# Master Thesis Strategic Management

"Creating the Entrepreneurial Environment: Selfefficacy and Intrapreneurial Behavior, the role of Perceived Organizational Support (POS) and Internal Knowledge Sharing (IKS)."



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Yours sincerely,

Mees Venderink



# Abstract

The world does not look like it used to, population is aging, markets are becoming virtual, operations are being automated, and big data is booming. Organizations need to prepare for uncertain futures and deal with increasing competition. Stimulating intrapreneurial behavior helps organizations prepare for the future and can result in a competitive advantage over rivals. How is this behavior stimulated however, and which factors have considerable influence on the organizational existence of this behavior? This research project will shed light on the effect of self-efficacy on intrapreneurial behavior and whether the relationship is moderated by perceived organizational support (POS) and internal knowledge sharing (IKS).

This research project is inductive and quantitative by nature, questionnaires have been distributed along two IT-consultancy organizations, and a total of 65 responses were gathered. Different statistical analyses were conducted to evaluate the effect and the magnitude of the variables' effect on intrapreneurial behavior. The results indicate that, for this specific research setting, all of the independent variables do not significantly relate to or predict intrapreneurial behavior. This could be considered as rather odd as the performed literature review predicted different outcomes. However, a separate analysis was performed, in which a specific observational outlier is removed, which considerably changes the outcomes.

In the end, with this observation removed, self-efficacy is hypothesized as significant, predicting intrapreneurial behavior. Furthermore, IKS positively contributes to intrapreneurial behavior. However, this relationship becomes negative in the moderation relationship between self-efficacy and intrapreneurial behavior. Organizations should dedicate sufficient time and resources to enhance the self-efficacy levels of individuals, and IKS processes should be well designed depending on self-efficacy levels of internal employees. Future studies might focus on factors influencing the interplay between self-efficacy and intrapreneurial behavior, such as autonomy, leadership styles, and hybrid workstyles.



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# Introduction

Intrapreneurship, defined as both strategic renewal brought by employees and as organizational venture creation, has become crucial for organizations to survive in challenging times and to maintain their competitive advantage within the market they are situated (Ireland et al., 2003; Morris et al., 2011). Research in the private sector has shown that intrapreneurship has several positive consequences at the organizational level; it is considered as being essential in maintaining organizational success (Antoncic & Hisrich, 2001), innovation, organizational performance, business renewal and individual success (Baggen et al., 2016; Rigtering & Weitzel, 2013; Sundin & Tillmar, 2008). However, organizations struggle to find the proper strategies to initiate innovative and entrepreneurial behavior amongst their employees (Kuratko et al., 2014).

Åmo & Kolvereid (2005) state that it is both the characteristics and attitudes of the individual, together with activities initiated and designed by firms, that enable intrapreneurial behavior within organizations. Intrapreneurial behavior is researched extensively in business literature, specifically involving individual's innovativeness, risk-taking, and proactiveness behavior (Bouchard & Basso, 2011; Escriba-Carda et al., 2020; Farrukh et al., 2016; Neessen et al., 2019; Valsania et al., 2016). In their framework on intrapreneurship, Neessen et al. (2019) distinguish between intrapreneurial attitudes, characteristics, and organizational factors influencing intrapreneurial behavior and outcomes.

One of the main characteristics described within the framework is self-efficacy of employees, which can be referred to as an individual's belief that he or she is capable of successfully performing a task (Wang et al., 2013). The relationship between self-efficacy and intrapreneurship has been researched extensively in the past. Entrepreneurial behavior, product performance and, opportunity recognition are higher when employees display high levels of self-efficacy (Rutherford & Holt, 2007; Simon et al., 2002; Urbano et al., 2013; Wakkee et al., 2010; Zampetakis et al., 2009). Besides, higher levels of an individual's self-efficacy also lead to an increase in intention to act entrepreneurially (Douglas & Fitzsimmons, 2013; Hanson, 2017), which is one of the intrapreneurs' attitudes found in business research.

Additionally, receiving organizational support is crucial for employees willing to display intrapreneurial behavior. Managers act as organizational agents; employee's perception of favorable or unfavorable treatment towards them is indicative for the level of perceived organizational support (POS) (Eisenberger et al., 1986; Kurtessis et al., 2017; Levinson, 1965). According to organizational support theory, developed by Eisenberger et al. (1986), there are



three specific factors of perceived favorable treatment from the organization (i.e., supervisor support, fairness, and organizational reward and job description) that have a significant impact on POS. Additionally, the ongoing sharing of knowledge between individuals contributes to the accumulation of innovation initiatives within teams, business units, or the organization as a whole (Wang & Wang, 2012). Personal knowledge does not lead to individual entrepreneurial action; internal knowledge-sharing routines are required to connect the organization's different knowledge domains (Floyd & Wooldridge, 1992).

