz, 2015), about internal process leading individuals consciously and constructively explore their own thoughts and intentions to achieve desired changes (Li, Kang & Song, 2022). Moreover, this ability enables a person to take more self-control on his/her behavior, to identify and remove ineffective work behavior by self-reflection process, also find ways to change work behavior into more effective (Manz and Neck). In other words, it means that people who have strong self-leadership skills are motivated to use positive work behaviors versus negative work behaviors to achieve higher job performance. Also, it leads to learning of specific behavior and cognitive skills, which are essential for achieving effective job performance, making strategies for a control of behavior in uncertain circumstances and making them into opportunities for achieving desired goals (Carmeli, Meitar, & Weisberg, 2006). Employees could enhance desirable behavior with self-leadership skills while having various pressures from internal and external environments. So overall, self-leadership is “a process through which individuals control their own behavior, influencing and leading themselves through the use of specific sets of behavioral and cognitive strategies” (Houghton and Neck, 2006, p. 270).

After many years of research, it was proposed three different types of strategies for employees to motivate themselves for achieving a variety of different outcomes (Courtright, Manz & Stewart, 2011, Courtright, Manz & Stewart, 2019), also to achieve and exercise self-leadership by managing unpleasant professional responsibilities through intrinsic motivation (Houghton and Neck, 2006; Manz and Neck, 2010):

- behavioral focused strategies - oriented into managing individual behavior by the process like self-attentional, self-observation, self-goal setting, self-correcting feedback (self-criticism), self- reinforcement, self-cueing, self-reward and replacing ineffective behaviors with an effective one,also assist in accomplishment of challenging, unpleasant or difficult tasks. Self-leadership be- haviour

focused strategies is in direct, positive and significant relationship with job satisfaction, which mediates the relation between self-leadership behavioral-focused strategies and team performance (Politis, 2005);

- natural reward strategies - oriented into rewarding intrinsic tasks, making the completion of the tasks more pleasant and enjoyable, reevaluating unpleasant tasks as pleasant, being positive and enjoying completing the tasks, improving positive effect by using natural motivation during activity, developing motivating feelings of purpose, self-control and self-competence;
- constructive thought pattern strategy - oriented into individual ability to influence and direct his or her thoughts and mental activity in desirable ways through certain cognitive strategies, such as mental imagery, positive self-talk, challenging irrational beliefs and assumptions, developing positive and desirable ways of thinking, reducing dysfunctional thoughts, as a result facilitating self-influence to think more constructively and having a positive influence on performance.

  All these self-leadership strategies are positively related to enhanced work performance (Inam, Ho, Sheikh, Shafqat & Najam, 2023). Self-leadership behavioral-focused strategies have a direct, positive effect on the level of job satisfaction, which has a direct, positive effect on team performance and mediates previous relation (Politis, 2005). It is important to note that self-leadership is mainly considered a pivotal factor when there is no such a formal leader (Houghton, Manz & Neck, 2003). On the contrary, Inam, Ho, Sheikh, Shafqat & Najam (2023) argues that having transformational leader (not traditional vertical) can lead and empower employees to take more responsibilities and become self-leaders. It could be developed when individuals spend more time practicing self- leadership behavior (Shukla and Shaheen, 2023) in the workplace.

From the practical point of view self-leadership helps individuals finding out ways for dealing with various job demands (Kotze, 2018). Also, self-leaders can lead others to support their solutions and ideas (Carmeli, Meitar & Weisberg, 2006), because self-leadership is in a positive relationship with team members' proficiency and their individual task proficiency (Hauschildt and Konradt, 2012).

The concept of self-leadership differs from other similar concepts, such as empowerment (empowerment is more about having an influence on, rather than having influence over, self-influence (self-influence is more about an expanded view of self-control, which contains behavioral and cognitive aspects showing how people influence themselves, autonomy and self-determinant (which are fundamental aspects of self-leadership). But there is such a concept as empowering leadership, which is positively related to knowledge sharing, innovative work behavior and other desired outcomes at a workplace (Rao Jada, Mukhopadhyay & Titiyal, 2019).

It is also important that previous studies prove self-leadership relations with employees creativity (Jnaneswar and Ranjit, 2023), self-efficacy, organizational citizenship behaviors (Afridi, Jan & Shah, 2022), knowledge sharing (Khan, Li, Chughtai, Mushtaq & Zeng, 2023), project success (Ahmad,

Abdulhamid, Wahab & Nazir, 2022), job performance, job satisfaction and other factors, related to organizational performance: effective self-regulatory processes, employee adoptive performance, improving productivity, facilitating a successful career, reducing absenteeism, enhancing individual well-being by reducing stress and anxiety, increasing self-efficacy, contributing to the job success of individuals by facilitating the maintenance of desirable behaviors (Knotts and Houghton, 2021).

Self-leadership with moderation of empowerment positively impacts project success and also takes a mediator role in a project manager's transformational leadership behavior and project success relation (Ahmad, Abdulhamid, Wahab and Nazir, 2022). Therefore, project managers should be mindful of employees' self-leadership, should adopt transformational behavior and encourage employees' self-leadership and empowerment by providing ample authority and resources (Ahmad, Abdulhamid, Wahab & Nazir, 2022).

1.3. Work Engagement

Work engagement is one of the desired positive work attitudes, so leaders of the organizations search for the ways to foster employees' commitment and work engagement as a result building workers loyalty and workforce stability, especially nowadays, when a quick career opportunity and "free agent" era stimulates unengagement, willingness to change jobs and career paths in order to find fulfillment (Knotts and Houghton, 2021). Employees who are engaged to their organizations are psychologically attached and consider the organization as part of themselves.

Work engagement was defined in early 1990s by Kahn (1990): "the harnessing of organizational members' selves to their work roles; in engagement, people employ and express themselves physically, cognitively, and emotionally during role performances" (Kahn, 1990, p. 694). From one side, engagement involves a dedication and attachment to employee's work performance, from the other - it is employee's organizational commitment, which determines whether an individual wants, needs, or feels that he or she should remain in the organization (Park and Pierce, 2020).

Also work engagement is a motivational concept, where is demonstrating active allocation of personal resources associated with the tasks related to a work role. Schaufeli (2002) conceptualized it as an active, absolute, "positive, fulfilling, work related state of mind that is characterized by vigor, dedication, and absorption" (Bakker, Gonzalez-Roma, Salanova & Schaufeli, 2002, p. 74):

- vigor - refers into person, who has mental resilience and higher level of energy;
- dedication - enthusiasm, pride, strong involvement, experience of significance and supposes greater employee's involvement with the work;
- absorption - defines individual's fully concentration on his/her work when there are difficulties trying to detach him/her from work.

Furthermore, employees' engagement is not just a momentary state, as an emotion, but rather "refers to a more persistent motivational state that is not focused on any particular object, event, individual, or behavior" (Salanova and Schaufeli, 2008, p. 118). It is an indicator of the general autonomous and intrinsic motivation, specifically focused on one job task, at work and reflects more persistent and pervasive affective-cognitive state (Bakker, Salanova & Schaufeli, 2006; Salanova and Schaufeli, 2008).

Engaged employees work because they genuinely want to work (Salanova and Schaufeli, 2008). They also have more energy, deeper association with their job-related activities, believing in their abilities to meet complex job demands, and a stronger commitment to their organizations (Islam and Nazir, 2017). Employees engagement into work also supposes state of well-being, which employees can achieve by becoming motivated and fully evolved into performing of job task. Moreover, when individuals are engaged in their work, therefore they are exerting more energy and effort into job tasks, therefore there are some positive outcomes in organization: the result of performance is improving, better customer satisfaction because of engaged employees willing to go the extra mile (Bakker, Demerouti & Sanz-Vergel, 2014).

Work engagement is related with a lot of personal characteristics and also to important constructs to nowdays organizations: starting from employees' well-being and employees general health (van Dorssen-Boog, de Jong, Veld & Van Vuuren, 2020), to employees' job autonomy (van Dorssen- Boog, de Jong, Veld & Van Vuuren, 2020), work performance, normative commitment (Inam, Ho, Sheikh, Shafqat & Najam, 2023) creativity and self-leadership (Jnaneswar and Ranjit, 2023).

Work engagement has a positive impact on employees' general health because it has relation with self-observation and goal setting, while self-punishment and goal setting are in a relation with workaholism (Hakanen, Peeters & Zeijen, 2018). Moreover, workaholism concept refers to a tendency to work excessively hard and even being obsessed with work (Schaufeli, Taris & Van Rhenen, 2008), as a result has a negative influence on health, explained by the controlled regulation of motivation (Van den Broeck et al., 2011).

Employees' engagement is also related to normative commitment (Godlewska-Werner, Kawalec, Peplińska & Połomski, 2020), which could be understood as a sense of willingly benefiting and meeting the organizational expectations, Schaufeli et al. (2002) and an inner belief that they can meet the expectations and demands of their jobs or related to it even in the time of distress, and remain positive (Bakker, Gon Alezro, Salanova & Schaufeli, 2002). Also, by engaging in work-related activities, employees "can satisfy their sense of moral obligation towards the organization which may stem from already invested psychological, social and organizational resources, and work-related needs (such as autonomy, competence, relatedness)" (Inam, Ho, Sheikh, Shafqat & Najam, 2023, p. 3601).

Previous research has established self-leadership as an antecedent to work engagement (Harunavamwe, Nel & Van Zyl, 2020), especially to vigor and dedication (Jnaneswar and Ranjit, 2023). Self-leadership enhances work engagement and employees' creativity. Also engaged employees consider their work more meaningful and even show more creative behavior. Furthermore, by improving creativity, employees enhance self-leadership skills and engagement into work; in this relation work engagement takes mediating role (Jnaneswar and Ranjit, 2023) as well as in individual characteristics relation to creative performance.

Also, self-leadership encourages employees to experience positive emotions (pride, zeal, etc.) at their work and through experiencing positive emotions at the work employees become more engaged, broaden their intellectual resources, as a result adopting innovations in their job (Fredrick- son, 2001). Employees' engagement into work also positively affects innovative behavior (Palumbo (2021) and mediates the relationship between self-leadership and individual innovation. (Caetano, Curral & Gomes, 2015).

1.4. Self-efficacy

Self-efficacy can be explained as an persons' belief in their ability to execute tasks successfully, overcome challenges and achieve goals in specific contexts. A self-efficacy concept was developed by psychologist Albert Bandura in the second half of the last century and now is well known not just in psychology field, but also in human resources and business management areas. Self-efficacy can be also described as a person's capacity to deliver designated levels of achievement through influencing events that affect their lives (Bandura, 1997).

Therefore, if self-efficacy is linked to motivation, resilience, and performance, individuals with higher self-efficacy will be more likely to approach challenges with more confidence, persist in the face of setbacks, maintain motivation to succeed, take risks and persist in creative tasks, what is particularly important in innovation context. There is already some evidences, supporting this idea: employee engagement is positively correlated with creativity and self-efficacy (Wan et al., 2022). Moreover, strong employee engagement through social interactions might improve self-efficacy (Mustafa et al., 2023). Employees who try to develop their efficiency, are more likely to think creatively and not act by following the procedures – act more spontaneous, seek new ideas for the company's progress. According to that, employers can instill a feeling of responsibility in participants, foster initiatives, facilitate the process of discovery and improve innovative work behavior (Mustafa et al., 2023).

It shows that self-efficacy plays a crucial role in shaping how a person thinks, behaves, and feels across different situations. Research in Public Higher Education Institutions among academics indicated a positive and significant relationship between self-efficacy and another individual‘s quality – self-leadership

(Ibus et al., 2020) and reaffirmed self-efficacy and innovative work behavior positive link. Self-efficacy is found to mediate the relationship between self-leadership and innovative work behavior (Ibus et al., 2020), suggesting that the belief in one's capabilities enhances the influence of self-leadership on innovation among academics in Public Higher Education Institutions.

2. RELATIONS AND INTERACTIONS BETWEEN CONCEPTS

2.1. Self-leadership and innovative work behavior relation

According to Afsar et al., 2019, personal characteristics of individuals are essential in enhancing innovative work behavior and through self-leadership, as one of these characteristics, thoughts and intentions are cognitively navigated to accomplish desirable changes for innovative products or services (Afsar, Masood & Umrani, 2019; Goldsby, M. G., Goldsby, E. A., Neck, C. B., Neck, C. P. & Mathews, 2021), that shows self-leadership positive influence on an individual's innovative work behavior (Kor, 2016).

From another point of view, self-leadership could be described as a self-influence process through which individuals derive self-motivation and self-direction (Houghton, Neck & Manz, 2019), essential tools for innovative work behavior. In other words, self-leadership strategies work like intrinsic motivation and confidence for individuals' creative and innovative thinking. There are researches that has proved extrinsic motivation impact on innovative work behavior (Deci, Koestner & Ryan, 1999), but intrinsic rewards are more motivating than extrinsic ones (Li, Kang & Song, 2022). Moreover, extrinsic rewards can weaken intrinsic motivation over time (Amabile, 1979). Due to that organizations' management should establish organization workforce self-leadership and as a result achieve employees' innovative work behavior (Shukla and Shaheen, 2023).

Employees who demonstrate self-leadership are more likely to be innovative in their job and also more innovative in handling their work-related problems (Carmeli and Weisberg, 2006). Furthermore, Ibus, Wahab, Ismail and Omar (2020) study shows that self-leadership through self-efficacy as a mediator is positively related to innovative work behavior among the academics in PHEIs (Ibus, Wahab, Ismail & Omar, 2020) while Khan et. al. (2023) study shows that in the IT sector self-leadership through creative self-efficacy as a mediator and using knowledge sharing as a moderator is positively related to innovative work behavior (Khan, Li, Chughtai, Mushtaq and Zeng, 2023). Self-leadership and innovative behavior relationship could be increased by mediation of informal learning and moderation of social capital (Li, Kang & Song, 2022). Self-leadership moderates the indirect effect between ethical leadership and innovative work behavior through job crafting. The association becomes stronger when self-leadership is high rather than low.

In the other study (Chughtai and Khalid 2022) has been proven that self-leadership moderates the relationship between creative self-efficacy and innovative work behavior, such that higher level of self-leadership strengthens the positive relationship. Also, self-leadership indirectly influences learning organizations and innovative work behaviors through creative self-efficacy, in a way that a higher level of moderator is strengthening positive relationship. Also, innovative behavior could be achieved

through individual informal learning strategies in the process of self-leadership. So self-leaders can respond appropriately to new learning needs in innovation activities (Li, Kang & Song, 2022). Moreover, employees with higher self-leadership levels show better adaptation and adjustment in organizations seeking innovative solutions.

There was found another relation between self-leadership and innovative work behavior: Carmeli et al. (2006) research in different Israel organizations' supervisors and their employees revealed that self-leadership positively impacts employees' innovative behavior (Carmeli, Meitar & Weisberg, 2006). Similarly Ghosh (2015) researched pharmaceutical, information technology, automobile, advertising and chemical organizations in India (Ghosh, Jawahar & Rai, 2020); Taştan (2013) - employees of SME in Turkey; Park, Moon, & Hyun (2014) - sport educators from business firms in South Korea; Kalyar (2012) employees working in manufacturing firms in Pakistan; academics, and all these studies also observed this relationship (Ibus, Wahab, Ismail and Omar, 2020).

Kor (2016) research in the banking sector revealed that self-leadership was a mediator between participants' perceptions of entrepreneurial orientation and innovative behavior at work (Kor, 2016). Self-leadership also takes mediator role in the relationship between perceived entrepreneurial orientation and innovative work behavior (Kor, 2016).

2.2. Self-leadership and work engagement relation

Self-leadership like an individual motivator facilitates work engagement, because self-leaders have improved cognitive functions, therefore can utilize their psychological resources effectively, fulfill their own needs and to achieve their desired goals (Harunavamwe, Nel & Van Zyl, 2020; Kotze, 2018). It means that self-leadership strategies (for example, natural reward strategy) can enable employees to motivate themselves, achieve required goals and optimize their work environment, and in that way, increase their work engagement. In other words, self-leadership contributes to the resourcefulness of working environment, making it more pleasant and enjoyable and as a result to employees' work engagement (Bakker, Breevaart & Demerouti, 2014). It was showed in van Dorssen-Boog, de Jong, Veld and Van Vuuren (2020) study, where self-leadership natural rewards strategy mediated the relationship between job autonomy with work engagement and general health of healthcare workers (van Dorssen-Boog, de Jong, Veld and Van Vuuren, 2020). Perceived organizational support moderates and strengthens the relationship between self-leadership and employee engagement (Malaeb, Dagher and Messarra, 2022). Emotional exhaustion, affective commitment, normative commitment, and continuance commitment mediate the relationship between work engagement and self-leadership (Afridi, Jan & Shah, 2022). Shukla and Shaheen (2023) also confirm that higher level of self-leadership is related

to higher level of work engagement, which is related to higher levels of work performance of freelancers (Shukla and Shaheen, 2023). Breevaart et al. (2016) had shown the same findings in quantitative diary survey completed by 57 employees at the end of each week for five weeks, also actual autonomous self-leadership behavior (i.e., taking responsibility and initiative in an independent way) is in a positive relationship with work engagement (Bakker, Breevaart, Demerouti & Derks, 2016).

Work engagement takes mediator role in the positive relationship between self-leadership and work performance and between self-leadership and normative commitment (Inam, Ho, Sheikh, Shafqat and Najam, 2023). Work engagement and organizational commitment mediate the positive relationship between self-leadership and employee creativity (Jnaneswar and Ranjit, 2023). Moreover, self-leadership and work engagement have a positive relation through affective commitment as mediator - higher levels of self-leadership lead to higher level of affective organizational commitment, which, in turn, leads to higher levels of work engagement (Knotts and Houghton, 2021). Next, self-leadership mediates organizational justice and work engagement relation (Lim, Park & Song, 2016). Furthermore, self-leadership mediates the effects of job autonomy on work engagement and health (de Jong, van Dorssen-Boog, Van Vuuren & Veld, 2020). Self-leadership, specifically its two factors (behavior awareness, volition, task motivation and constructive cognition) is also related to future of human resources management through mediating role of work engagement (Schultz, 2021).

Inam, Ho, Sheikh, Shafqat and Najam (2023) notices, although self-leaders strive to use specific behavioral and cognitive self-influencing strategies for optimizing their work-performance and motivation, but sometimes work has not naturally motivating tasks, which need to be done and there- fore self-leaders will use positive, fulfilling, work-related state of mind that comes with being engaged at work (Bakker, Salanova & Schaufeli, 2006) to increase their work performance, conserving and mobilizing their resources to fit well with their organizations (Harunavamwe, Nel & Van Zyl, 2020) and remain committed to it (Inam, Ho, Sheikh, Shafqat and Najam, 2023).

Self-leadership positive relation to work engagement also could be explaining through intrinsic motivation theory (Deci, Miller & Ryan, 1988): self-leadership uses work resources work environment shaping, which sustains their interests and motivation in the job and maximize employees' potential gains for self-regulated motives. Furthermore, employees increase their work engagement by using natural reward strategies to shape the work motivating them to engage more (Inam, Ho, Sheikh, Shafqat & Najam, 2023).

Self-leadership positive relation to work engagement also could be explaining through social cognitive theory: involving into internalized self-leadership strategies direct employees to reshape their attitude of their work contexts and related behaviors and as a result become more invigorated, dedicated and absorbed in their work. From that point of view, more naturally rewarding tasks should increase vigor, dedication and absorption in work (Knotts and Houghton, 2021).

2.3. Self-leadership - self-efficacy - work engagement - innovative work behavior relation

The increase of attention to the rise of work engagement specifies its role in innovative employees behavior. Mustafa, Mubarak, Khan, Nauman and Riaz (2023) evidences the positive relation between engagement and innovative work behavior. It also revealed that self-efficacy moderates this relationship (Mustafa, Mubarak, Khan, Nauman and Riaz, 2023). Similar results were presented in Wan, He, Zhang and Zhou, 2022, but it also showed that creative self-efficacy and innovative work behavior takes a chain intermediary role between work engagement and open service innovation. Agarwal, Bhargava, Blake-Beard & Datta (2012) confirmed that higher level of work engagement improves employees innovative work behavior in information technology projects (Mustafa, Mubarak, Khan, Nauman and Riaz, 2023).

Self-leadership allows individuals to strongly believe in their own abilities through which they can be skillfully engaged, moreover, to improve their innovative work behavior (Goldsby et al., 2021; Harari et al., 2021).

Jnaneswar and Ranjit, 2023 showed that organizational commitment and work engagement can mediate a relationship between self-leadership and employees' creativity. Moreover, engaged employees try to bolster their creativity by contributing innovative ideas (Jnaneswar and Ranjit, 2023).

For example, Gomes et al. (2015) explored a sample of 337 nurses and doctors to establish the role of work engagement as a mediator between self-leadership and innovation, while also finding support for the direct relationship between self-leadership and work engagement (Caetano, Curral & Gomes, 2015).

Demographic variables such as gender, age, education, experience was controlled in this research. In previous researches (Park, Moon & Yang, 2014; de Jong, van Dorssen-Boog, van Vuuren & Veld, 2021; Liu, Shalley & Wang, 2018), these variables affected the relationship between self-leadership and innovative work behavior.

3. THE IMPACT OF SELF-LEADERSHIP ON INNOVATIVE WORK BEHAVIOR TROUGH MEDIATOR OF WORK ENGAGEMENT AND MODERATOR OF SELF-EFFICACY RESEARCH METHODOLOGY

3.1. Research conceptual framework, aim, objectives and hypotheses

The aim of this empirical research is to examine the impact of self-leadership on innovative work behavior and the mediating roles of self-efficacy and work engagement in this relation.

The objectives of the research:

1. To explore respondents' perceptions of self-leadership, innovative work behavior, self-efficacy, and work engagement operating in Lithuania, using a structured questionnaire survey method.
2. To assess whether self-leadership has a direct impact on innovative work behavior.
3. To examine whether self-efficacy has an indirect effect on the relationship between self-leadership and employee innovative work behavior, using mediation analysis.
4. To examine whether work engagement has an indirect effect on the relationship between self-leadership and employee innovative work behavior, using mediation analysis.
5. Determine the reliability and internal consistency of the research questionnaire, using the Cronbach alfa coefficient.
6. Determine the normality of data distribution using Kolmogorov - Smirnov and Shapiro – Wilk tests.
7. Identify the differences in evaluations of studied variables according to demographic and organizational characteristics of respondents using T-test and ANOVA.

Studies have shown that leadership can lead to the exchange of innovative ideas within organizations (Mustafa et al., 2023), which in turn creates an environment that encourages creativity and collaboration, also motivates to think and act innovatively. Moreover, self-leadership has a positive relationship with organizational citizenship behaviors (Afridi et al., 2022), which can involve proactive and voluntary efforts to improve and develop organizational outcomes, indirectly facilitating innovation. More findings show that self-leadership, along with several other characteristics, is a critical determinant of innovative behavior (Kang et al., 2022). Notably, individuals with strong self-leadership are more likely to demonstrate high levels of innovative behavior compared to those with weaker self-leadership (Kör, 2016), emphasizing its importance in driving innovation at the individual level. These findings reinforce the the following hypothesis:

Hypothesis 1: self-leadership is positively associated with innovative work behavior.

Research indicates that through different models self-leadership has a positive relation with work engagement: emotional exhaustion mediates (Afridi et al., 2022), perceived organizational support moderates (Malaeb et al., 2023) self-leadership – work engagement relationship. Furthermore, research indicates that individuals who demonstrate high self-leadership are more intrinsically motivated to engage at work (Inam et al., 2021). Knotts & Houghton suggest that as individuals engage in higher levels of self-leadership, they will more engage in their work (Knotts & Houghton, 2021), further reinforcing their commitment to their roles and enhancing their innovative potential. Researchers also explore a partial mediation effect of work engagement and organizational commitment in the relationship between self-leadership and employee creativity (Jnaneswar & Ranjit, 2023), highlighting the dual role of motivation and connection to organizational goals. These findings underline how work engagement enables individuals to channel their intrinsic motivation fostered through self-leadership and focus on creative problem-solving and innovation. Therefore, the following hypothesis is proposed:

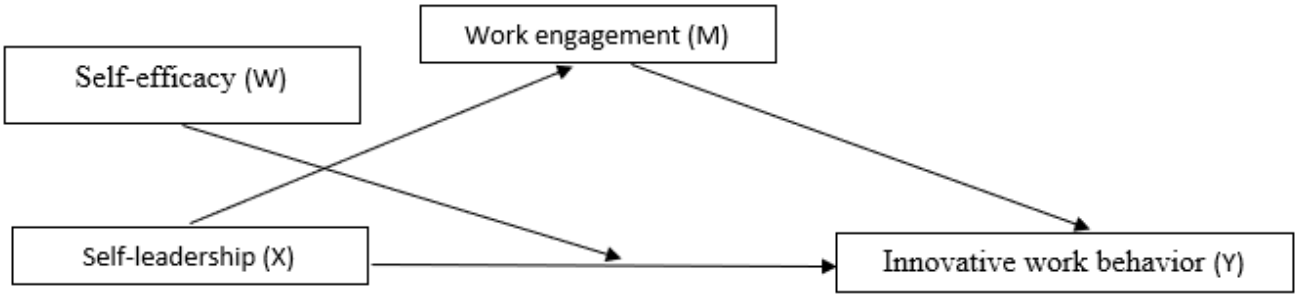
Hypothesis 2: work engagement mediates the relationship between self-leadership and innovative work behavior.

Previous research has shown that academics who exhibit self-leadership are inherently self-directed and self-motivated to perform tasks which consequently encourage them to be innovative and achieve their goals (Ibus et al., 2020). It allows to take initiative and perform tasks more efficiently, moreover, self-efficacy is one of very important elements to improve innovative performance (Mustafa et al., 2023). Increased self-efficacy is a key precursor to idea creation, a fundamental component of innovative behavior, that can be seen in dynamic and demanding environments, such as information technology projects (Mustafa et al., 2023), where self-efficacy underpins the capacity to generate and implement modern solutions. Therefore, based on the previous research the following hypothesis is proposed:

Hypothesis 3: self-efficacy moderates the relationship between self-leadership and innovative work behavior.

The proposed hypotheses align with a combined conditional process model, where selected variables, mediator and moderator match each other in the following sequence: independent variable - X, dependent variable - Y, mediator - M and moderator - W corresponded to constructs as X - self-leadership, Y - innovative work behavior, M - work engagement, W - self-efficacy (see Table 1. Research model):

Table 1. *Research model*



To account for external influences the research included several control variables that might impact innovative behavior: demographics (age, gender, educational level, tenure) and the aspects of current workplace (sector, industry type, size).

3.2. Sampling and data collection strategies

Sampling. As employers increasingly talk about the importance of innovation and employee's ability to react fast and positive to new situations, working tools and changing tasks, it was decided to explore more widely in Lithuanian labor market, therefore employees across various industries and organizations were asked to participate in this research. There was selected a convenience sampling strategy, which is a type of non-probability sampling, to conduct this research. The research participants are 18-65 y.o. employees, who are working in various companies, operating in different Lithuanian business industries and sectors.

Sample size. The sample size needed for this research was calculated based on similar studies by other authors (see in Table 2. The comparison of sample sizes):

Table 2. *The comparison of sample sizes*

Author	**Name of the article**	**Sample size**
Ibus, S., Wahab, E., Ismail F., Omar, R. (2020).	*Stimulating Innovative Work Behavior among Academics in Private Higher Educational Institutions*	350

Mustafa, G., Mubarak, N., Khan, J., Nauman, M., Riaz, A. (2023).	*Impact of Leader-Member Exchange on Innovative Work Behavior of Information Technology Project Employees; Role of Employee Engagement and Self-Efficacy*	210
Wan, X., He, R., Zhang, G. and Zhou, J. (2022).	*Employee engagement and open service innovation: The roles of creative self-efficacy and employee innovative behaviour*	103
Malaeb, M., Dagher, G., Canaan Messarra, L. (2023).	*The relationship between self-leadership and employee engagement in Lebanon and the UAE: the moderating role of perceived organizational support*	225
	All respondents	**888**
	Average	**222**

Source: Compiled by the author.

Data collection. For this empirical research was chosen survey method. It was composed of five different sections, to measure correspondents' self-leadership, self-efficacy, work engagement, innovative work behavior and identify some demographic data as correspondent gender, age, education, working experience and current company information - size, business sector and private/public sector. The questionnaire in total had 52 questions.

Methods. The correspondents were asked to fill an online form via Office Forms (https://forms.office.com/). The online form was distributed via social network - social media platforms: Linkedin, Facebook, Instagram. The invitation to participate in the research was sent directly and extending recruitment beyond immediate friends and colleagues circle - including acquaintances and secondary connections. The survey provided clear instructions and ensured confidentiality.

3.3. Measurement

This empirical research was based on previous research scales, which measure self-leadership, self-efficiency, work engagement and innovative work behavior. The survey was prepared in Lithuanian language, therefore all the scales were also translated into Lithuanian language.

Self-leadership is measured using a scale of Houghton, J. D., Dawley, D., & DiLiello, T. C. 2012, scale items can be grouped into different aspects:

Table 3. *Self-leadership scale*

Aspect	Scale Items
Self-Goal Setting	1. I establish specific goals for my own performance.
	3. I work toward specific goals I have set for myself.
Self-Observation	2. I make a point to keep track of how well I'm doing at work.
Visualizing Successful Performance	4. I visualize myself s1uccessfully performing a task before I do it.
	5. Sometimes I picture in my mind a successful performance before I actually do a task.
Self-Reward	6. When I have successfully completed a task, I often reward myself with something I like.
Evaluating Beliefs and Assumptions	7. Sometimes I talk to myself (out loud or in my head) to work through difficult situations.
	8. I try to mentally evaluate the accuracy of my own beliefs about situations I am having problems with.
	9. I think about my own beliefs and assumptions whenever I encounter a difficult situation.

Source: Compiled by the author according to Houghton, Dawley & DiLiello (2012)

Score options were delivered on a Likert-type scale, where 1 - strongly disagree, 2 - disagree, 3 - neither/nor agree, 4 - agree, 5 - strongly agree, with higher scores indicating a higher level of self-leadership.

Self-efficacy is measured by Generalized Self-Efficacy Scale (GSES) of Schwarzer and Jerusalem (1995), scale items can be grouped into different aspects:

Table 4. *Self-efficacy scale*

Aspect	Scale Items
Problem-Solving Ability	1. I can always manage to solve difficult problems if I try hard enough.
	6. I can solve most problems if I invest the necessary effort.
Assertiveness and Influence	2. If someone opposes me, I can find means and ways to get what I want.
Goal Commitment	3. It is easy for me to stick to my aims and accomplish my goals.
Adaptability to Challenges	4. I am confident that I could deal efficiently with unexpected events.
	5. Thanks to my resourcefulness, I know how to handle unforeseen situations.
Coping and Emotional Resilience	7. I can remain calm when facing difficulties because I can rely on my coping abilities.
Creative Problem-Solving	8. When I am confronted with a problem, I can usually find several solutions.
	9. If I am in a bind, I can usually think of something to do.
General Confidence	10. No matter what comes my way, I'm usually able to handle it.

Source: Compiled by the author according to Schwarzer & Jerusalem (1995)

Score options were delivered on a 5-point Likert-type scale, where 1 – Not at all true, 2 - Hardly true, 3 - Moderately true, 4 - Exactly true, with higher scores indicating a higher level of self-efficiency.

Work engagement is measured with Work and Well-Being Survey (UWES) by Schaufeli and Bakker (2006), scale items can be grouped into different aspects:

Table 5. *Work engagement scale*

Aspect	Scale Items
Vigor	1. At my work, I feel bursting with energy.
	4. At my job, I feel strong and vigorous.
	12. I can continue working for very long periods at a time.

	15. At my job, I am very resilient, mentally.
	17. At my work, I always persevere, even when things do not go well.
Dedication	2. I find the work that I do full of meaning and purpose.
	5. I am enthusiastic about my job.
	7. My job inspires me.
	8. When I get up in the morning, I feel like going to work.
	10. I am proud of the work that I do.
	13. To me, my job is challenging.
Absorption	3. Time flies when I am working.
	6. When I am working, I forget everything else around me.
	9. I feel happy when I am working intensely.
	11. I am immersed in my work.
	14. I get carried away when I am working.
	16. It is difficult to detach myself from my job.

Source: Compiled by the author according to Schaufeli, Bakker & Salanova (2006)

Score options were delivered on a 7-point Likert-type scale, where 0 - Never (Never), 1 – Almost Never (A few times a year or less), 2 - Rarely (Once a month or less), 3 - Sometimes (A few times a month), 4 - Often (Once a week), 5 - Very Often (A few times a week), 6 - Always (Every day), with higher scores indicating higher level of work engagement.

Innovative work behavior is measured by a scale of Janssen (2000), scale items can be grouped into different aspects:

Table 6. *Innovative work behavior scale*

Aspect	**Scale Items**
Idea Generation	1. I am creating new ideas for difficult issues.

	2. I am searching out new working methods, techniques, or instruments.
	3. I am generating original solutions for problems.
Idea Promotion	4. I am mobilizing support for innovative ideas.
	5. I am acquiring approval for innovative ideas.
	6. I am making important organizational members enthusiastic for innovative ideas.
Idea Implementation	7. I am transforming innovative ideas into useful applications.
	8. I am introducing innovative ideas into the work environment in a systematic way.
	9. I am evaluating the utility of innovative ideas.

Source: Compiled by the author according to Janssen (2000)

Score options were delivered on a 7-point Likert-type scale, where 0 - Never (Never), 1 – Almost Never (A few times a year or less), 2 - Rarely (Once a month or less), 3 - Sometimes (A few times a month), 4 - Often (Once a week), 5 - Very Often (A few times a week), 6 - Always (Every day), with higher scores indicating higher level of innovative behavior.

3.4. Data processing procedures and study limitations

The collected data will be analyzed using IBM SPSS (Statistical Package for the Social Sciences). Descriptive statistics, such as means, frequencies, and standard deviations, will summarize demographic and organizational information. Cronbach's alpha will be used to assess the reliability of the study scales. The Kolmogorov-Smirnov and Shapiro-Wilk tests will check the normality of data distribution. T-test and ANOVA will evaluate the statistical significance of the results. Furthermore, linear regression and combined conditional process analysis will explore the relationships between the independent and dependent variables.

This study has a few limitations. Firstly, it relies on employees' subjective perceptions of their self-leadership, self-efficacy and work engagement, as well as their self-evaluations of innovative behaviors at work, which may lead to potential biases. Secondly, the survey is conducted online, so it is possible that the questionnaire will not reach more employees working in non-digital workplaces.

4. THE ANALYSIS OF EMPIRICAL RESEARCH RESULTS

4.1. Demographic characteristics of the respondents

To assess the respondents' personal and organizational characteristics, participants were asked to provide information about their age, gender, education, and tenure (work experience) in their current organization. Additionally, they identified the sector and industry (business sector) in which their company operates, as well as the organization's size. The summarized findings are presented in Tables 7, 8, and 9.

Table 7. *Individual characteristics of the respondents*

Characteristics	Variable	N	Percentage %
Gender	Man	79	27,3
	Woman	210	72,7
	Other	0	0
Education	Secondary education	25	8,7
	Vocational education	20	6,9
	Higher non-university education	43	14,9
	Bachelor's degree	128	44,3
	Master's degree	71	24,6
	Doctorate degree	1	0,3
	Other	1	0,3
Work experience in the organization	Up to 1 year	62	21,5
	1-5 years	153	52,9
	6-10 years	38	13,1
	11-20 years	18	6,2
	more than 20 years	18	6,2

Source: Compiled by the author according to research results.

As can be observed from the findings shown in Table 7, the percentage of male and female participants in the research were distributed unevenly – the majority of respondents were females - 72,7% and only

27,3% were male. The almost half of participants had bachelor’s degrees (44,3%), and almost quarter had master's degree (24,6%). More than half of respondents indicated being employed by the company for one to five years (52,9%) and more than one-fifth of respondents up to one year (21,5%).

Table 8. *Age of the respondents*

Age group	Age	N	N	Percentage %
Less than 26 years	19	1	101	34,9
	20	6		
	21	10		
	22	13		
	23	18		
	24	17		
	25	36		
26-35 years of age	26	15	104	36,0
	27	15		
	28	7		
	29	7		
	30	11		
	31	7		
	32	9		
	33	9		
	34	12		
	35	12		
36-45 years of age	36	8	43	14,9
	37	3		
	38	5		
	39	3		
	40	3		

	41	8		
	42	6		
	43	3		
	44	3		
	45	1		
46-55 years of age	46	2	29	10,0
	47	2		
	48	3		
	49	4		
	50	6		
	51	2		
	52	5		
	53	2		
	55	3		
More than 55 years	57	4	9	3,1
	58	2		
	59	1		
	60	1		
	63	1		

Source: Compiled by the author according to research results.

According to the findings shown in Table 8, the age of the respondents, divided into age groups, was distributed quite evenly: most participants were in the age group of 26-35 (36,0%) and less than 26 (34,9%), other were in the age groups of 36-45 (14,9%) and 46-55 (10,0%), while the fewest respondents were in the age group of more than 55 years (3,1%).

Table 9. *Organizations characteristics by the respondents*

Characteristics	Variable	N	Percentage %

Sector	Private	186	64,4
	Public	98	33,6
	Other	5	2,1
Business sector	Energy / Utilities	61	21,1
	Financial services	19	6,6
	Manufacturing	25	8,7
	Information technology	12	4,2
	Engineering / Mechanical / Construction	11	3,8
	Customer service / Other services	57	19,7
	Culture / Sports	6	2,1
	Trade	11	3,8
	Healthcare / Medicine / Pharmaceuticals	18	6,2
	Education / Training	36	12,5
	Transport / Logistics	14	4,8
	Other	19	6,6
Company size	Micro (1-9 employees)	35	12,1
	Small (10-49 employees)	56	19,4
	Medium (50-249 employees)	98	33,9
	Large (250+ employees)	100	34,6

Source: Compiled by the author according to research results.

As can be seen in the findings shown in Table 9, most of the respondents specified their company operating in private sector (64,4%), the other part - operating in public sector (33,6) and only a few of the respondents chose other answer (2,1%), mentiong non-governmental organization, association, individual activity or combined company working in public and private sectors. According to company size, more than two-thirds participants work in large (250+ employees) and medium (50-249 employees) companies - 34,6% and 33,9% respectively.

4.2 Internal consistency and reliability of scales

The research used a questionnaire that was created using validated scales. However, it is important to assess the internal consistency and reliability of the measurement scales for the constructs in the survey every time it is used (Tavakol & Dennick, 2011). To confirm the validity of these scales, the Cronbach's alpha coefficient was computed for each scale and latent variable. The obtained Cronbach's alpha values were then compared with those reported by the original authors and are shown in Table 10.

Table 10. *The comparison of Cronbach alpha coefficient for the measurement*

Construct	Cronbach alpha overall scale reported by authors	Cronbach alpha overall scale obtained
Self-leadership scale (Houghton, Dawley & DiLiello, 2012) 9 items	0,73	0,75
Self-efficacy scale (Schwarzer & Jerusalem, 1995) 10 items	0,80	0,84
Work engagement scale (Schaufeli, Bakker & Salanova, 2006) 16 items	0,91	0,90
Innovative work behavior scale (Janssen, 2000) 9 items	0,95	0,93

Source: Compiled by the author according to research results.

As presented in Table 10, the Cronbach's alpha coefficients for the measurement scales used in this research are very similar to those reported by the original authors. All scales had a score of 0.74 or higher. Although a high Cronbach's alpha may be influenced by factors such as item redundancy and the length of the construct, an alpha value above 0.7 demonstrates strong validity and reliability for use in subsequent surveys (Tavakol & Dennick, 2011).

4.3 Assessment of data normality

Data normality tests were conducted to determine whether the data followed a normal distribution. Both the Kolmogorov-Smirnov and Shapiro-Wilk tests were used, and the results of these tests are presented in Table 11.

Table 11. *Test of Normality results*

Variables	Kolmogorov-Smirnov test		Shapiro-Wilk test	
	Statistics	P value	Statistics	P value
Self-leadership	0,102	<0,001	0,960	<0,001
Self-efficacy	0,082	<0,001	0,987	0,011
Work engagement	0,065	0,006	0,978	<0,001
Innovative work behavior	0,043	0,200	0,989	0,030

Source: Compiled by the author according to research results.

The findings from the data normality tests revealed that the study data cannot be regarded as exactly precisely normally distributed, and only work engagement and innovative work behavior passed Kolmogorov-Smirnov test, other the acquired test results had p-values less than 0.05, as presented in Table 11. To further examine the normality of the data distribution, considering the individual and organizational characteristics of the respondents, the Skewness and Kurtosis coefficients were assessed (see Table 12).

Table 12. *Skewness and Kurtosis results*

Variables	Skewness	Kurtosis
Self-leadership	-0,737	2,627
Self-efficacy	0,042	0,339
Work engagement	-0,381	-0,492
Innovative work behavior	-0,046	-0,384

Source: Compiled by the author according to research results.

As can be seen in Table 12, the Skewness and Kurtosis coefficients of self-efficacy, work engagement and innovative work behavior fits within the range of -1.5 to 1.5, suggesting that the data closely approximates a normal distribution. The only exception is self-leadership, which has kurtosis value of 2.6. Despite this fact, the research sample size is sufficiently large (n= 289), the parametric tests are robust to mild deviations from normality, visualisation of the data shows only minor deviations, skewness is within acceptable limits and parametric tests provide more statistical power than non-parametric alternatives, making them the appropriate choice for this analysis. Therefore, it is considered

that the research data are close to normal distribution and statistical tools for parametric data will be applied in further analysis. The histograms of the variables can be found in Annex 2.

4.4 Descriptive statistics

The mean values of the constructs show survey respondents' perceptions of self-leadership, self-efficacy, work engagement, and innovative work behavior. Table 13 presents the mean values, standard deviations of the constructs, and the Likert scale used for evaluation.

Table 13. *Means, standard deviation and scales' values of the constructs*

Construct	Mean value (M)	Standard deviation (SD)	Scale values	
			Min	Max
Self-leadership	3,86	0,512	1	5
Self-efficacy	3,09	0,417	1	4
Work engagement	4,95	0,976	1	7
Innovative work behavior	4,38	1,315	1	7

Source: Compiled by the author according to research results

Based on the outcomes in Table 13, it may be concluded that participants in the sample perceive themselves as demonstrating self-leadership, as the computed mean score (M=3.86) is higher than the neutral midpoint of three on a Likert scale ranging from one to five. Also, respondents quite highly evaluated their self-efficacy (M=3,09) on a Likert scale ranging from one to four. Employees work engagement was evaluated by them as M=4,95 and innovative work behavior as M=4,38 on a Likert scale from one to seven. However, significance tests will be conducted out to further analyze respondents' attitudes toward the variables in relation to their demographic and organizational characteristics.

4.5 Distribution of demographic data

Possible variations among respondents based on demographic characteristics and their influence on employee perceptions of important study variables were assessed using independent samples t-tests and one-way ANOVA. The differences in self-leadership, self-efficacy, work engagement and innovative work behavior were evaluated according to respondents' gender, age, education, work experience in

their current organization, sector and industry in which organization operates and the size of the company.

Evaluation of variables according to respondents' age group

One-way ANOVA test results showed that there were significant differences in the evaluations based on the respondent's age for all variables, except self-efficacy: self-leadership (p=0,028), work engagement (p<0,001) and innovative work behavior (p=0,032), see Table 14:

Table 14. *Evaluation differences of variables according to respondents' age group*

Variables	Less than 26 years (N=101)		26-35 years (N=104)		36-45 years (N=43)		46-55 years (N=29)		More than 55 years (N=9)		One-way ANOVA	
	M	SD	M	SD	M	SD	M	SD	M	SD	F	p
Self-leadership	3,89	0,452	3,75	0,517	4,01	0,472	3,79	0,644	4,05	0,561	2,773	0,028
Self-efficacy	3,03	0,404	3,08	0,420	3,20	0,370	3,10	0,449	3,36	0,508	2,317	0,057
Work engagement	4,68	1,035	4,84	0,966	5,33	0,708	5,45	0,790	5,47	0,847	6,893	<0,001
Innovative work behavior	4,22	1,384	4,25	1,298	4,49	1,220	4,89	1,140	5,20	1,279	2,680	0,032

Source: Compiled by the author according to research results.

To evaluate the statistical significance between different respondent groups Bonferroni test was performed. Based on Bonferroni test results respondents who belong to the 26-35 years old age group perceived their self-leadership at lower level than the respondents who belong to the 36-45 years old age group. Moreover, younger respondents (who belong to less than 26 years and 26-35 years old age groups) demonstrated less work engagement in comparison with older respondents (who belong to 36-45 and 46-55 years old age groups). Additional information on the data comparison with the respondents' age is provided in Annex 3.

Evaluation of variables according to respondents' gender

Independent samples T-test was used to evaluate the differences in respondents' evaluations of the variables according to gender. (See Table 15).

Table 15. *Evaluation differences of variables according to respondents' gender*

Variables	Male		Female		t-test		
	Means	SD	Means	SD	t	p	p (two sided)
Self-leadership	3,8917	0,51350	3,8444	0,51169	-0,698	0,729	0,486
Self-efficacy	3,1797	0,40427	3,0610	0,41779	-2,206	0,754	0,029
Work engagement	5,0484	0,82497	4,9070	1,02629	-1,098	0,007	0,273
Innovative work behavior	4,6048	1,18444	4,2931	1,35392	-1,915	0,142	0,057

Source: Compiled by the author according to research results.

The collected data (See Table 15) indicate that there were no significant differences in evaluations of self-leadership, work engagement and innovative work behavior between males and females (t-test p (two-sided) value >0,05). The only one difference can be seen in women self-efficacy evaluation (t-test p (two-sided) value is 0,029). Due to the small number of respondents this difference can exist only in this research sample, but not in population, therefore this data do not show significant difference. Additional information on the data comparison with the respondents' gender is provided in Annex 4.

Evaluation of variables according to respondents' education

To examine whether respondents' evaluations of the variables differ significantly based on their educational background, a one-way ANOVA test was performed. The results (See Table 16) showed no significant differences for self-leadership and self-efficacy, but work engagement and innovative work behavior had p value =0.002 and p value =0.015 respectively.

Table 16. *Evaluation differences of variables according to respondents' education*

		Self-leadership	Self-efficacy	Work engagement	Innovative work behavior
Secondary education (N=25)	M	3,79	3,02	4,36	3,64
	SD	0,575	0,388	0,949	1,370
Vocational education (N=20)	M	3,70	3,09	4,81	4,81
	SD	0,601	0,488	1,086	1,425
Higher non-university education (N=43)	M	3,98	3,14	5,22	4,63
	SD	0,411	0,414	0,954	1,384
Bachelor's degree (N=128)	M	3,80	3,05	4,86	4,32
	SD	0,493	0,397	0,979	1,240
Master's degree (N=71)	M	3,95	3,17	5,17	4,49
	SD	0,534	0,433	0,860	1,270
Doctorate degree (N=1)	M	3,78	3,80	5,82	2,89
	SD				
One-way ANOVA	F	1,809	1,697	3,895	2,878
	p	0,111	0,135	0,002	0,015

Source: Compiled by the author according to research results.

This suggests that respondents' educational background has a significant impact on their reported work engagement and innovative work behavior. Although post-hoc tests could not be conducted, the descriptive statistics indicate that respondents with higher non-university education reported the highest mean work engagement at M=5.22, while respondents with secondary education reported the lowest mean work engagement at M=4.36. Higher levels of education generally corresponded to greater work engagement, but higher non-university education reported the highest engagement (M=5.22). Respondents with vocational education reported the highest mean innovative work behavior at M=4.81, while respondents with secondary education reported the lowest mean innovative work behavior at M=3.64. In this study, innovative work behavior does not strictly increase with higher education levels.

This suggests that while higher education is associated with slightly higher innovation, vocational education stands out as the top-performing group. Additional information on the data comparison with the respondents' education is provided in Annex 5.

Evaluation of variables according to respondents' work experience in the organization

One-way ANOVA test results showed that there were significant differences in the evaluations based on the respondent's work experience in the organization for two variables: work engagement (p=0,003) and innovative work behavior (p=0,049), see Table 17:

Table 17. *Evaluation differences of variables according to respondents' work experience in the organization*

Variables	Up to 1 year (N=62)		1-5 years (N=153)		6-10 years (N=38)		11-20 years (N=18)		More than 20 years (N=18)		One-way ANOVA	
	M	SD	M	SD	M	SD	M	SD	M	SD	F	p
Self-leadership	3,86	0,412	3,86	0,510	3,79	0,699	3,83	0,305	3,98	0,563	0,434	0,784
Self-efficacy	3,01	0,417	3,10	0,416	3,19	0,360	3,07	0,407	3,09	0,527	1,108	0,353
Work engagement	4,88	0,944	4,79	1,020	5,29	0,900	5,24	0,710	5,47	0,700	4,077	0,003
Innovative work behavior	4,12	1,330	4,31	1,357	4,64	1,175	4,61	1,056	5,04	1,181	2,411	0,049

Source: Compiled by the author according to research results.

To evaluate the statistical significance between different respondent groups Bonferroni test was performed. Based on Bonferroni test results respondents who worked in the organization from one to five years perceived their work engagement at lower level than the respondents working from six to ten years and more than twenty years. The respondents with less work experience within the organization (up to one year, one to five years) demonstrated less innovative work behaviors in comparison with

more experienced ones (more than twenty years). Additional information on the data comparison with the respondents' work experience is provided in Annex 6.

Evaluation of variables according to respondents' organization sector

To assess the differences in the participants' evaluation of variables according to the sector organization operates in one-way ANOVA test was performed. It can be seen in Table 18, that respondents who chose the option "Other" scored highest evaluations (mean values) for all variables, but overall results didn't show any significant differences across all the variables - p-value >0.05 and the mean scores for all variables (self-leadership, self-efficacy, work engagement, and innovative work behavior) are fairly similar across the different sectors (private, public, and other) (See Table 18).

Table 18. *Evaluation differences of variables according to sector of the organization*

Variables	Private (N=186)		Public (N=98)		Other (N=5)		One-way ANOVA	
	M	SD	M	SD	M	SD	F	p
Self-leadership	3,83	0,535	3,89	0,469	4,09	0,404	1,007	0,366
Self-efficacy	3,10	0,411	3,07	0,431	3,20	0,367	0,306	0,737
Work engagement	4,91	0,987	4,99	0,965	5,13	0,965	0,283	0,753
Innovative work behavior	4,41	1,250	4,30	1,432	4,69	1,470	0,367	0,693

Source: Compiled by the author according to research results.

Evaluation of variables according to respondents' organization business sector

To assess the differences in respondents' evaluations of variables based on the business sector in which their organization operates, a one-way ANOVA test was performed. The results, presented in Table 18, indicate no significant differences across all variables, as all p-values exceeded >0.05. For self-leadership, mean scores ranged from M=3.72 (manufacturing) to M=3.98 (trade), indicating relatively consistent perceptions of this variable across industries. Similarly, self-efficacy scores showed minimal variation, with mean values between M=3.05 (customer service/other services) and M=3.22 (energy/utilities). Work engagement had the highest mean score M=5.15 (education/training) and the

lowest in M=4.78 (customer service/other services), though these differences were not statistically significant. Finally, innovative work behavior displayed the widest range of mean scores, from M=4.03 (financial services) to M=5.02 (culture/sports), but again, no significant differences were observed. These findings suggest that employees' evaluations of self-leadership, self-efficacy, work engagement, and innovative work behavior are consistent across different business sectors.

Table 19. *Evaluation differences of variables according to business sector of the organization*

		Self-leadership	Self-efficacy	Work engagement	Innovative work behavior
Energy / Utilities (N=61)	M	3,94	3,22	4,89	4,48
	SD	0,442	0,407	0,929	1,177
Financial services (N=19)	M	3,79	3,10	4,49	4,03
	SD	0,524	0,432	1,090	1,183
Manufacturing (N=25)	M	3,72	3,04	5,10	4,27
	SD	0,423	0,346	0,811	0,980
Information technology (N=12)	M	3,76	2,92	4,64	4,20
	SD	0,387	0,316	1,374	1,380
Engineering / Mechanical / Construction (N=11)	M	3,80	3,08	5,07	4,81
	SD	0,680	0,344	0,711	1,436
Customer service / Other services (N=57)	M	3,80	3,05	4,78	4,23
	SD	0,587	0,417	1,098	1,497
Culture / Sports (N=6)	M	3,93	3,12	5,50	5,02
	SD	0,623	0,531	1,108	1,592
Trade (N=11)	M	3,98	3,16	5,01	4,82
	SD	0,455	0,338	1,011	0,946
	M	3,66	3,14	5,15	4,19

Healthcare / Medicine / Pharmaceuticals (N=18)	SD	0,629	0,422	0,945	1,612
Education / Training (N=36)	M	3,96	3,05	5,15	4,66
	SD	0,418	0,491	0,863	1,390
Transport / Logistics (N=14)	M	3,92	3,01	5,06	4,06
	SD	0,437	0,497	0,687	1,225
Other (N=19)	M	4,06	3,06	5,27	4,21
	SD	0,629	0,391	0,840	1,239
One-way ANOVA	F	1,100	0,984	1,291	0,892
	p	0,361	0,461	0,229	0,548

Source: Compiled by the author according to research results.

Evaluation of variables according to the size of organization

To assess the differences in respondents' evaluations of variables according to the size of organization they work, a one-way ANOVA test was conducted. As shown in Table 20, the results did not reveal any significant differences across variables, with p-values >0.05. For self-leadership, mean scores ranged from M=3.73 (micro organizations) to M=3.94 (large organizations), showing relatively consistent perceptions regardless of organizational size. Similarly, self-efficacy mean scores varied only slightly, from M=3.09 (micro organizations) to M=3.14 (large organizations). The highest mean score for work engagement was observed in micro organizations (M=5.20), while large organizations had a slightly lower mean score M(=4.97). For innovative work behavior, mean scores were similar across organizational sizes, with micro organizations scoring the highest (M=4.57) and large organizations scoring slightly lower (M=4.36). From the other point of view, employees in micro companies showed highest work engagement and innovative work behavior, while employees in large companies showed highest self-leadership and self-efficacy evaluations. However, these findings suggest that organizational size does not significantly influence employees' perceptions of self-leadership, self-efficacy, work engagement, or innovative work behavior.

Table 20. *Evaluation differences of variables according to the size of organization*

Variables	Micro (1-9 employees) (N=35)		Small (10-49 employees) (N=56)		Medium (50-249 employ-ees) (N=98)		Large (250+ employees) (N=100)		One-way ANOVA	
	M	SD	M	SD	M	SD	M	SD	F	p
Self-leadership	3,73	0,732	3,88	0,396	3,81	0,525	3,94	0,454	1,874	0,134
Self-efficacy	3,09	0,414	3,06	0,409	3,06	0,449	3,14	0,390	0,788	0,501
Work engagement	5,20	0,952	5,00	0,911	4,80	0,986	4,97	1,001	1,568	0,197
Innovative work behavior	4,57	1,288	4,54	1,204	4,30	1,271	4,30	1,426	0,774	0,509

Source: Compiled by the author according to research results.

In summary, several conclusions can be drawn for statistically significant differences in a comparison of variables averages with respondents' demographic and organizational features.

- The statistically significant differences were found in evaluations of self-leadership, work engagement and innovative work behavior depending on respondents' age group. According to the Bonferroni test results, respondents in 26-35 years old age group evaluated their self-leadership at lower level than the respondents who belong to the 36-45 years old age group. Also younger respondents (less than 26 years, 26-35 years old age groups) perceived their work engagement at lower level in comparison with older respondents (36-45, 46-55 years old age groups)
- Furthermore, statistically significant differences were found in evaluations of work engagement and innovative work behavior depending on respondents' tenure in the organization. Based on the Bonferroni test results, employees with shorter work experience (1-5 years) evaluated their work engagement at lower level in comparison with the ones with higher (6-10 and more than 20 years) tenure in the organization. Also, employes with less work experience within the organization (up to 1, 1-5 years) perceived their behavior at work as less innovative in comparison with more experienced ones (more than 20 years).

- Moreover, statistically significant differences were found in ANOVA results (p=0.002 and p=0,015) for work engagement and innovative work behavior variables respectively. Descriptive statistics indicate that respondents with higher non-university education reported the highest mean work engagement (M=5.22), while respondents with secondary education the lowest (M=4.36) and respondents with vocational education reported the highest mean innovative work behavior (M=4.81), while respondents with secondary education reported the lowest (M=3.64).
- Also, the difference can be seen in women self-efficacy evaluation (t-test p (two-sided) =0,029), but due to small number of respondents this difference can exist only in this research sample, not in population. The analysis of respondents' answers due to their company sector, business sector and company size didn't show any significant differences.

4.6. Research analysis of the impact of self-leadership on innovative work behavior through the mediating role of employee engagement and moderating role of self-efficacy

To examine the relationships between self-leadership, self-efficacy, work engagement and innovative work behavior, thus determining whether perceived work engagement has mediation effect and self-efficacy has moderation effect on the relationship between self-leadership and innovative work behavior, simple linear regression, correlation analysis, mediation analysis, moderation analysis, and conditional process analysis was performed. Mediation analysis was done using IBM SPSS Statistics 4.2 version PROCESS macro by Andrew F. Hayes, using Model 4 to test the mediation effect of work engagement. Moderation analysis was conducted using PROCESS Model 1 to examine the moderating role of self-efficacy. To combine both mediation and moderation effects, conditional process analysis was executed using PROCESS Model 5. Correlation analysis and simple linear regression were used to examine the direct relationships between self-leadership, self-efficacy, work engagement, and innovative work behavior. The analysis will confirm or reject the following hypothesis:

H1: self-leadership is positively associated with innovative work behavior.

H2: work engagement mediates the relationship between self-leadership and innovative work behavior.

H3: self-efficacy moderates the relationship between self-leadership and innovative work behavior.

The relationship between self-leadership and innovative work behavior is shown in Table 21.

Table 21. *Relationship between self-leadership and innovative work behavior*

Independent variable (X)	Dependent variable (Y)	Adjusted R Square	ANOVA (F)	ANOVA P value	Unstandardized B	P value	VIF
Self-leadership	Innovative work behavior	0,053	16,958	<0,001	0,607	<0,001	1

Source: Compiled by the author according to research results.

According to the linear regression analysis results adjusted R Square 0.053 suggests that innovative work behavior 5,3% can be predicted by self-leadership, positive unstandardized B (0.607) and p-value <0.001 shows a positive relationship between self-leadership and innovative work behavior, therefore the **H1 hypothesis is confirmed**. (Additional information on linear regression analysis results is provided in Annex 10).

The mediation analysis will be carried out according to the mediation analysis results, direct and indirect relationships between self-leadership, work engagement and innovative work behavior are shown in Table 22 and Table 23:

Table 22. *The direct relationship between self-leadership, work engagement and innovative work behavior*

Direct effect						
Independent variable (X)	Dependent variable (Y)	b	t	p	LLCI	ULCI
Self-leadership	Work engagement	0,4675	4,2829	0,0000	0,2526	0,6823
Work engagement	Innovative work behavior	0,6940	10,1306	0,0000	0,5592	0,8288

Source: Compiled by the author according to research results.

Table 23. *The indirect relationship between self-leadership, work engagement and innovative work behavior*

Indirect effect					
Independent variable (X)	Mediator (M1)	Dependent variable (Y)	b	BootLLCI	BootULCI

Self-leadership	Work engagement	Innovative work behavior	0,3244	0,1298	0,5630

Source: Compiled by the author according to research results.

Based on mediation analysis, results suggest that there is a positive relationship between self-leadership and work engagement (b=0,4675, t=4,2829, p=0,0000), so, the direct effect is statistically significant, indicating that self-leadership positively influences work engagement. Moreover, there is a positive relationship between work engagement and innovative work behavior (b=0,6940, t=10,1306, p=0,0000). The indirect effect of self-leadership on innovative work behavior through a mediation of work engagement is b=0.3244 and this mediation effect is statistically significant (BootLLCI=0,1298, BootULCI=0,5630) the confidence intervals don't include zero in between the values), indicating that work engagement mediates the relationship between self-leadership and innovative work behavior. The simple linear regression results indicate a significant relationship (F=16,958, p<0,001) and R=0,236, Adjusted R-sq=0,053, R-sq=0,056, meaning that 5,6% of the variance in innovative work behavior can be explained by self-leadership. The regression coefficient for self-leadership is b=0,607, t=4,118, p<0,001, confirming its significant contribution. Therefore, the **H2 hypothesis is confirmed**. (Additional information on mediation analysis results is provided in Annex 11).

Table 24. *The interaction between self-leadership and self-efficacy on innovative work behavior*

Independent variable (X)	Moderator (W)	Dependent variable (Y)	b	t	p	LLCI	ULCI
Self-leadership	Self-efficacy	Innovative work behavior	0,5102	1,6818	0,0937	-0,0869	1,1073

Source: Compiled by the author according to research results.

Based on moderation analysis, results suggest that there is not a positive relationship between self-leadership and self-efficacy (b=0,5102, t=1,6818, p=0,0937), thus, it is statistically unsignificant, (BootLLCI=0,0869, BootULCI=1,1073) the confidence intervals changed signs in between the values). Therefore, the **H3 hypothesis is rejected** (additional information on moderation analysis results is provided in Annex 12).

To sum up, a combined conditional process analysis was performed using PROCESS Model 5 to examine the mediation of work engagement and the moderation of self-efficacy in the relationship between self-leadership and innovative work behavior. The results revealed that the interaction term (self-leadership × self-efficacy) did not significantly moderate the direct relationship between self-leadership

and innovative work behavior but work engagement mediated relationship between self-leadership and innovative work behavior. The change in R^2 due to the interaction term was significant (R^2 change=0,0113, F=5,0418, p=0,0255), confirming the significance of the moderation effect. (additional information on conditional process analysis results is provided in Annex 13).

4.7. Research results summary and discussion

In the contemporary dynamic business environment, innovation is widely recognized as a pivotal determinant of organizational success. It signifies an organization's capacity to adapt to change, initiate advancements, and secure a sustainable competitive advantage. Central to the process of continuous innovation are individual employee behaviors, which play a critical role in fostering progress and creativity. This Master's thesis aims to rigorously examine the influence of self-leadership on employees' innovative behaviors, with a specific focus on investigating the mediating effect of work engagement and the moderating role of self-efficacy.

In analyzing the impact of self-leadership effects on innovative employee behavior, this Master Thesis research results suggest that there is a direct positive relationship between self-leadership and innovative work behavior of employees, which align with the previous studies of Kor (2016), Shukla and Shaheen (2023), which found a positive effect of self-leadership on employee innovativeness across different industries and countries.

The mediation analysis results showed that self-leadership has positive influence on employee's work engagement which is in line with the findings of Shukla and Shaheen (2023), Bakker, Breevaart, Demerouti & Derks (2016), where results showed a positive impact of self-leadership on work engagement while explored separately. Employee's work engagement also had a positive impact on innovative work behavior which aligns with the previous findings of Mustafa, Mubarak, Khan, Nauman and Riaz (2023) which found a positive work engagement impact on innovative work behavior. The mediation results showed a significant mediating effect of influence of self-leadership on innovative work behavior through the employee's work engagement which supports the finding of (Caetano, Curral & Gomes, 2015) where results showed that work engagement mediated the relationship between self-leadership and innovation.

The moderation analysis examining self-efficacy as a moderator between self-leadership and innovative work behavior revealed no moderation effect and did not significantly influence self-leadership and innovative work behavior relation. It deviates from the previous findings by Mustafa, Mubarak, Khan, Nauman and Riaz (2023) where self-efficacy had a positive impact on innovative behaviors of employees. However, self-efficacy can be examined further by exploring different samples and conditions on self-leadership and innovative work behavior relation.

CONCLUSION AND RECOMMENDATION

1. To conclude, an analysis of the concept of self-leadership reveals that it is an individual's capacity to utilize autonomous decision-making and intrinsic motivation to accomplish specific tasks, with a focus on achieving the desired outcome while strengthening the self-regulation process. Self-leadership has proven to have a positive effect on employees' creativity, organizational citizenship behaviors, knowledge sharing, project success, job performance, job satisfaction and other factors, related to organizational performance: effective self-regulatory processes and employee adoptive performance.
2. Self-efficacy can be explained as an individual's confidence in their ability to successfully complete tasks, overcome challenges, and achieve goals in particular situations. Self-efficacy results in positive employee outcomes such as motivation, resilience, and performance.
3. Work engagement can be described through three dimensions: vigor, dedication, and absorption. It reflects an employee's commitment and connection to their work, encompassing their enthusiasm, involvement, and focus on job performance. This engagement also represents an individual's organizational commitment, influencing whether they feel motivated, obligated, or inclined to remain a part of the organization. Employees' work engagement is in a positive relationship with their well-being and general health, employees' job autonomy, work performance, normative commitment and creativity.
4. Innovative work behavior can be defined through four dimensions: opportunity exploration, idea generation, idea championing and idea application. It signifies an individual's readiness to promote creativity and experimentation in the development of new products or services, the adoption of novel approaches, technological innovation, and process improvements. This behavior involves conceiving, refining, and executing valuable ideas within an organization and is crucial for the effectiveness of employees, especially in businesses focused on innovation.
5. A conceptual model was developed based on the literature review, and the influence of self-leadership on innovative work behavior was analyzed, considering the mediating roles of work engagement and the moderating effect of self-efficacy.
6. According to empirical research results, the statistically significant differences were found in evaluations of self-leadership, work engagement and innovative work behavior depending on respondents' age group: 26-35 years old age group evaluated their self-leadership at lower level than the respondents who belong to the 36-45 years old age group, also less than 26 years, 26-35 years old age groups perceived their work engagement at lower level in comparison with 36-45,

46-55 years old age groups. It suggests that self-leadership and work engagement may be improved with age and experience: older employees, possibly due to accumulated work experience or maturity, tend to perceive higher levels of self-leadership and engagement, which could also positively impact their innovative work behavior.

7. Furthermore, statistically significant differences were found in evaluations of work engagement and innovative work behavior depending on respondents' tenure in the organization: employees with 1-5 years work experience evaluated their work engagement at lower level in comparison with 6-10 and more than 20 years tenure in the organization. Also, employes up to 1, 1-5 years work experience perceived their behavior at work as less innovative in comparison with more than 20 years work experience. This suggests that longer tenure within the organization may be associated with higher level of work engagement and a greater perception of innovative work behavior, potentially due to increased experience, confidence, and familiarity with organizational practices.
8. Moreover, statistically significant differences were found for work engagement and innovative work behavior variables respectively: respondents with higher non-university education reported the highest mean work engagement, while respondents with secondary education the lowest and respondents with vocational education reported the highest mean innovative work behavior, while respondents with secondary education reported the lowest. It suggests that vocational training and higher education may contribute to greater work engagement and more innovative behavior, possibly due to the specialized skills and knowledge, gained through these educational paths.
9. Research results confirmed a direct significant influence of self-leadership on innovative work behavior, aligning with findings from previous studies.
10. Research results did not support self-efficacy as a moderator in the relationship between self-leadership and innovative work behavior.
11. Research results supported the mediation effect of work engagement in the relationship between self-leadership and innovative employee behaviors, aligning with findings from previous studies, suggesting that a employee's vigor, dedication, and absorption can facilitate employees-self-leaders' innovative work behavior.

Drawing from the theoretical concepts and empirical research findings, the following recommendations can be made for organizations aiming to enhance the innovative behaviors of their employees:

1. Select and recruit employees with self-leadership characteristics, which positively influences creativity, job performance, and other organizational outcomes. Furthermore, develop employees' self-leadership skills through training programs, which emphasize autonomy, intrinsic motivation and self-regulation, empower employees to perform better and take more initiative in their roles.

2. Foster work engagement by investing in and developing programs and initiatives, which improve employee engagement. These activities should be based on offering employees more autonomy, creating a supportive work environment, recognizing achievements, encouraging involvement in meaningful work.
3. Provide training to employees on the innovation process and eliminate obstacles to innovation by modifying organizational practices and processes. Moreover, encourage innovation through work design - provide opportunities for creative thinking, experimentation, freedom to pursue new ideas.
4. Promote employee experience and age diversity. The research shows that older employees with more experience tend to have higher levels of self-leadership and work engagement. Therefore, organizations should implement mentoring and knowledge-sharing programs for connecting experienced employees with younger ones, facilitating the exchange of knowledge and expertise.
5. Encourage long-term career development. Employees with longer tenure in the organization often demonstrate higher work engagement and innovative behavior, so, organizations should prioritize career development initiatives that support long-term commitment and progress, offering chances for career advancement, skill improvement, and new challenges.
6. Focus on education and training. The research underscores the link between education levels and work engagement and innovative behavior. Thus, organizations should invest in continuous education and training for employees, particularly by providing opportunities for vocational training and higher education - that will improve employees' technical expertise and enhance their overall engagement and ability to innovate.

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THE MEDIATING EFFECT OF WORK ENGAGEMENT AND MODERATING EFFECT OF SELF-EFFICACY ON THE RELATIONSHIP BETWEEN SELF-LEADERSHIP AND INNOVATIVE WORK BEHAVIOR

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Master thesis

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SUMMARY

61 pages, 24 tables, 13 annexes, 92 references.

The main aim of this master's thesis is to evaluate the impact of self-leadership on innovative work behavior through the mediating role of employees' work engagement and moderating role of self-efficacy.

This master thesis consists of four major parts – two of them are for scientific literature analysis, one for research methodology, and the last for empirical research results, also there are introduction, conclusion and recommendation, list of references, list of tables and annexes. The literature analysis examines self-leadership, employees' work engagement, employees' self-efficacy and innovative work behavior concepts and their peculiarities. Different aspects of self-leadership, work engagement and its components, self-efficacy factors, innovative work behavior dimensions and the aspects influencing innovative behavior of employees, as well as the relationships between these concepts.

Based on the scientific literature analysis, the conceptual framework was developed to conduct quantitative research to examine the impact of self-leadership on innovative work behavior through the mediating role of work engagement and moderating role of self-efficacy. 289 questionnaires were processed for further statistical analysis of the respondents, who work in companies operating in Lithuania.

The statistical analysis of the data was performed using IBM's Statistical Package for the Social Sciences (SPSS). Mediation analysis was done using IBM SPSS Statistics 4.2 version PROCESS macro by Andrew F. Hayes, using Model 4, moderation analysis was conducted using PROCESS Model 1, to combine both mediation and moderation effects, conditional process analysis was executed using PROCESS Model 5, correlation analysis and simple linear regression were used to examine the direct relationships between self-leadership, self-efficacy, work engagement, and innovative work behavior. The methods for statistical data analysis included descriptive statistics (such as means, frequencies, and standard deviation), the Cronbach's alpha coefficient to evaluate the internal consistency and reliability of the measurement scales, Kolmogorov-Smirnov and Shapiro-Wilk tests to determine the normality of data distribution, T-tests and one-way ANOVA (with Bonferroni criterion) to analyze mean differences based on respondents' demographic and organizational characteristics.

This research results indicated that self-leadership has a positive impact on innovative work behavior, however, the moderion analysis results showed that self-efficacy has no statistically significant moderation effect, while the employees' work engagement mediated the impact of self-leadership on innovative work behavior.

The conclusions and recommendations section provides a summary of the scientific literature review, the results of the empirical research, and practical suggestions.

Keywords: self-leadership, self-efficacy, work engagement, innovative work behavior.

SAVILYDERYSTĖS ĮTAKA INOVATYVIAM DARBUOTOJŲ ELGESIUI MEDIJUOJANT DARBUOTOJŲ ĮSITRAUKIMUI Į DARBĄ BEI MODERUOJANT SAVIVEIKSMINGUMUI

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Darbo vadovė – prof. dr. D. Diskienė, Vilnius, 2025

SANTRAUKA

61 puslapis, 24 lentelės, 13 priedų, 92 literatūros šaltiniai.

Pagrindinis šio magistro darbo tikslas – įvertinti savilyderystės įtaką inovatyviam darbuotojų elgesiui darbe medijuojant darbuotojų įsitraukimo į darbą ir moderuojant saviveiksmingumo veiksniams.

Šį magistro darbą sudaro keturios pagrindinės dalys – dvi skirtos mokslinės literatūros analizei, viena – tyrimo metodologijai, paskutinė – empiriniams tyrimo rezultatams, taip pat darbą sudaro įvadas, išvados ir rekomendacijos, literatūros sąrašas, lentelių sąrašas bei priedai.

Literatūros analizės dalyse nagrinėjama savilyderystė, darbuotojų įsitraukimas į darbą, darbuotojų saviveiksmingumo ir novatoriškos darbo elgsenos sampratos ir jų ypatumai. Skirtingi savilyderystės aspektai, įsitraukimas į darbą ir jo komponentai, saviveiksmingumo veiksniai, inovatyvios darbo elgsenos dimensijos ir aspektai, darantys įtaką inovatyviam darbuotojų elgesiui, taip pat šių konceptų ryšiai.

Remiantis mokslinės literatūros analize, buvo sukurta sistema, skirta atlikti kiekybinius tyrimus, siekiant ištirti savilyderystės įtaką novatoriškai elgsenai darbe per medijuojantį įsitraukimo į darbą vaidmenį ir moderuojantį saviveiksmingumo vaidmenį. Tolesnei statistinei respondentų, dirbančių Lietuvoje veikiančiose įmonėse, analizei buvo naudotos 289 anketos.

Duomenų statistinė analizė atlikta naudojant IBM Statistikos paketą socialiniams mokslams (SPSS). Medijavimo analizė atlikta naudojant IBM SPSS Statistics 4.2 versijos PROCESS makrokomandą Andrew F. Hayes, naudojant 4 modelį, moderavimo analizė atlikta naudojant PROCESS 1 modelį, siekiant sujungti medijavimo ir moderavimo efektus, sąlyginė proceso analizė atlikta naudojant PROCESS 5 modelį, koreliacijos analizė ir paprasta tiesinė regresija buvo panaudotos siekiant ištirti tiesioginius ryšius tarp savilyderystės ir naujoviško darbuotojų elgesio. Statistinių duomenų analizės metodai apėmė aprašomąją statistiką (pvz., vidurkius, dažnius ir standartinį nuokrypį), Cronbach alfa koeficientą, skirtą matavimo skalių vidiniam nuoseklumui ir patikimumui įvertinti, Kolmogorov-Smirnov ir Shapiro-Wilk testus, skirtus nustatyti duomenų pasiskirstymo normalumą, T-testas ir ANOVA (su Bonferroni kriterijumi), siekiant išanalizuoti skirtumus pagal respondentų demografines ir organizacines charakteristikas.

Tyrimo rezultatai parodė, kad savilyderystė turi teigiamą įtaką inovatyviam darbuotojų elgesiui, darbuotojų įsitraukimas į darbą tarpininkauja savilyderystės įtakai inovatyviam darbuotojų elgesiui, tačiau moderavimo analizės rezultatai atskleidė, kad saviveiksmingumas neturi statistiškai reikšmingo moderavimo efekto.

Išvadų ir rekomendacijų skyriuje pateikiama mokslinės literatūros apžvalgos santrauka, empirinio tyrimo rezultatai, praktiniai pasiūlymai.

Raktiniai žodžiai: savilyderystė, saviveiksmingumas, darbuotojų įsitraukimas į darbą, inovatyvus darbuotojų elgesys.

ANNEXES

1 Annex. Research questionnaire

Darbuotojų inovatyvų elgesį lemiantys veiksniai

Sveiki,

esu Laura Vaičiūnaitė, Vilniaus universiteto žmogiškųjų išteklių valdymo magistro studijų antro kurso studentė. Magistro darbo tyrimui (vadovė prof. dr. Danuta Diskienė) parengta apklausa yra skirta nustatyti dirbančių asmenų savybių, tokių kaip savilyderystė (angl. self-leadership), saviveiksmingumas (angl. self-efficacy) bei įsitraukimo į darbą (angl. work engagement) ryšį su inovatyviu darbuotojų elgesiu. Apklausa yra anoniminė, visų dalyvių pateikti atsakymai bus analizuojami apibendrintai. Prašome Jus skirti savo laiko apačioje pateiktiems klausimams (atsakinėdami klausimyną užtruksite apie 15 min).

1. Įvertinkite, kiek sutinkate su šiais teiginiais:	Visiškai nesutinku	Nesutinku	Nei sutinku, nei nesutinku	Sutinku	Visiškai sutinku
Aš nusistatau konkrečius savo veiklos tikslus.					
Aš stengiuosi sekti, kaip man sekasi darbe.					
Dirbu siekdamas (-a) konkrečių sau užsibrėžtų tikslų.					
Įsivaizduoju save sėkmingai atliekantį (-čią) užduotį prieš ją atlikdamas (-a).					
Kartais įsivaizduoju sėkmingą užduoties atlikimą prieš iš tikrųjų ją atliekant.					
Sėkmingai įvykdęs (-džiusi) užduotį dažnai apdovanoju save kažkuo, kas man patinka.					
Kartais kalbuosi su savimi (garsiai arba mintyse), kad išspręsčiau sudėtingas situacijas (vertindamas (-a) įsitikinimus ir prielaidas).					
Stengiuosi mintyse įvertinti savo įsitikinimų tikslumą apie man problemines situacijas.					
Aš galvoju apie savo įsitikinimus ir prielaidas, kai susiduriu su sudėtinga situacija.					

2. Įvertinkite, kiek pritariate žemiau pateiktiems teiginiams:	Visiškai nesutinku	Daugiau nesutinku nei sutinku	Daugiau sutinku nei nesutinku	Visiškai sutinku
Visada galiu išspręsti sudėtingas problemas, jei pakankamai stengiuosi.				
Jei kas nors man prieštarauja, galiu rasti priemonių ir būdų gauti tai, ko noriu.				
Man lengva laikytis savo tikslų ir juos pasiekti.				
Esu įsitikinęs (-usi), kad galiu efektyviai susidoroti su netikėtais įvykiais.				
Dėl savo išradingumo moku elgtis nenumatytose situacijose.				
Galiu išspręsti daugumą problemų, jei įdėsiu reikiamų pastangų.				
Susidūręs (-usi) su sunkumais galiu išlikti ramus (-i), nes galiu pasikliauti savo sugebėjimais susidoroti su problemomis.				
Kai susiduriu su problema, paprastai galiu rasti kelis sprendimus.				
Jei esu įstrigęs (-usi), įprastai galiu sugalvoti ką dėl to padaryti.				
Kad ir kas atsitiktų, aš paprastai galiu su tuo susitvarkyti.				

3.Kaip dažnai Jums dirbant pasikartoja apačioje pateikti pavyzdžiai?	Niekada (niekada)	Beveik niekada (kelis kartus per metus ar rečiau)	Retai (kartą per mėnesį ar rečiau)	Kartais (kelis kartus per mėnesį)	Dažnai (kartą per savaitę)	Labai dažnai (kelis kartus per savaitę)	Visada (kiekvieną dieną)
Dirbdamas (-a) jaučiuosi trykštantis (-i) energija.							
Mano dirbamas darbas turi prasmę ir tikslą.							
Kai dirbu, laikas skrieja.							
Savo darbe jaučiuosi stiprus (-i) ir energingas (-a).							

Darbe esu entuziastingas (-a).							
Kai dirbu, pamirštu visa kita aplinkui.							
Mano darbas mane įkvepia.							
Atsikėlus ryte, norisi eiti į darbą.							
Jaučiuosi laimingas (-a), kai intensyviai dirbu.							
Didžiuojuosi darbu, kurį darau.							
Esu pasinėręs (-usi) į savo darbą.							
Galiu nepertraukiamai tęsti darbą labai ilgai.							
Man mano darbas yra keliantis iššūkių.							
Dirbdamas (-a) labai įsitraukiu.							
Savo darbe esu psichologiškai atsparus (-i).							
Sunku atsiriboti nuo savo darbo.							
Savo darbe visada esu ištvermingas (-a), net kai nesiseka.							

4. Kaip dažnai Jums dirbant pasikartoja apačioje pateikti pavyzdžiai?	Niekada (niekada)	Beveik niekada (kelis kartus per metus ar rečiau)	Retai (kartą per mėnesį ar rečiau)	Kartais (kelis kartus per mėnesį)	Dažnai (kartą per savaitę)	Labai dažnai (kelis kartus per savaitę)	Visada (kiekvieną dieną)
Kuriu naujas idėjas sudėtingoms problemoms spręsti.							
Ieškau naujų darbo metodų, technikų ar instrumentų.							

Kuriu originalius problemų sprendimo būdus.							
Palaikau inovatyvias idėjas.							
Gaunu pritarimą novatoriškoms idėjoms.							
Sužadinu svarbių organizacijos narių entuziamą naujoviškoms idėjoms.							
Inovatyvias idėjas paverčiu naudingomis programomis.							
Sistemingai į darbo aplinką įvedu novatoriškas idėjas.							
Vertinu inovatyvių idėjų naudingumą.							

5. Jūsų lytis:	
	moteris
	vyras
	kita

6. Jūsų amžius:	
	(įrašykite)

7. Išsilavinimas:	
	vidurinis
	profesinis
	aukštasis neuniversitetinis

	bakalauro laipsnis
	magistro laipsnis
	daktaro laipsnis
	kita

8. Jūsų darbo patirtis įmonėje, kurioje šiuo metu dirbate:	
	iki 1 metų
	1-5 metai
	6-10 metų
	11-20 metų
	daugiau nei 20 metų

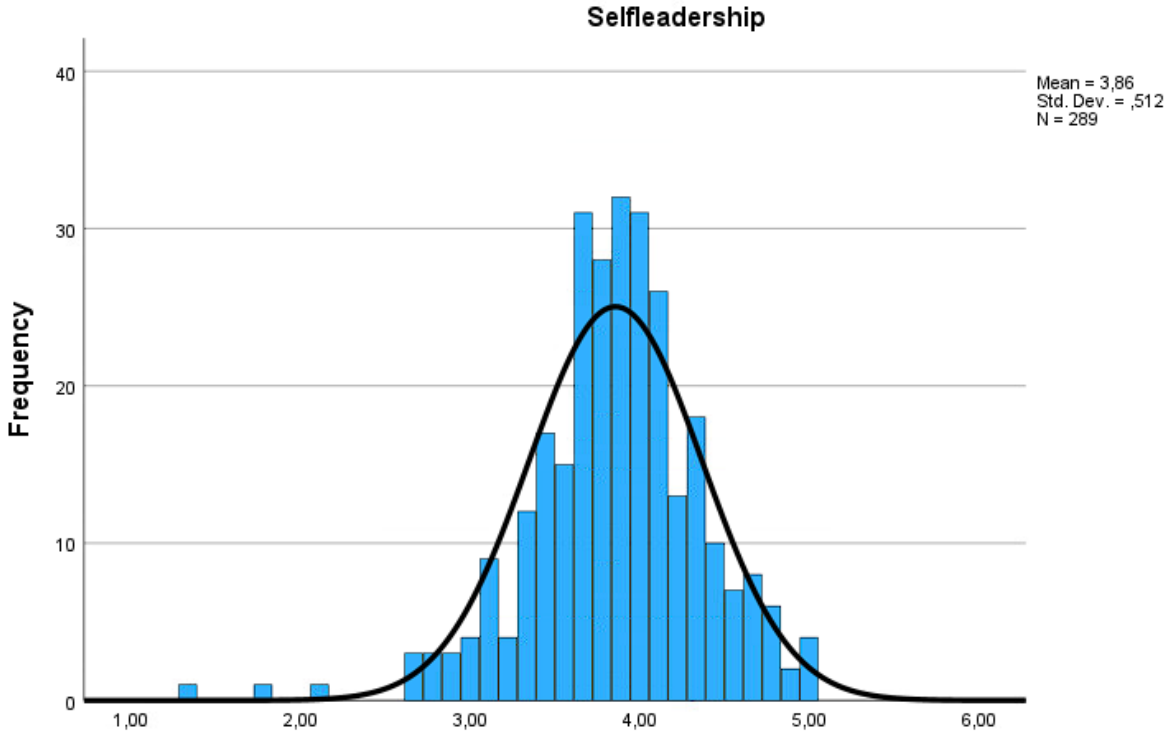
9. Įmonės sektorius:	
	privatus
	viešasis
	kita

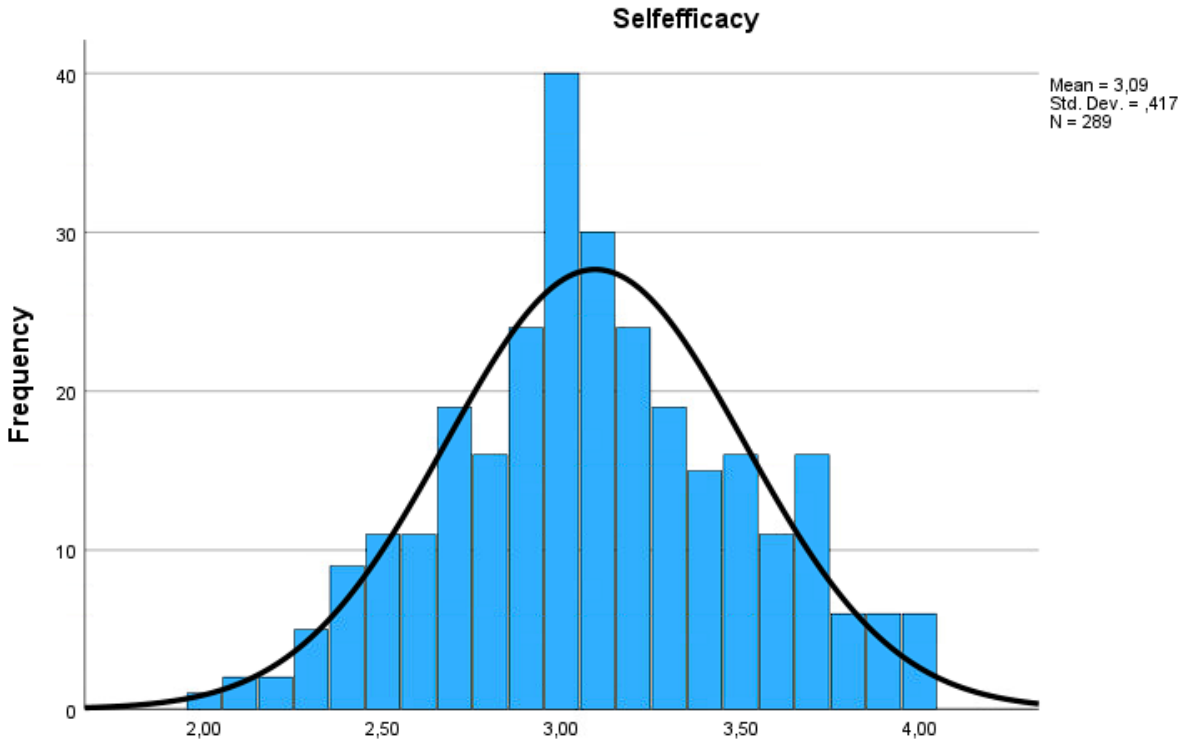
10. Įmonės sritis:	
	energetika / komunalinės paslaugos
	finansinės paslaugos
	gamyba
	informacinės technologijos
	inžinerija / mechanika / statyba
	klientų aptarnavimas / paslaugos
	kultūra / sportas
	prekyba

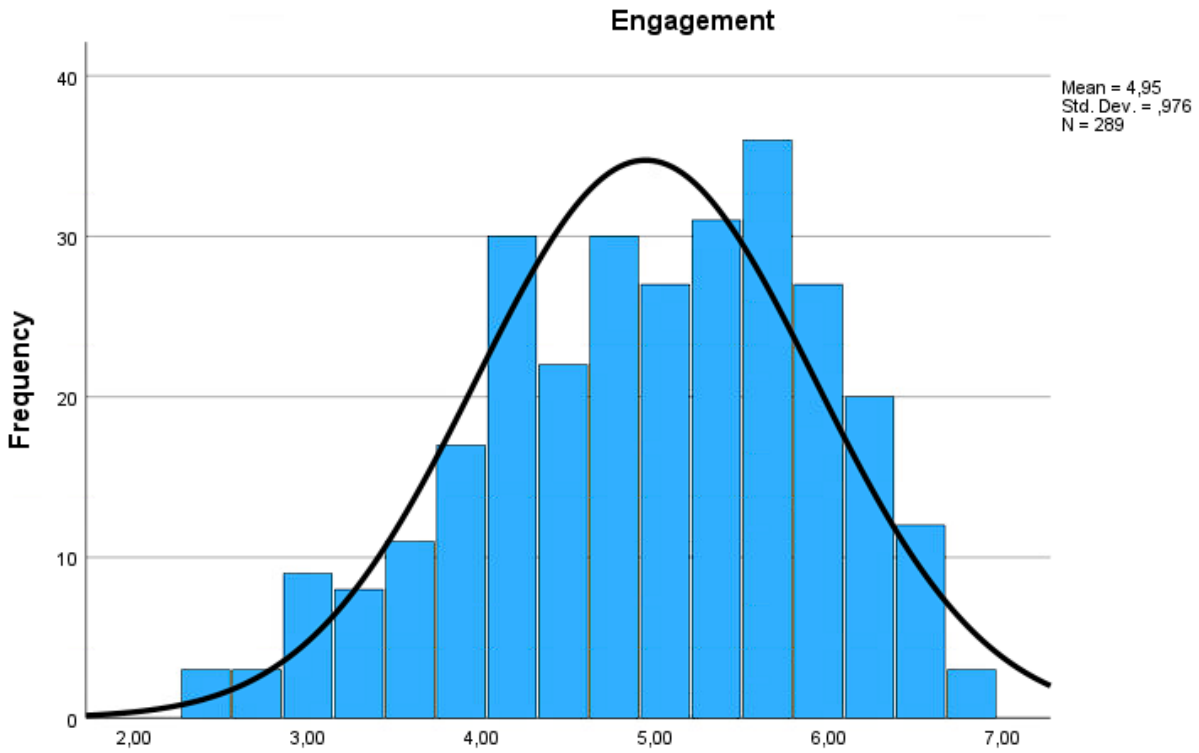
	sveikatos priežiūra / medicina / farmacija
	švietimas / mokymai
	transportas / logistika
	kita

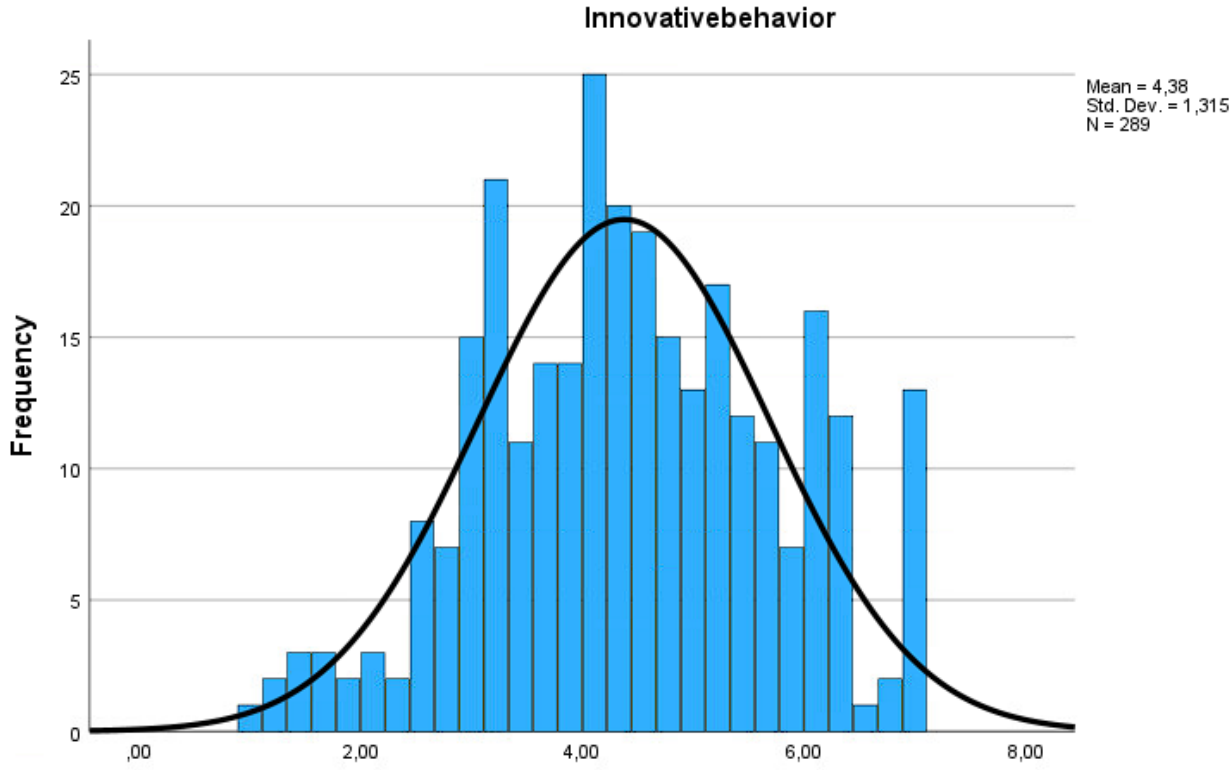
11. Įmonės dydis:	
	mikro (1-9 darbuotojai)
	maža (10-49 darbuotojai)
	vidutinė (50-249 darbuotojai)
	didelė (250 ir daugiau darbuotojų)

2 Annex. Histograms of the variables






Engagement
Mean = 4,95
Std. Dev. = ,976
N = 289
Frequency
40
30
20
10
0
2,00
3,00
4,00
5,00
6,00
7,00


Innovativebehavior
Mean = 4,38
Std. Dev. = 1,315
N = 289
Frequency
25
20
15
10
5
0
,00
2,00
4,00
6,00
8,00

3 Annex. Evaluation differences of variables according to respondents' age

Descriptives									
						95% Confidence Interval for Mean			
		N	Mean	Std. Deviation	Std. Error	Lower Bound	Upper Bound	Minimum	Maximum
Selfleadership	19	1	3.6667					3.67	3.67
	20	6	3.8704	0.53248	0.21739	3.3116	4.4292	3.22	4.56
	21	10	4.2444	0.56607	0.17901	3.8395	4.6494	3.22	5.00
	22	13	4.0256	0.26119	0.07244	3.8678	4.1835	3.56	4.44
	23	18	3.7222	0.41965	0.09891	3.5135	3.9309	2.89	4.33
	24	17	4.0588	0.47971	0.11635	3.8122	4.3055	2.67	4.67
	25	36	3.7531	0.39495	0.06583	3.6195	3.8867	3.00	4.44
	26	15	3.6889	0.46043	0.11888	3.4339	3.9439	2.67	4.78
	27	15	3.7037	0.47637	0.12300	3.4399	3.9675	3.00	4.78
	28	7	3.8889	0.54810	0.20716	3.3820	4.3958	3.33	4.89
	29	7	3.7302	0.44840	0.16948	3.3155	4.1449	3.33	4.67
	30	11	3.7879	0.39269	0.11840	3.5241	4.0517	3.00	4.22
	31	7	3.7619	0.19698	0.07445	3.5797	3.9441	3.44	4.00
	32	9	3.6543	0.80016	0.26672	3.0393	4.2694	1.78	4.67
	33	9	3.8519	0.54149	0.18050	3.4356	4.2681	2.67	4.44
	34	12	3.7500	0.46451	0.13409	3.4549	4.0451	2.78	4.78
	35	12	3.7593	0.75780	0.21876	3.2778	4.2407	2.11	5.00
	36	8	4.1111	0.34118	0.12062	3.8259	4.3963	3.56	4.56
	37	3	3.6667	0.50918	0.29397	2.4018	4.9315	3.11	4.11
	38	5	4.4000	0.48813	0.21830	3.7939	5.0061	3.56	4.78
	39	3	3.8148	0.66975	0.38668	2.1511	5.4786	3.11	4.44
	40	3	3.8519	0.23130	0.13354	3.2773	4.4264	3.67	4.11
	41	8	4.0972	0.43416	0.15350	3.7343	4.4602	3.33	4.78
	42	6	3.8519	0.68373	0.27913	3.1343	4.5694	2.78	4.67
	43	3	3.7778	0.19245	0.11111	3.2997	4.2559	3.67	4.00
	44	3	3.9259	0.23130	0.13354	3.3514	4.5005	3.67	4.11
	45	1	4.6667					4.67	4.67
	46	2	2.7778	2.04275	1.44444	-15.5756	21.1312	1.33	4.22
	47	2	3.0556	0.23570	0.16667	0.9379	5.1733	2.89	3.22
	48	3	3.7778	0.11111	0.06415	3.5018	4.0538	3.67	3.89
	49	4	3.8333	0.21276	0.10638	3.4948	4.1719	3.56	4.00
	50	6	4.0556	0.56547	0.23085	3.4621	4.6490	3.33	5.00
	51	2	4.2778	0.07857	0.05556	3.5719	4.9837	4.22	4.33
	52	5	3.7556	0.51759	0.23147	3.1129	4.3982	2.89	4.11
	53	2	3.9444	0.39284	0.27778	0.4149	7.4739	3.67	4.22
	55	3	4.0000	0.29397	0.16973	3.2697	4.7303	3.78	4.33

	57	4	4.0278	0.72222	0.36111	2.8786	5.1770	3.33	5.00
	58	2	4.0556	0.54997	0.38889	-0.8857	8.9969	3.67	4.44
	59	1	4.5556					4.56	4.56
	60	1	3.4444					3.44	3.44
	63	1	4.2222					4.22	4.22
	To-tal	286	3.8516	0.51048	0.03019	3.7922	3.9110	1.33	5.00
Selfefficacy	19	1	3.1000					3.10	3.10
	20	6	2.8167	0.37639	0.15366	2.4217	3.2117	2.30	3.40
	21	10	3.2000	0.44721	0.14142	2.8801	3.5199	2.50	4.00
	22	13	3.1385	0.34770	0.09644	2.9283	3.3486	2.70	3.90
	23	18	2.9611	0.29533	0.06961	2.8142	3.1080	2.40	3.50
	24	17	3.1353	0.38396	0.09312	2.9379	3.3327	2.40	4.00
	25	36	2.9583	0.45693	0.07616	2.8037	3.1129	2.00	3.90
	26	15	2.9333	0.54336	0.14029	2.6324	3.2342	2.10	3.80
	27	15	2.9333	0.45145	0.11656	2.6833	3.1833	2.30	3.90
	28	7	3.1000	0.34641	0.13093	2.7796	3.4204	2.40	3.50
	29	7	2.9000	0.42426	0.16036	2.5076	3.2924	2.30	3.40
	30	11	2.9545	0.51061	0.15396	2.6115	3.2976	2.20	4.00
	31	7	2.9143	0.21931	0.08289	2.7115	3.1171	2.70	3.20
	32	9	3.1889	0.28480	0.09493	2.9700	3.4078	2.90	3.70
	33	9	3.2333	0.23979	0.07993	3.0490	3.4177	2.90	3.50
	34	12	3.3417	0.31176	0.09000	3.1436	3.5398	3.00	3.80
	35	12	3.2583	0.37769	0.10903	3.0184	3.4983	2.90	4.00
	36	8	3.1875	0.34821	0.12311	2.8964	3.4786	2.70	3.80
	37	3	3.1000	0.36056	0.20817	2.2043	3.9957	2.80	3.50
	38	5	3.3200	0.54037	0.24166	2.6490	3.9910	2.70	3.90
	39	3	3.6667	0.35119	0.20276	2.7943	4.5391	3.30	4.00
	40	3	3.1000	0.34641	0.20000	2.2395	3.9605	2.70	3.30
	41	8	3.3250	0.23755	0.08399	3.1264	3.5236	3.10	3.70
	42	6	3.2000	0.33466	0.13663	2.8488	3.5512	2.70	3.50
	43	3	2.9000	0.26458	0.15275	2.2428	3.5572	2.70	3.20
	44	3	2.7333	0.15275	0.08819	2.3539	3.1128	2.60	2.90
	45	1	3.3000					3.30	3.30
	46	2	3.5500	0.07071	0.05000	2.9147	4.1853	3.50	3.60
	47	2	3.1000	0.84853	0.60000	-4.5237	10.7237	2.50	3.70
	48	3	2.9667	0.15275	0.08819	2.5872	3.3461	2.80	3.10
	49	4	3.1750	0.51235	0.25617	2.3597	3.9903	2.50	3.70
	50	6	3.0667	0.47188	0.19264	2.5715	3.5619	2.40	3.70
	51	2	3.7500	0.07071	0.05000	3.1147	4.3853	3.70	3.80
	52	5	2.8800	0.19235	0.08602	2.6412	3.1188	2.60	3.10
	53	2	3.2500	0.35355	0.25000	0.0734	6.4266	3.00	3.50
	55	3	2.7333	0.56862	0.32830	1.3208	4.1459	2.10	3.20
	57	4	3.4250	0.51235	0.25617	2.6097	4.2403	2.90	4.00

	58	2	3.1500	0.91924	0.65000	-5.1090	11.4090	2.50	3.80
	59	1	3.4000					3.40	3.40
	60	1	3.0000					3.00	3.00
	63	1	3.8000					3.80	3.80
	To-tal	286	3.0895	0.41671	0.02464	3.0410	3.1380	2.00	4.00
Engagement	19	1	2.9412					2.94	2.94
	20	6	4.1863	0.47704	0.19475	3.6857	4.6869	3.65	5.06
	21	10	4.0529	1.12688	0.35635	3.2468	4.8591	2.53	6.18
	22	13	4.9095	0.98741	0.27386	4.3128	5.5062	2.41	6.47
	23	18	4.6667	1.15535	0.27232	4.0921	5.2412	2.41	6.71
	24	17	4.7924	0.84277	0.20440	4.3591	5.2257	3.18	6.35
	25	36	4.8676	1.04552	0.17425	4.5139	5.2214	2.82	6.71
	26	15	4.4902	1.17050	0.30222	3.8420	5.1384	2.65	6.06
	27	15	4.5725	1.02236	0.26397	4.0064	5.1387	2.76	6.41
	28	7	4.4622	1.17815	0.44530	3.3726	5.5518	3.06	6.12
	29	7	4.6134	0.68081	0.25732	3.9838	5.2431	3.47	5.47
	30	11	4.7647	0.98431	0.29678	4.1034	5.4260	3.00	6.53
	31	7	4.8403	0.91742	0.34675	3.9919	5.6888	3.29	5.94
	32	9	4.9673	1.02271	0.34090	4.1812	5.7534	3.29	6.53
	33	9	5.3529	0.61695	0.20565	4.8787	5.8272	4.59	6.12
	34	12	5.1176	0.77269	0.22306	4.6267	5.6086	4.18	6.71
	35	12	5.2598	0.88447	0.25533	4.6978	5.8218	3.88	6.65
	36	8	5.2500	0.74323	0.26277	4.6286	5.8714	4.06	6.06
	37	3	4.5294	1.03067	0.59506	1.9691	7.0897	3.47	5.53
	38	5	5.6706	0.46055	0.20597	5.0987	6.2424	5.12	6.12
	39	3	4.7059	0.97902	0.56524	2.2739	7.1379	3.59	5.41
	40	3	4.7451	0.40040	0.23117	3.7504	5.7398	4.29	5.06
	41	8	5.6029	0.47138	0.16666	5.2089	5.9970	4.94	6.35
	42	6	5.7941	0.56145	0.22921	5.2049	6.3833	4.94	6.59
	43	3	5.4706	0.79575	0.45943	3.4938	7.4473	4.65	6.24
	44	3	5.0980	0.57133	0.32985	3.6788	6.5173	4.47	5.59
	45	1	5.5882					5.59	5.59
	46	2	6.3529	0.08319	0.05882	5.6055	7.1004	6.29	6.41
	47	2	5.0000	1.08146	0.76471	-4.7165	14.7165	4.24	5.76
	48	3	5.8824	0.32752	0.18909	5.0688	6.6959	5.59	6.24
	49	4	5.4559	0.90159	0.45079	4.0213	6.8905	4.24	6.41
	50	6	5.0588	0.69700	0.28455	4.3274	5.7903	4.41	6.35
	51	2	5.5294	1.16465	0.82353	-4.9345	15.9933	4.71	6.35
	52	5	5.0118	0.76516	0.34219	4.0617	5.9618	4.12	5.65
	53	2	5.2647	0.70711	0.50000	-1.0884	11.6178	4.76	5.76
	55	3	6.2941	0.42418	0.24490	5.2404	7.3478	5.82	6.65
	57	4	5.6324	0.83241	0.41621	4.3078	6.9569	4.59	6.53
	58	2	5.3824	1.03986	0.73529	-3.9604	14.7252	4.65	6.12

	59	1	4.4118					4.41	4.41
	60	1	5.0000					5.00	5.00
	63	1	6.5294					6.53	6.53
	To-tal	286	4.9397	0.97675	0.05776	4.8261	5.0534	2.41	6.71
Innova-tivebehavior	19	1	1.2222					1.22	1.22
	20	6	3.8519	0.56946	0.23248	3.2542	4.4495	3.00	4.33
	21	10	4.0444	1.61628	0.51111	2.8882	5.2007	1.11	7.00
	22	13	4.3590	1.34498	0.37303	3.5462	5.1717	2.67	6.89
	23	18	4.6852	1.43119	0.33733	3.9735	5.3969	1.00	7.00
	24	17	4.0719	1.10829	0.26880	3.5021	4.6417	2.78	6.22
	25	36	4.2037	1.46938	0.24490	3.7065	4.7009	1.44	7.00
	26	15	4.1185	1.40826	0.36361	3.3387	4.8984	1.33	6.22
	27	15	4.1926	1.26091	0.32556	3.4943	4.8909	2.56	7.00
	28	7	3.5079	1.48775	0.56232	2.1320	4.8839	1.67	6.33
	29	7	4.1270	1.41774	0.53586	2.8158	5.4382	1.56	6.11
	30	11	3.9899	1.50099	0.45257	2.9815	4.9983	1.56	7.00
	31	7	3.9048	1.10261	0.41675	2.8850	4.9245	2.89	5.44
	32	9	4.7037	1.21589	0.40530	3.7691	5.6383	2.56	6.67
	33	9	4.5185	1.36423	0.45474	3.4699	5.5672	2.78	6.33
	34	12	4.2870	1.16289	0.33570	3.5482	5.0259	2.89	6.67
	35	12	4.8611	1.12429	0.32455	4.1468	5.5755	3.44	7.00
	36	8	5.1111	0.53452	0.18898	4.6642	5.5580	4.22	5.67
	37	3	4.0741	1.54094	0.88966	0.2462	7.9020	2.78	5.78
	38	5	4.7556	1.25068	0.55932	3.2026	6.3085	3.78	6.33
	39	3	3.4815	1.83361	1.05864	-1.0735	8.0364	1.44	5.00
	40	3	3.4815	0.52509	0.30316	2.1771	4.7859	2.89	3.89
	41	8	4.6667	1.06243	0.37562	3.7785	5.5549	3.33	6.11
	42	6	5.2222	1.29957	0.53055	3.8584	6.5860	3.33	6.89
	43	3	3.1852	0.81901	0.47286	1.1506	5.2197	2.56	4.11
	44	3	4.4815	1.61907	0.93477	0.4595	8.5035	2.78	6.00
	45	1	3.6667					3.67	3.67
	46	2	5.8889	0.15713	0.11111	4.4771	7.3007	5.78	6.00
	47	2	5.2778	0.86424	0.61111	-2.4871	13.0427	4.67	5.89
	48	3	5.5556	1.36536	0.78829	2.1638	8.9473	4.00	6.56
	49	4	5.4167	1.48622	0.74311	3.0518	7.7816	3.89	7.00
	50	6	4.5000	1.13257	0.46237	3.3114	5.6886	3.00	5.56
	51	2	4.5556	1.09994	0.77778	-5.3270	14.4382	3.78	5.33
	52	5	3.8889	1.11941	0.50062	2.4990	5.2788	2.33	5.11
	53	2	4.6667	0.15713	0.11111	3.2549	6.0785	4.56	4.78
	55	3	5.3704	0.66975	0.38668	3.7066	7.0341	4.67	6.00
	57	4	5.6667	1.41421	0.70711	3.4163	7.9170	3.67	7.00
	58	2	5.6667	0.62854	0.44444	0.0195	11.3139	5.22	6.11
	59	1	3.1111					3.11	3.11

	60	1	4.2222					4.22	4.22
	63	1	5.4444					5.44	5.44
	To-tal	286	4.3706	1.31817	0.07794	4.2172	4.5241	1.00	7.00

ANOVA

		Sum of Squares	df	Mean Square	F	Sig.
Selfleadership	Between Groups	13,538	40	,338	1,365	,082
	Within Groups	60,731	245	,248		
	Total	74,269	285			
Selfefficacy	Between Groups	9,816	40	,245	1,515	,031
	Within Groups	39,673	245	,162		
	Total	49,489	285			
Engagement	Between Groups	60,966	40	1,524	1,770	,005
	Within Groups	210,933	245	,861		
	Total	271,899	285			
Innovativebehavior	Between Groups	83,351	40	2,084	1,240	,166
	Within Groups	411,856	245	1,681		
	Total	495,207	285			

4 Annex. Evaluation differences of variables according to respondents' gender

Group Statistics

	Jūsų lytis:	N	Mean	Std. Deviation	Std. Error Mean
Selfleadership	moteris	210	3,8444	,51169	,03531
	vyras	79	3,8917	,51350	,05777
Selfefficacy	moteris	210	3,0610	,41779	,02883
	vyras	79	3,1797	,40427	,04548
Engagement	moteris	210	4,9070	1,02629	,07082
	vyras	79	5,0484	,82497	,09282
Innovativebehavior	moteris	210	4,2931	1,35392	,09343
	vyras	79	4,6048	1,18444	,13326

Independent Samples Test

		Levene's Test for Equality of Variances		t-test for Equality of Means							
						Significance				95% Confidence Interval of the Difference	
		F	Sig.	t	df	One-Sided p	Two-Sided p	Mean Difference	Std. Error Difference	Lower	Upper
Selfleadership	Equal variances assumed	,120	,729	-,699	287	,243	,485	-,04726	,06760	-,18031	,08580
	Equal variances not assumed			-,698	139,871	,243	,486	-,04726	,06771	-,18112	,08661
Selfefficacy	Equal variances assumed	,099	,754	-2,173	287	,015	,031	-,11879	,05466	-,22638	-,01120
	Equal variances not assumed			-2,206	144,559	,014	,029	-,11879	,05385	-,22523	-,01236
Engagement	Equal variances assumed	7,430	,007	-1,098	287	,137	,273	-,14140	,12878	-,39487	,11207
	Equal variances not assumed			-1,211	173,336	,114	,228	-,14140	,11675	-,37183	,08904
Innovativebehavior	Equal variances assumed	2,170	,142	-1,802	287	,036	,073	-,31166	,17290	-,65198	,02866
	Equal variances not assumed			-1,915	159,175	,029	,057	-,31166	,16275	-,63309	,00977

5 Annex. Evaluation differences of variables according to respondents' education

Descriptives

		N	Mean	Std. Deviation	Std. Error	95% Confidence Interval for Mean		Minimum	Maximum
						Lower Bound	Upper Bound		
Selfleadership	vidurinis	26	3,7863	,57514	,11279	3,5540	4,0186	2,67	4,89
	profesinis	20	3,7000	,60117	,13443	3,4186	3,9814	2,11	4,89
	aukstasis neuniversitetinis	43	3,9793	,41094	,06267	3,8529	4,1058	3,11	5,00
	bakalauro laipsnis	128	3,8021	,49296	,04357	3,7159	3,8883	1,78	4,78
	magistro laipsnis	71	3,9546	,53438	,06342	3,8281	4,0811	1,33	5,00
	daktaro laipsnis	1	3,7778	.	.	.	.	3,78	3,78
	Total	289	3,8574	,51173	,03010	3,7981	3,9166	1,33	5,00
Selfefficacy	vidurinis	26	3,0154	,38750	,07599	2,8589	3,1719	2,30	4,00
	profesinis	20	3,0900	,48764	,10904	2,8618	3,3182	2,10	3,90
	aukstasis neuniversitetinis	43	3,1395	,41412	,06315	3,0121	3,2670	2,40	4,00
	bakalauro laipsnis	128	3,0461	,39682	,03507	2,9767	3,1155	2,10	4,00
	magistro laipsnis	71	3,1704	,43273	,05136	3,0680	3,2728	2,00	4,00
	daktaro laipsnis	1	3,8000	.	.	.	.	3,80	3,80
	Total	289	3,0934	,41682	,02452	3,0452	3,1417	2,00	4,00
Engagement	vidurinis	26	4,3597	,94913	,18614	3,9764	4,7431	2,41	6,65
	profesinis	20	4,8118	1,08593	,24282	4,3035	5,3200	3,06	6,41
	aukstasis neuniversitetinis	43	5,2230	,95418	,14551	4,9293	5,5166	2,53	6,71
	bakalauro laipsnis	128	4,8635	,97886	,08652	4,6923	5,0347	2,41	6,71
	magistro laipsnis	71	5,1657	,86065	,10214	4,9620	5,3694	2,94	6,71
	daktaro laipsnis	1	5,8235	.	.	.	.	5,82	5,82
	Total	289	4,9457	,97605	,05741	4,8326	5,0587	2,41	6,71
Innovativebehavior	vidurinis	26	3,6410	1,36998	,26868	3,0877	4,1944	1,11	6,22
	profesinis	20	4,8111	1,42479	,31859	4,1443	5,4779	1,67	7,00
	aukstasis neuniversitetinis	43	4,6331	1,38365	,21100	4,2073	5,0589	1,33	7,00
	bakalauro laipsnis	128	4,3255	1,23957	,10956	4,1087	4,5423	1,00	7,00
	magistro laipsnis	71	4,4883	1,27040	,15077	4,1876	4,7890	1,44	7,00
	daktaro laipsnis	1	2,8889	.	.	.	.	2,89	2,89
	Total	289	4,3783	1,31513	,07736	4,2261	4,5306	1,00	7,00

ANOVA

		Sum of Squares	df	Mean Square	F	Sig.
Selfleadership	Between Groups	2,335	5	,467	1,809	,111
	Within Groups	73,081	283	,258		
	Total	75,416	288			
Selfefficacy	Between Groups	1,457	5	,291	1,697	,135
	Within Groups	48,581	283	,172		
	Total	50,038	288			
Engagement	Between Groups	17,664	5	3,533	3,895	,002
	Within Groups	256,704	283	,907		
	Total	274,368	288			
Innovativebehavior	Between Groups	24,104	5	4,821	2,878	,015
	Within Groups	474,015	283	1,675		
	Total	498,119	288			

6 Annex. Evaluation differences of variables according to respondents' work experience

Descriptives

		N	Mean	Std. Deviation	Std. Error	95% Confidence Interval for Mean		Minimum	Maximum
						Lower Bound	Upper Bound		
Selfleadership	iki 1 metų	62	3,8566	,41251	,05239	3,7519	3,9614	3,00	4,89
	1-5 metai	153	3,8642	,50985	,04122	3,7828	3,9456	1,78	5,00
	6-10 metų	38	3,7865	,69910	,11341	3,5568	4,0163	1,33	4,78
	11-20 metų	18	3,8333	,30548	,07200	3,6814	3,9852	3,33	4,44
	daugiau nei 20 metų	18	3,9753	,56342	,13280	3,6951	4,2555	2,89	5,00
	Total	289	3,8574	,51173	,03010	3,7981	3,9166	1,33	5,00
Selfefficacy	iki 1 metų	62	3,0145	,41680	,05293	2,9087	3,1204	2,00	3,90
	1-5 metai	153	3,1046	,41618	,03365	3,0381	3,1710	2,10	4,00
	6-10 metų	38	3,1895	,36002	,05840	3,0711	3,3078	2,40	3,80
	11-20 metų	18	3,0667	,40729	,09600	2,8641	3,2692	2,40	4,00
	daugiau nei 20 metų	18	3,0944	,52745	,12432	2,8322	3,3567	2,10	4,00
	Total	289	3,0934	,41682	,02452	3,0452	3,1417	2,00	4,00
Engagement	iki 1 metų	62	4,8767	,94351	,11983	4,6371	5,1163	2,65	6,71
	1-5 metai	153	4,7920	1,02046	,08250	4,6290	4,9550	2,41	6,71
	6-10 metų	38	5,2879	,90032	,14605	4,9920	5,5839	3,29	6,71
	11-20 metų	18	5,2418	,70959	,16725	4,8890	5,5947	3,59	6,41
	daugiau nei 20 metų	18	5,4706	,70009	,16501	5,1224	5,8187	4,41	6,53
	Total	289	4,9457	,97605	,05741	4,8326	5,0587	2,41	6,71
Innovativebehavior	iki 1 metų	62	4,1165	1,32990	,16890	3,7788	4,4542	1,22	7,00
	1-5 metai	153	4,3145	1,35741	,10974	4,0976	4,5313	1,00	7,00
	6-10 metų	38	4,6374	1,17523	,19065	4,2511	5,0237	2,78	7,00
	11-20 metų	18	4,6111	1,05633	,24898	4,0858	5,1364	2,89	6,56
	daugiau nei 20 metų	18	5,0432	1,18152	,27849	4,4557	5,6308	3,11	7,00
	Total	289	4,3783	1,31513	,07736	4,2261	4,5306	1,00	7,00

ANOVA

		Sum of Squares	df	Mean Square	F	Sig.
Selfleadership	Between Groups	,459	4	,115	,434	,784
	Within Groups	74,958	284	,264		
	Total	75,416	288			
Selfefficacy	Between Groups	,769	4	,192	1,108	,353
	Within Groups	49,269	284	,173		
	Total	50,038	288			
Engagement	Between Groups	14,898	4	3,724	4,077	,003
	Within Groups	259,470	284	,914		
	Total	274,368	288			
Innovativebehavior	Between Groups	16,359	4	4,090	2,411	,049
	Within Groups	481,760	284	1,696		
	Total	498,119	288			

Multiple Comparisons

Dependent Variable				Mean Difference (I-J)	Std. Error	Sig.	95% Confidence Interval	
							Lower Bound	Upper Bound
Selfleadership	LSD	iki 1 metų	1-5 metai	-0.00757	0.07734	0.922	-0.1598	0.1447
			6-10 metų	0.07008	0.10584	0.508	-0.1383	0.2784
			11-20 metų	0.02330	0.13755	0.866	-0.2475	0.2940

			daugiau nei 20 metų	-0.11868	0.13755	0.389	-0.3894	0.1521
		1-5 metai	iki 1 metų	0.00757	0.07734	0.922	-0.1447	0.1598
			6-10 metų	0.07765	0.09312	0.405	-0.1056	0.2609
			11-20 metų	0.03086	0.12802	0.810	-0.2211	0.2828
			daugiau nei 20 metų	-0.11111	0.12802	0.386	-0.3631	0.1409
		6-10 metų	iki 1 metų	-0.07008	0.10584	0.508	-0.2784	0.1383
			1-5 metai	-0.07765	0.09312	0.405	-0.2609	0.1056
			11-20 metų	-0.04678	0.14700	0.751	-0.3361	0.2426
			daugiau nei 20 metų	-0.18876	0.14700	0.200	-0.4781	0.1006
		11-20 metų	iki 1 metų	-0.02330	0.13755	0.866	-0.2940	0.2475
			1-5 metai	-0.03086	0.12802	0.810	-0.2828	0.2211
			6-10 metų	0.04678	0.14700	0.751	-0.2426	0.3361
			daugiau nei 20 metų	-0.14198	0.17125	0.408	-0.4791	0.1951
		daugiau nei 20 metų	iki 1 metų	0.11868	0.13755	0.389	-0.1521	0.3894
			1-5 metai	0.11111	0.12802	0.386	-0.1409	0.3631
			6-10 metų	0.18876	0.14700	0.200	-0.1006	0.4781
			11-20 metų	0.14198	0.17125	0.408	-0.1951	0.4791
	Bon-ferroni	iki 1 metų	1-5 metai	-0.00757	0.07734	1.000	-0.2264	0.2113
			6-10 metų	0.07008	0.10584	1.000	-0.2294	0.3695
			11-20 metų	0.02330	0.13755	1.000	-0.3659	0.4124

			daugiau nei 20 metų	-0.11868	0.13755	1.000	-0.5078	0.2705
		1-5 metai	iki 1 metų	0.00757	0.07734	1.000	-0.2113	0.2264
			6-10 metų	0.07765	0.09312	1.000	-0.1858	0.3411
			11-20 metų	0.03086	0.12802	1.000	-0.3313	0.3930
			daugiau nei 20 metų	-0.11111	0.12802	1.000	-0.4733	0.2511
		6-10 metų	iki 1 metų	-0.07008	0.10584	1.000	-0.3695	0.2294
			1-5 metai	-0.07765	0.09312	1.000	-0.3411	0.1858
			11-20 metų	-0.04678	0.14700	1.000	-0.4627	0.3691
			daugiau nei 20 metų	-0.18876	0.14700	1.000	-0.6046	0.2271
		11-20 metų	iki 1 metų	-0.02330	0.13755	1.000	-0.4124	0.3659
			1-5 metai	-0.03086	0.12802	1.000	-0.3930	0.3313
			6-10 metų	0.04678	0.14700	1.000	-0.3691	0.4627
			daugiau nei 20 metų	-0.14198	0.17125	1.000	-0.6265	0.3425
		daugiau nei 20 metų	iki 1 metų	0.11868	0.13755	1.000	-0.2705	0.5078
			1-5 metai	0.11111	0.12802	1.000	-0.2511	0.4733
			6-10 metų	0.18876	0.14700	1.000	-0.2271	0.6046
			11-20 metų	0.14198	0.17125	1.000	-0.3425	0.6265
Selfefficacy	LSD	iki 1 metų	1-5 metai	-0.09006	0.06271	0.152	-0.2135	0.0334
			6-10 metų	-,17496*	0.08581	0.042	-0.3439	-0.0061
			11-20 metų	-0.05215	0.11152	0.640	-0.2717	0.1674

			daugiau nei 20 metų	-0.07993	0.11152	0.474	-0.2994	0.1396
		1-5 metai	iki 1 metų	0.09006	0.06271	0.152	-0.0334	0.2135
			6-10 metų	-0.08490	0.07549	0.262	-0.2335	0.0637
			11-20 metų	0.03791	0.10379	0.715	-0.1664	0.2422
			daugiau nei 20 metų	0.01013	0.10379	0.922	-0.1942	0.2144
		6-10 metų	iki 1 metų	,17496*	0.08581	0.042	0.0061	0.3439
			1-5 metai	0.08490	0.07549	0.262	-0.0637	0.2335
			11-20 metų	0.12281	0.11918	0.304	-0.1118	0.3574
			daugiau nei 20 metų	0.09503	0.11918	0.426	-0.1396	0.3296
		11-20 metų	iki 1 metų	0.05215	0.11152	0.640	-0.1674	0.2717
			1-5 metai	-0.03791	0.10379	0.715	-0.2422	0.1664
			6-10 metų	-0.12281	0.11918	0.304	-0.3574	0.1118
			daugiau nei 20 metų	-0.02778	0.13884	0.842	-0.3011	0.2455
		daugiau nei 20 metų	iki 1 metų	0.07993	0.11152	0.474	-0.1396	0.2994
			1-5 metai	-0.01013	0.10379	0.922	-0.2144	0.1942
			6-10 metų	-0.09503	0.11918	0.426	-0.3296	0.1396
			11-20 metų	0.02778	0.13884	0.842	-0.2455	0.3011
	Bonferroni	iki 1 metų	1-5 metai	-0.09006	0.06271	1.000	-0.2675	0.0873
			6-10 metų	-0.17496	0.08581	0.424	-0.4177	0.0678
			11-20 metų	-0.05215	0.11152	1.000	-0.3676	0.2633

			daugiau nei 20 metų	-0.07993	0.11152	1.000	-0.3954	0.2356
		1-5 metai	iki 1 metų	0.09006	0.06271	1.000	-0.0873	0.2675
			6-10 metų	-0.08490	0.07549	1.000	-0.2985	0.1287
			11-20 metų	0.03791	0.10379	1.000	-0.2557	0.3315
			daugiau nei 20 metų	0.01013	0.10379	1.000	-0.2835	0.3038
		6-10 metų	iki 1 metų	0.17496	0.08581	0.424	-0.0678	0.4177
			1-5 metai	0.08490	0.07549	1.000	-0.1287	0.2985
			11-20 metų	0.12281	0.11918	1.000	-0.2144	0.4600
			daugiau nei 20 metų	0.09503	0.11918	1.000	-0.2421	0.4322
		11-20 metų	iki 1 metų	0.05215	0.11152	1.000	-0.2633	0.3676
			1-5 metai	-0.03791	0.10379	1.000	-0.3315	0.2557
			6-10 metų	-0.12281	0.11918	1.000	-0.4600	0.2144
			daugiau nei 20 metų	-0.02778	0.13884	1.000	-0.4206	0.3650
		daugiau nei 20 metų	iki 1 metų	0.07993	0.11152	1.000	-0.2356	0.3954
			1-5 metai	-0.01013	0.10379	1.000	-0.3038	0.2835
			6-10 metų	-0.09503	0.11918	1.000	-0.4322	0.2421
			11-20 metų	0.02778	0.13884	1.000	-0.3650	0.4206
Engagement	LSD	iki 1 metų	1-5 metai	0.08466	0.14390	0.557	-0.1986	0.3679
			6-10 metų	-,41127*	0.19692	0.038	-0.7989	-0.0237
			11-20 metų	-0.36517	0.25592	0.155	-0.8689	0.1386

			daugiau nei 20 metų	-,59393*	0.25592	0.021	-1.0977	-0.0902
		1-5 metai	iki 1 metų	-0.08466	0.14390	0.557	-0.3679	0.1986
			6-10 metų	-,49592*	0.17325	0.005	-0.8369	-0.1549
			11-20 metų	-0.44983	0.23818	0.060	-0.9186	0.0190
			daugiau nei 20 metų	-,67859*	0.23818	0.005	-1.1474	-0.2098
		6-10 metų	iki 1 metų	,41127*	0.19692	0.038	0.0237	0.7989
			1-5 metai	,49592*	0.17325	0.005	0.1549	0.8369
			11-20 metų	0.04610	0.27350	0.866	-0.4922	0.5844
			daugiau nei 20 metų	-0.18266	0.27350	0.505	-0.7210	0.3557
		11-20 metų	iki 1 metų	0.36517	0.25592	0.155	-0.1386	0.8689
			1-5 metai	0.44983	0.23818	0.060	-0.0190	0.9186
			6-10 metų	-0.04610	0.27350	0.866	-0.5844	0.4922
			daugiau nei 20 metų	-0.22876	0.31861	0.473	-0.8559	0.3984
		daugiau nei 20 metų	iki 1 metų	,59393*	0.25592	0.021	0.0902	1.0977
			1-5 metai	,67859*	0.23818	0.005	0.2098	1.1474
			6-10 metų	0.18266	0.27350	0.505	-0.3557	0.7210
			11-20 metų	0.22876	0.31861	0.473	-0.3984	0.8559
	Bonferroni	iki 1 metų	1-5 metai	0.08466	0.14390	1.000	-0.3225	0.4918
			6-10 metų	-0.41127	0.19692	0.376	-0.9684	0.1459
			11-20 metų	-0.36517	0.25592	1.000	-1.0892	0.3589

			daugiau nei 20 metų	-0.59393	0.25592	0.210	-1.3179	0.1301
		1-5 metai	iki 1 metų	-0.08466	0.14390	1.000	-0.4918	0.3225
			6-10 metų	-,49592*	0.17325	0.045	-0.9861	-0.0058
			11-20 metų	-0.44983	0.23818	0.600	-1.1237	0.2240
			daugiau nei 20 metų	-,67859*	0.23818	0.047	-1.3524	-0.0047
		6-10 metų	iki 1 metų	0.41127	0.19692	0.376	-0.1459	0.9684
			1-5 metai	,49592*	0.17325	0.045	0.0058	0.9861
			11-20 metų	0.04610	0.27350	1.000	-0.7277	0.8199
			daugiau nei 20 metų	-0.18266	0.27350	1.000	-0.9564	0.5911
		11-20 metų	iki 1 metų	0.36517	0.25592	1.000	-0.3589	1.0892
			1-5 metai	0.44983	0.23818	0.600	-0.2240	1.1237
			6-10 metų	-0.04610	0.27350	1.000	-0.8199	0.7277
			daugiau nei 20 metų	-0.22876	0.31861	1.000	-1.1302	0.6726
		daugiau nei 20 metų	iki 1 metų	0.59393	0.25592	0.210	-0.1301	1.3179
			1-5 metai	,67859*	0.23818	0.047	0.0047	1.3524
			6-10 metų	0.18266	0.27350	1.000	-0.5911	0.9564
			11-20 metų	0.22876	0.31861	1.000	-0.6726	1.1302
Innova-tivebehavior	LSD	iki 1 metų	1-5 metai	-0.19796	0.19608	0.314	-0.5839	0.1880
			6-10 metų	-0.52094	0.26833	0.053	-1.0491	0.0072
			11-20 metų	-0.49462	0.34871	0.157	-1.1810	0.1918

			daugiau nei 20 metų	-,92672*	0.34871	0.008	-1.6131	-0.2403
		1-5 metai	iki 1 metų	0.19796	0.19608	0.314	-0.1880	0.5839
			6-10 metų	-0.32298	0.23607	0.172	-0.7876	0.1417
			11-20 metų	-0.29666	0.32454	0.361	-0.9355	0.3422
			daugiau nei 20 metų	-,72876*	0.32454	0.026	-1.3676	-0.0899
		6-10 metų	iki 1 metų	0.52094	0.26833	0.053	-0.0072	1.0491
			1-5 metai	0.32298	0.23607	0.172	-0.1417	0.7876
			11-20 metų	0.02632	0.37267	0.944	-0.7072	0.7599
			daugiau nei 20 metų	-0.40578	0.37267	0.277	-1.1393	0.3278
		11-20 metų	iki 1 metų	0.49462	0.34871	0.157	-0.1918	1.1810
			1-5 metai	0.29666	0.32454	0.361	-0.3422	0.9355
			6-10 metų	-0.02632	0.37267	0.944	-0.7599	0.7072
			daugiau nei 20 metų	-0.43210	0.43415	0.320	-1.2866	0.4225
		daugiau nei 20 metų	iki 1 metų	,92672*	0.34871	0.008	0.2403	1.6131
			1-5 metai	,72876*	0.32454	0.026	0.0899	1.3676
			6-10 metų	0.40578	0.37267	0.277	-0.3278	1.1393
			11-20 metų	0.43210	0.43415	0.320	-0.4225	1.2866
	Bonferroni	iki 1 metų	1-5 metai	-0.19796	0.19608	1.000	-0.7527	0.3568
			6-10 metų	-0.52094	0.26833	0.532	-1.2801	0.2382
			11-20 metų	-0.49462	0.34871	1.000	-1.4812	0.4919

			daugiau nei 20 metų	-0.92672	0.34871	0.083	-1.9133	0.0598
		1-5 metai	iki 1 metų	0.19796	0.19608	1.000	-0.3568	0.7527
			6-10 metų	-0.32298	0.23607	1.000	-0.9908	0.3449
			11-20 metų	-0.29666	0.32454	1.000	-1.2148	0.6215
			daugiau nei 20 metų	-0.72876	0.32454	0.255	-1.6469	0.1894
		6-10 metų	iki 1 metų	0.52094	0.26833	0.532	-0.2382	1.2801
			1-5 metai	0.32298	0.23607	1.000	-0.3449	0.9908
			11-20 metų	0.02632	0.37267	1.000	-1.0280	1.0806
			daugiau nei 20 metų	-0.40578	0.37267	1.000	-1.4601	0.6485
		11-20 metų	iki 1 metų	0.49462	0.34871	1.000	-0.4919	1.4812
			1-5 metai	0.29666	0.32454	1.000	-0.6215	1.2148
			6-10 metų	-0.02632	0.37267	1.000	-1.0806	1.0280
			daugiau nei 20 metų	-0.43210	0.43415	1.000	-1.6604	0.7962
		daugiau nei 20 metų	iki 1 metų	0.92672	0.34871	0.083	-0.0598	1.9133
			1-5 metai	0.72876	0.32454	0.255	-0.1894	1.6469
			6-10 metų	0.40578	0.37267	1.000	-0.6485	1.4601
			11-20 metų	0.43210	0.43415	1.000	-0.7962	1.6604
*. The mean difference is significant at the 0.05 level.								

7 Annex. Evaluation differences of variables according to organization sector

Descriptives

		N	Mean	Std. Deviation	Std. Error	95% Confidence Interval for Mean		Minimum	Maximum
						Lower Bound	Upper Bound		
Selfleadership	privatus	186	3,8315	,53459	,03920	3,7542	3,9089	1,33	5,00
	viešasis	98	3,8946	,46934	,04741	3,8005	3,9887	2,11	5,00
	kita	5	4,0889	,40369	,18053	3,5876	4,5901	3,67	4,67
	Total	289	3,8574	,51173	,03010	3,7981	3,9166	1,33	5,00
Selfefficacy	privatus	186	3,1011	,41159	,03018	3,0415	3,1606	2,10	4,00
	viešasis	98	3,0735	,43138	,04358	2,9870	3,1600	2,00	4,00
	kita	5	3,2000	,36742	,16432	2,7438	3,6562	2,70	3,60
	Total	289	3,0934	,41682	,02452	3,0452	3,1417	2,00	4,00
Engagement	privatus	186	4,9162	,98696	,07237	4,7734	5,0590	2,41	6,71
	viešasis	98	4,9922	,96497	,09748	4,7987	5,1857	2,41	6,71
	kita	5	5,1294	,90787	,40601	4,0021	6,2567	4,18	6,59
	Total	289	4,9457	,97605	,05741	4,8326	5,0587	2,41	6,71
Innovativebehavior	privatus	186	4,4110	1,25046	,09169	4,2301	4,5919	1,00	7,00
	viešasis	98	4,3005	1,43203	,14466	4,0133	4,5876	1,33	7,00
	kita	5	4,6889	1,47070	,65772	2,8628	6,5150	2,89	6,89
	Total	289	4,3783	1,31513	,07736	4,2261	4,5306	1,00	7,00

ANOVA

		Sum of Squares	df	Mean Square	F	Sig.
Selfleadership	Between Groups	,528	2	,264	1,007	,366
	Within Groups	74,889	286	,262		
	Total	75,416	288			
Selfefficacy	Between Groups	,107	2	,053	,306	,737
	Within Groups	49,931	286	,175		
	Total	50,038	288			
Engagement	Between Groups	,543	2	,271	,283	,753
	Within Groups	273,825	286	,957		
	Total	274,368	288			
Innovativebehavior	Between Groups	1,275	2	,638	,367	,693
	Within Groups	496,844	286	1,737		
	Total	498,119	288			

Multiple Comparisons

Dependent Variable				Mean Difference (I-J)	Std. Error	Sig.	95% Confidence Interval	
							Lower Bound	Upper Bound
Selfleadership	LSD	privatus	viešasis	-0.06302	0.06387	0.325	-0.1887	0.0627
			kita	-0.25735	0.23190	0.268	-0.7138	0.1991
		viešasis	privatus	0.06302	0.06387	0.325	-0.0627	0.1887
			kita	-0.19433	0.23461	0.408	-0.6561	0.2674
		kita	privatus	0.25735	0.23190	0.268	-0.1991	0.7138
			viešasis	0.19433	0.23461	0.408	-0.2674	0.6561
	Bonferroni	privatus	viešasis	-0.06302	0.06387	0.974	-0.2168	0.0908

			kita	-0.25735	0.23190	0.804	-0.8158	0.3011
		viešasis	privatus	0.06302	0.06387	0.974	-0.0908	0.2168
			kita	-0.19433	0.23461	1.000	-0.7593	0.3706
		kita	privatus	0.25735	0.23190	0.804	-0.3011	0.8158
			viešasis	0.19433	0.23461	1.000	-0.3706	0.7593
Selfefficacy	LSD	privatus	viešasis	0.02761	0.05215	0.597	-0.0750	0.1303
			kita	-0.09892	0.18935	0.602	-0.4716	0.2738
		viešasis	privatus	-0.02761	0.05215	0.597	-0.1303	0.0750
			kita	-0.12653	0.19157	0.509	-0.5036	0.2505
		kita	privatus	0.09892	0.18935	0.602	-0.2738	0.4716
			viešasis	0.12653	0.19157	0.509	-0.2505	0.5036
	Bon-ferroni	privatus	viešasis	0.02761	0.05215	1.000	-0.0980	0.1532
			kita	-0.09892	0.18935	1.000	-0.5549	0.3571
		viešasis	privatus	-0.02761	0.05215	1.000	-0.1532	0.0980
			kita	-0.12653	0.19157	1.000	-0.5879	0.3348
		kita	privatus	0.09892	0.18935	1.000	-0.3571	0.5549
			viešasis	0.12653	0.19157	1.000	-0.3348	0.5879
Engagement	LSD	privatus	viešasis	-0.07600	0.12214	0.534	-0.3164	0.1644
			kita	-0.21322	0.44343	0.631	-1.0860	0.6596
		viešasis	privatus	0.07600	0.12214	0.534	-0.1644	0.3164
			kita	-0.13721	0.44862	0.760	-1.0202	0.7458
		kita	privatus	0.21322	0.44343	0.631	-0.6596	1.0860
			viešasis	0.13721	0.44862	0.760	-0.7458	1.0202
	Bon-ferroni	privatus	viešasis	-0.07600	0.12214	1.000	-0.3701	0.2181
			kita	-0.21322	0.44343	1.000	-1.2811	0.8546

		viešasis	privatus	0.07600	0.12214	1.000	-0.2181	0.3701
			kita	-0.13721	0.44862	1.000	-1.2175	0.9431
		kita	privatus	0.21322	0.44343	1.000	-0.8546	1.2811
			viešasis	0.13721	0.44862	1.000	-0.9431	1.2175
Innova-tivebehavior	LSD	privatus	viešasis	0.11054	0.16452	0.502	-0.2133	0.4344
			kita	-0.27790	0.59731	0.642	-1.4536	0.8978
		viešasis	privatus	-0.11054	0.16452	0.502	-0.4344	0.2133
			kita	-0.38844	0.60429	0.521	-1.5779	0.8010
		kita	privatus	0.27790	0.59731	0.642	-0.8978	1.4536
			viešasis	0.38844	0.60429	0.521	-0.8010	1.5779
	Bon-ferroni	privatus	viešasis	0.11054	0.16452	1.000	-0.2856	0.5067
			kita	-0.27790	0.59731	1.000	-1.7163	1.1605
		viešasis	privatus	-0.11054	0.16452	1.000	-0.5067	0.2856
			kita	-0.38844	0.60429	1.000	-1.8437	1.0668
		kita	privatus	0.27790	0.59731	1.000	-1.1605	1.7163
			viešasis	0.38844	0.60429	1.000	-1.0668	1.8437

8 Annex. Evaluation differences of variables according to organization business sector

ANOVA

		Sum of Squares	df	Mean Square	F	Sig.
Selfleadership	Between Groups	3,155	11	,287	1,100	,361
	Within Groups	72,261	277	,261		
	Total	75,416	288			
Selfefficacy	Between Groups	1,881	11	,171	,984	,461
	Within Groups	48,156	277	,174		
	Total	50,038	288			
Engagement	Between Groups	13,384	11	1,217	1,291	,229
	Within Groups	260,984	277	,942		
	Total	274,368	288			
Innovativebehavior	Between Groups	17,047	11	1,550	,892	,548
	Within Groups	481,072	277	1,737		
	Total	498,119	288			

Descriptives

		N	Mean	Std. Deviation	Std. Error	95% Confidence Interval for Mean		Minimum	Maximum
						Lower Bound	Upper Bound		
Selfleadership	energetika / komunalinės paslaugos	61	3.9435	0.44195	0.05659	3.8303	4.0567	2.67	4.78
	finansinės paslaugos	20	3.7889	0.52352	0.11706	3.5439	4.0339	2.78	4.67
	gamyba	27	3.7243	0.42295	0.08140	3.5570	3.8916	2.78	4.67
	informacinės technologijos	12	3.7593	0.38732	0.11181	3.5132	4.0054	3.11	4.33
	inžinerija / mechanika / statyba	12	3.7963	0.67973	0.19622	3.3644	4.2282	2.11	4.78

	klientų aptarnavimas / paslaugos	61	3.8015	0.58693	0.07515	3.6511	3.9518	1.33	5.00
	kultūra / sportas	6	3.9259	0.62328	0.25445	3.2718	4.5800	3.11	4.67
	prekyba	11	3.9798	0.45493	0.13717	3.6742	4.2854	3.44	4.78
	sveikatos priežiūra / medicina / farmacija	18	3.6605	0.62908	0.14828	3.3477	3.9733	1.78	4.44
	švietimas / mokymai	36	3.9599	0.41756	0.06959	3.8186	4.1012	3.11	5.00
	transportas / logistika	14	3.9206	0.43675	0.11673	3.6685	4.1728	2.89	4.44
	kita	11	4.0606	0.62925	0.18973	3.6379	4.4833	3.11	5.00
	Total	289	3.8574	0.51173	0.03010	3.7981	3.9166	1.33	5.00
Selfefficacy	energetika / komunalinės paslaugos	61	3.2230	0.40677	0.05208	3.1188	3.3271	2.30	4.00
	finansinės paslaugos	20	3.0950	0.43222	0.09665	2.8927	3.2973	2.30	3.90
	gamyba	27	3.0444	0.34567	0.06652	2.9077	3.1812	2.40	3.90
	informacinės technologijos	12	2.9167	0.31575	0.09115	2.7160	3.1173	2.30	3.40
	inžinerija / mechanika / statyba	12	3.0750	0.34411	0.09933	2.8564	3.2936	2.40	3.90

	klientų aptarnavimas / paslaugos	61	3.0475	0.41658	0.05334	2.9409	3.1542	2.10	4.00
	kultūra / sportas	6	3.1167	0.53072	0.21667	2.5597	3.6736	2.30	3.80
	prekyba	11	3.1636	0.33845	0.10205	2.9363	3.3910	2.70	3.70
	sveikatos priežiūra / medicina / farmacija	18	3.1389	0.42168	0.09939	2.9292	3.3486	2.40	4.00
	švietimas / mokymai	36	3.0472	0.49135	0.08189	2.8810	3.2135	2.00	4.00
	transportas / logistika	14	3.0071	0.49686	0.13279	2.7203	3.2940	2.20	4.00
	kita	11	3.0636	0.39057	0.11776	2.8012	3.3260	2.20	3.60
	Total	289	3.0934	0.41682	0.02452	3.0452	3.1417	2.00	4.00
Engagement	energetika / komunalinės paslaugos	61	4.8910	0.92927	0.11898	4.6530	5.1290	2.76	6.41
	finansinės paslaugos	20	4.4912	1.08956	0.24363	3.9812	5.0011	2.82	6.35
	gamyba	27	5.1002	0.81145	0.15616	4.7792	5.4212	3.18	6.41
	informacinės technologijos	12	4.6373	1.37447	0.39678	3.7640	5.5106	2.41	6.41
	inžinerija / mechanika / statyba	12	5.0686	0.71069	0.20516	4.6171	5.5202	3.88	6.18

	klientų aptarnavimas / paslaugos	61	4.7840	1.09806	0.14059	4.5028	5.0652	2.53	6.71
	kultūra / sportas	6	5.5000	1.10848	0.45253	4.3367	6.6633	3.82	6.59
	prekyba	11	5.0107	1.01061	0.30471	4.3318	5.6896	3.12	6.65
	sveikatos priežiūra / medicina / farmacija	18	5.1471	0.94512	0.22277	4.6771	5.6171	3.71	6.71
	švietimas / mokymai	36	5.1536	0.86318	0.14386	4.8615	5.4457	2.41	6.53
	transportas / logistika	14	5.0630	0.68695	0.18360	4.6664	5.4597	3.94	6.29
	kita	11	5.2674	0.84032	0.25337	4.7028	5.8319	3.18	6.35
	Total	289	4.9457	0.97605	0.05741	4.8326	5.0587	2.41	6.71
Innovativebehavior	energetika / komunalinės paslaugos	61	4.4809	1.17654	0.15064	4.1795	4.7822	1.56	7.00
	finansinės paslaugos	20	4.0333	1.18311	0.26455	3.4796	4.5870	1.89	6.33
	gamyba	27	4.2716	0.98050	0.18870	3.8837	4.6595	1.56	6.33
	informacinės technologijos	12	4.2037	1.38034	0.39847	3.3267	5.0807	1.11	6.22
	inžinerija / mechanika / statyba	12	4.8056	1.43558	0.41442	3.8934	5.7177	1.89	6.67

	klientų aptarnavimas / paslaugos	61	4.2350	1.49747	0.19173	3.8515	4.6185	1.22	7.00
	kultūra / sportas	6	5.0185	1.59229	0.65005	3.3475	6.6895	2.89	6.89
	prekyba	11	4.8182	0.94578	0.28516	4.1828	5.4536	3.56	6.22
	sveikatos priežiūra / medicina / farmacija	18	4.1914	1.61232	0.38003	3.3896	4.9931	1.44	7.00
	švietimas / mokymai	36	4.6636	1.38968	0.23161	4.1934	5.1338	1.00	7.00
	transportas / logistika	14	4.0556	1.22474	0.32733	3.3484	4.7627	2.33	6.89
	kita	11	4.2121	1.23873	0.37349	3.3799	5.0443	2.00	5.56
	Total	289	4.3783	1.31513	0.07736	4.2261	4.5306	1.00	7.00

9 Annex. Evaluation differences of variables according to the size of organization

Descriptives

		N	Mean	Std. Deviation	Std. Error	95% Confidence Interval for Mean		Minimum	Maximum
						Lower Bound	Upper Bound		
Selfleadership	1	35	3,7302	,73173	,12368	3,4788	3,9815	1,33	5,00
	2	56	3,8770	,39621	,05295	3,7709	3,9831	3,11	5,00
	3	98	3,8095	,52481	,05301	3,7043	3,9147	2,11	4,78
	4	100	3,9378	,45397	,04540	3,8477	4,0279	2,78	5,00
	Total	289	3,8574	,51173	,03010	3,7981	3,9166	1,33	5,00
Selfefficacy	1	35	3,0886	,41428	,07003	2,9463	3,2309	2,10	4,00
	2	56	3,0607	,40885	,05463	2,9512	3,1702	2,10	4,00
	3	98	3,0622	,44894	,04535	2,9722	3,1523	2,00	3,90
	4	100	3,1440	,38985	,03899	3,0666	3,2214	2,20	4,00
	Total	289	3,0934	,41682	,02452	3,0452	3,1417	2,00	4,00
Engagement	1	35	5,2000	,95184	,16089	4,8730	5,5270	3,18	6,65
	2	56	4,9979	,91067	,12169	4,7540	5,2418	2,53	6,71
	3	98	4,8031	,98572	,09957	4,6055	5,0007	2,41	6,59
	4	100	4,9671	1,00125	,10013	4,7684	5,1657	2,41	6,71
	Total	289	4,9457	,97605	,05741	4,8326	5,0587	2,41	6,71
Innovativebehavior	1	35	4,5714	1,28822	,21775	4,1289	5,0139	2,56	7,00
	2	56	4,5397	1,20352	,16083	4,2174	4,8620	1,11	7,00
	3	98	4,3016	1,27087	,12838	4,0468	4,5564	1,00	7,00
	4	100	4,2956	1,42609	,14261	4,0126	4,5785	1,22	7,00
	Total	289	4,3783	1,31513	,07736	4,2261	4,5306	1,00	7,00

ANOVA

		Sum of Squares	df	Mean Square	F	Sig.
Selfleadership	Between Groups	1,459	3	,486	1,874	,134
	Within Groups	73,958	285	,260		
	Total	75,416	288			
Selfefficacy	Between Groups	,412	3	,137	,788	,501
	Within Groups	49,626	285	,174		
	Total	50,038	288			
Engagement	Between Groups	4,454	3	1,485	1,568	,197
	Within Groups	269,914	285	,947		
	Total	274,368	288			
Innovativebehavior	Between Groups	4,025	3	1,342	,774	,509
	Within Groups	494,094	285	1,734		
	Total	498,119	288			

10 Annex. Regression analysis results

Model Summary

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	,236[a]	,056	,053	1,28015

a. Predictors: (Constant), SelfI

ANOVA[a]

Model		Sum of Squares	df	Mean Square	F	Sig.
1	Regression	27,790	1	27,790	16,958	<,001[b]
	Residual	470,329	287	1,639		
	Total	498,119	288			

a. Dependent Variable: Innov

b. Predictors: (Constant), SelfI

Coefficients[a]

Model		Unstandardized Coefficients		Standardized Coefficients	t	Sig.
		B	Std. Error	Beta		
1	(Constant)	2,037	,574		3,551	<,001
	SelfI	,607	,147	,236	4,118	<,001

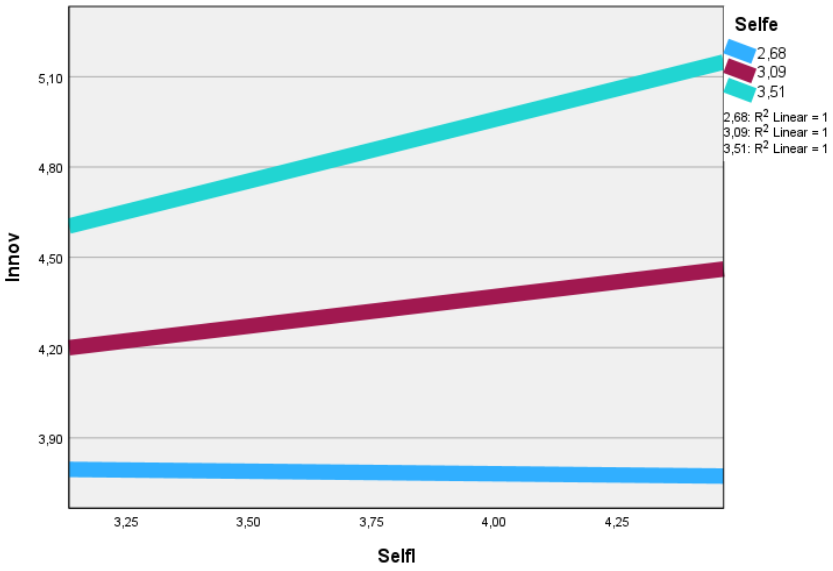
a. Dependent Variable: Innov

11 Annex. Mediation analysis results

```
**************************************************************************
Model  : 4
  Y : Innov
  X : Selfl
  M : Engag

Sample
Size:  289

**************************************************************************
OUTCOME VARIABLE:
 Engag

Model Summary
       R     R-sq      MSE       F      df1      df2        p
    ,2451    ,0601    ,8986   18,3428   1,0000  287,0000    ,0000

Model
          coeff       se        t        p     LLCI     ULCI
constant   3,1424    ,4247    7,3986    ,0000    2,3064    3,9783
Selfl       ,4675    ,1092    4,2829    ,0000    ,2526    ,6823

Standardized coefficients
         coeff
Selfl    ,2451

**************************************************************************
OUTCOME VARIABLE:
 Innov

Model Summary
       R     R-sq      MSE       F      df1      df2        p
    ,5524    ,3051    1,2102   62,7964   2,0000  286,0000    ,0000

Model
          coeff       se        t        p     LLCI     ULCI
constant   -,1440    ,5379   -,2678    ,7891   -1,2027    ,9147
Selfl       ,2826    ,1307    2,1628    ,0314    ,0254    ,5398
Engag       ,6940    ,0685   10,1306    ,0000    ,5592    ,8288

Standardized coefficients
         coeff
Selfl    ,1100
Engag    ,5151

************** TOTAL, DIRECT, AND INDIRECT EFFECTS OF X ON Y **************

Total effect of X on Y
   Effect       se        t        p     LLCI     ULCI     c_cs
    ,6070    ,1474    4,1180    ,0001    ,3169    ,8972    ,2362

Direct effect of X on Y
   Effect       se        t        p     LLCI     ULCI     c'_cs
    ,2826    ,1307    2,1628    ,0314    ,0254    ,5398    ,1100

Indirect effect(s) of X on Y:
       Effect    BootSE  BootLLCI  BootULCI
Engag    ,3244    ,1097    ,1298    ,5630

Completely standardized indirect effect(s) of X on Y:
       Effect    BootSE  BootLLCI  BootULCI
Engag    ,1262    ,0388    ,0536    ,2068

************************ ANALYSIS NOTES AND ERRORS ************************

Level of confidence for all confidence intervals in output:
 95,0000

Number of bootstrap samples for percentile bootstrap confidence intervals:
 5000

------ END MATRIX -----
```

12 Annex. Moderation analysis results

```
**************************************************************************
Model  : 1
  Y  : Innov
  X  : SelfI
  W  : Selfe

Sample
Size:  289

**************************************************************************
OUTCOME VARIABLE:
 Innov

Model Summary
      R     R-sq      MSE       F      df1      df2        p
  ,4715    ,2223   1,3593  27,1520   3,0000  285,0000    ,0000

Model
           coeff       se        t        p     LLCI     ULCI
constant   5,5305   3,7419   1,4780    ,1405  -1,8348  12,8957
SelfI     -1,3822    ,9736  -1,4197    ,1568  -3,2984    ,5341
Selfe      -,6288   1,1817   -,5322    ,5950  -2,9548   1,6971
Int_1       ,5102    ,3034   1,6818    ,0937   -,0869   1,1073

Product terms key:
 Int_1    :      SelfI    x      Selfe

Test(s) of highest order unconditional interaction(s):
     R2-chng       F      df1      df2        p
X*W    ,0077   2,8285   1,0000  285,0000    ,0937
----------
  Focal predict: SelfI    (X)
     Mod var: Selfe    (W)

Conditional effects of the focal predictor at values of the moderator(s):

    Selfe    Effect       se        t        p     LLCI     ULCI
   2,6766    -,0166    ,2078    -,0798    ,9364   -,4257    ,3925
   3,0934    ,1961    ,1448    1,3537    ,1769   -,0890    ,4812
   3,5102    ,4087    ,1753    2,3314    ,0204    ,0636    ,7538

Moderator value(s) defining Johnson-Neyman significance region(s):
    Value   % below   % above
   3,2713  67,1280  32,8720

Conditional effect of focal predictor at values of the moderator:
    Selfe    Effect       se        t        p     LLCI     ULCI
   2,0000    -,3618    ,3839    -,9425    ,3467  -1,1173    ,3938
   2,1000    -,3108    ,3559    -,8732    ,3833  -1,0112    ,3897
   2,2000    -,2597    ,3283    -,7912    ,4295   -,9060    ,3865
   2,3000    -,2087    ,3013    -,6928    ,4890   -,8017    ,3843
   2,4000    -,1577    ,2749    -,5736    ,5667   -,6989    ,3835
   2,5000    -,1067    ,2495    -,4276    ,6693   -,5978    ,3844
   2,6000    -,0557    ,2253    -,2471    ,8050   -,4991    ,3878
   2,7000    -,0047    ,2027    -,0230    ,9817   -,4037    ,3944
   2,8000    ,0464    ,1824    ,2541    ,7996   -,3128    ,4055
   2,9000    ,0974    ,1653    ,5893    ,5562   -,2279    ,4227
   3,0000    ,1484    ,1522    ,9748    ,3305   -,1513    ,4481
   3,1000    ,1994    ,1445    1,3800    ,1687   -,0850    ,4839
   3,2000    ,2504    ,1429    1,7521    ,0808   -,0309    ,5318
   3,2713    ,2868    ,1457    1,9683    ,0500    ,0000    ,5736
   3,3000    ,3015    ,1477    2,0409    ,0422    ,0107    ,5922
   3,4000    ,3525    ,1583    2,2273    ,0267    ,0410    ,6640
   3,5000    ,4035    ,1735    2,3252    ,0208    ,0619    ,7451
   3,6000    ,4545    ,1924    2,3622    ,0188    ,0758    ,8332
   3,7000    ,5055    ,2139    2,3630    ,0188    ,0844    ,9266
   3,8000    ,5565    ,2374    2,3443    ,0197    ,0893   1,0238
   3,9000    ,6076    ,2623    2,3165    ,0212    ,0913   1,1238
   4,0000    ,6586    ,2882    2,2852    ,0230    ,0913   1,2259

Data for visualizing the conditional effect of the focal predictor:
Paste text below into a SPSS syntax window and execute to produce plot.

DATA LIST FREE/
   SelfI    Selfe    Innov    .
BEGIN DATA.
   3,3456   2,6766   3,7918
   3,8574   2,6766   3,7833
   4,3691   2,6766   3,7748
   3,3456   3,0934   4,2412
   3,8574   3,0934   4,3415
   4,3691   3,0934   4,4418
   3,3456   3,5102   4,6905
   3,8574   3,5102   4,8997
   4,3691   3,5102   5,1088
END DATA.
GRAPH/SCATTERPLOT=
 SelfI  WITH   Innov  BY    Selfe   .
```



13 Annex. Conditional process analysis

```
**************************************************************************
OUTCOME VARIABLE:
 Engag

Model Summary
       R     R-sq      MSE        F       df1       df2        p
    ,2451    ,0601    ,8986   18,3428    1,0000  287,0000    ,0000

Model
          coeff       se        t        p      LLCI      ULCI
constant   3,1424    ,4247    7,3986    ,0000    2,3064    3,9783
SelfI       ,4675    ,1092    4,2829    ,0000    ,2526     ,6823

**************************************************************************

**************************************************************************
OUTCOME VARIABLE:
 Innov

Model Summary
       R     R-sq      MSE        F       df1       df2        p
    ,6048    ,3658    1,1123   40,9527    4,0000  284,0000    ,0000

Model
          coeff       se        t        p      LLCI      ULCI
constant   6,1154    3,3858    1,8062    ,0719    -,5490   12,7798
SelfI     -1,8404    ,8826   -2,0853    ,0379   -3,5775    -,1032
Engag      ,5718     ,0713    8,0169    ,0000    ,4314     ,7123
Selfe     -1,5750    1,0755   -1,4644    ,1442   -3,6918    ,5419
Int_1      ,6169     ,2747    2,2454    ,0255    ,0761     1,1577

Product terms key:
 Int_1   :      SelfI   x      Selfe

Test(s) of highest order unconditional interaction(s):
     R2-chng        F       df1       df2        p
X*W    ,0113    5,0418    1,0000  284,0000    ,0255
----------
   Focal predict: SelfI    (X)
      Mod var: Selfe    (W)


 Test(s) of highest order unconditional interaction(s):
      R2-chng        F       df1       df2        p
 X*W    ,0113    5,0418    1,0000  284,0000    ,0255
 ----------
    Focal predict: SelfI    (X)
       Mod var: Selfe    (W)
```

Conditional effects of the focal predictor at values of the moderator(s):

Selfe	Effect	se	t	p	LLCI	ULCI
2,6766	-,1892	,1892	-,9996	,3184	-,5617	,1833
3,0934	,0680	,1320	,5150	,6069	-,1918	,3278
3,5102	,3251	,1589	2,0456	,0417	,0123	,6380

Moderator value(s) defining Johnson-Neyman significance region(s):

Value	% below	% above
3,4717	78,8927	21,1073

Conditional effect of focal predictor at values of the moderator:

Selfe	Effect	se	t	p	LLCI	ULCI
2,0000	-,6066	,3486	-1,7401	,0829	-1,2927	,0796
2,1000	-,5449	,3232	-1,6856	,0930	-1,1811	,0914
2,2000	-,4832	,2983	-1,6198	,1064	-1,0703	,1040
2,3000	-,4215	,2738	-1,5392	,1249	-,9605	,1175
2,4000	-,3598	,2500	-1,4392	,1512	-,8519	,1323
2,5000	-,2981	,2270	-1,3134	,1901	-,7449	,1487
2,6000	-,2364	,2050	-1,1530	,2499	-,6400	,1672
2,7000	-,1747	,1846	-,9464	,3448	-,5381	,1887
2,8000	-,1130	,1662	-,6800	,4971	-,4402	,2142
2,9000	-,0513	,1506	-,3408	,7335	-,3479	,2452
3,0000	,0103	,1388	,0745	,9406	-,2628	,2835
3,1000	,0720	,1317	,5470	,5848	-,1872	,3312
3,2000	,1337	,1301	1,0277	,3049	-,1224	,3898
3,3000	,1954	,1343	1,4554	,1467	-,0689	,4597
3,4000	,2571	,1437	1,7898	,0746	-,0257	,5399
3,4717	,3013	,1531	1,9684	,0500	,0000	,6026
3,5000	,3188	,1573	2,0263	,0437	,0091	,6285
3,6000	,3805	,1743	2,1830	,0299	,0374	,7236
3,7000	,4422	,1937	2,2829	,0232	,0609	,8234
3,8000	,5039	,2149	2,3451	,0197	,0810	,9268
3,9000	,5656	,2373	2,3831	,0178	,0984	1,0327
4,0000	,6272	,2607	2,4057	,0168	,1140	1,1405

```
DATA LIST FREE/
  Selfl    Selfe    Innov    .
BEGIN DATA.
   3,3456   2,6766   4,0952
   3,8574   2,6766   3,9984
   4,3691   2,6766   3,9016
   3,3456   3,0934   4,2990
   3,8574   3,0934   4,3338
   4,3691   3,0934   4,3686
   3,3456   3,5102   4,5028
   3,8574   3,5102   4,6692
   4,3691   3,5102   4,8356
END DATA.
GRAPH/SCATTERPLOT=
 Selfl  WITH   Innov  BY    Selfe   .
```

********** DIRECT AND INDIRECT EFFECTS OF X ON Y **********

Conditional direct effects of X on Y

Selfe	Effect	se	t	p	LLCI	ULCI	
2,6766	-,1892	,1892	-,9996	,3184	-,5617	,1833	
3,0934	,0680	,1320	,5150	,6069	-,1918	,3278	
3,5102	,3251	,1589	2,0456	,0417	,0123	,6380	

Indirect effect(s) of X on Y:

	Effect	BootSE	BootLLCI	BootULCI
Engag	,2673	,0940	,1009	,4762

Completely standardized indirect effect(s) of X on Y:

	Effect	BootSE	BootLLCI	BootULCI
Engag	,1040	,0333	,0424	,1752

********** ANALYSIS NOTES AND ERRORS **********

Level of confidence for all confidence intervals in output:
95,0000

Number of bootstrap samples for percentile bootstrap confidence intervals:
5000

W values in conditional tables are the mean and +/- SD from the mean.

NOTE: Standardized coefficients are not available for models with moderators.

------ END MATRIX -----

Conditional effect of focal predictor at values of the moderator:

Selfe	Effect	se	t	p	LLCI	ULCI	
2,0000	-,6066	,3486	-1,7401	,0829	-1,2927	,0796	
2,1000	-,5449	,3232	-1,6856	,0930	-1,1811	,0914	
2,2000	-,4832	,2983	-1,6198	,1064	-1,0703	,1040	
2,3000	-,4215	,2738	-1,5392	,1249	-,9605	,1175	
2,4000	-,3598	,2500	-1,4392	,1512	-,8519	,1323	
2,5000	-,2981	,2270	-1,3134	,1901	-,7449	,1487	
2,6000	-,2364	,2050	-1,1530	,2499	-,6400	,1672	
2,7000	-,1747	,1846	-,9464	,3448	-,5381	,1887	
2,8000	-,1130	,1662	-,6800	,4971	-,4402	,2142	
2,9000	-,0513	,1506	-,3408	,7335	-,3479	,2452	
3,0000	,0103	,1388	,0745	,9406	-,2628	,2835	
3,1000	,0720	,1317	,5470	,5848	-,1872	,3312	
3,2000	,1337	,1301	1,0277	,3049	-,1224	,3898	
3,3000	,1954	,1343	1,4554	,1467	-,0689	,4597	
3,4000	,2571	,1437	1,7898	,0746	-,0257	,5399	
3,4717	,3013	,1531	1,9684	,0500	,0000	,6026	
3,5000	,3188	,1573	2,0263	,0437	,0091	,6285	
3,6000	,3805	,1743	2,1830	,0299	,0374	,7236	
3,7000	,4422	,1937	2,2829	,0232	,0609	,8234	
3,8000	,5039	,2149	2,3451	,0197	,0810	,9268	
3,9000	,5656	,2373	2,3831	,0178	,0984	1,0327	
4,0000	,6272	,2607	2,4057	,0168	,1140	1,1405	

Data for visualizing the conditional effect of the focal predictor:
Paste text below into a SPSS syntax window and execute to produce plot.