In an attempt to capture the underlying correlations between specific factors influencing intrapreneurial behavior, as suggested by Neessen et al. (2019), this study would like to show how self-efficacy impacts intrapreneurial behavior, moderated by POS and internal knowledge sharing (IKS) between individuals. By doing so, specific relationships between intrapreneurial determinants will be investigated. So far, no research has been focused on the combination of these intrapreneurial concepts in isolation. Therefore, by introducing these moderating variables and discovering how POS and IKS influence the primary defined relationship, a contribution would be delivered to the supposed research gap.

Perhaps individuals high on self-efficacy do not require managerial support or involvement in IKS processes and therefore do not require guidance or collaboration with colleagues. Accordingly, Obschonka et al. (2010) indicated that "individuals with a high level of self-efficacy might experience an illusion of control at work in that they are overconfident". Therefore, the proposed research project will shed light on this interesting occurrence. The following research question is central to this research report: "What is the relationship between Self-efficacy and Intrapreneurial Behavior, and is this relationship moderated by Perceived Organizational Support (POS) and Internal Knowledge Sharing (IKS)?"

First, a more precise analysis of elements related to intrapreneurial behavior will be investigated. Gawke et al. (2019) encouraged scholars to simultaneously include multiple types of intrapreneurial behavior predictors in future studies to create a more comprehensive understanding of the essential drivers of employee entrepreneurship. They refer to the previous work of Hornsby et al. (2013) on work design and the work of Hornsby et al. (2009) on managerial positioning predicting intrapreneurial behavior. Even though the positive relationship between self-efficacy and intrapreneurial behavior has been studied elaborately (Arslanagic-Kalajdzic et al., 2019; Bandura, 1997; Nisula & Kianto, 2016; Sequeira et al., 2007), this relationship has not been researched under the moderating conditions. Therefore, this research project might generate positive contributions to organizational processes, whether



required or not, given individual self-efficacy levels, which would broaden the field of scientific knowledge already existent.

Secondly, intrapreneurial behavior within firms is essential for innovation, organizational performance, and competitive advantage. In turn, organizational performance would lead to the survival of firms, providing benefits to the workforce. Besides, individuals' creativity would enhance these organizations' product and service range offerings. Therefore, society as a whole would be positively impacted by this behavior due to the improvements associated with an organization's existing portfolio offerings, for example. Nevertheless, organizations would allow individuals to take risks and experiment, creating a sense of freedom associated with their role within an organization.

Lastly, on a personal record, promoting intrapreneurial behavior within firms is of high interest. Promoting intrapreneurial behavior has been personally experienced as complex within previous work-related contexts. Individuals are different and therefore require different guidance to behave entrepreneurially and contribute to organizational performance. By studying the relationship between self-efficacy and intrapreneurial behavior, and the consequences of the moderating factors stimulating them, a more thorough analysis will be commenced, explaining what is required and what is not (given specific scenarios) when promoting intrapreneurial behavior.



# Theoretical Background

Entrepreneurial behavior may occur within a firm or organization, and this can also be categorized as intrapreneurship (Corbett et al., 2013). Intrapreneurs and entrepreneurs share common characteristics, such as innovative behavior, the creation of value, and undertaking risk when it comes to business opportunities (Cadar & Badulescu, 2015). Pinchot (1985) and Pinchot & Pellman (1999) introduced the term intrapreneurship as a composition of "intracorporate" and "entrepreneurs" and they assumed that intrapreneurs are closely resembled by entrepreneurs, as they turn ideas into realities however, executed within the boundaries of the firm.

## Intrapreneurial Behavior

Intrapreneurs are recognized for initiating new business opportunities within their organizations. On the contrary, entrepreneurs often take the upper hand of their human and social capital to establish possible new ventures and sell new products or services to potential external customers (Parker, 2011). Furthermore, intrapreneurs differ from entrepreneurs in that they can use internal resources that a firm offers, they operate within the boundaries of the firm, and they operate in organizations that already have their policies and bureaucracy in place (Baruah & Ward, 2015; Camelo-Ordaz et al., 2012). Vesper (1984) defines intrapreneurship as the initiative of an employee below within an organization to undertake something new, an innovation that subordinates have created without being asked, expected, or perhaps even given permission from higher management. This is in line with Carrier's (1996) definition of intrapreneurship, which specifies intrapreneurship as an innovation initiated bottom-up by employees within an organization.

The perspective on entrepreneurial behavior at the individual level has consensus with related studies that focus on intrapreneurial behavior at the level of the firm. For example, Covin and Slevin (1989) distinguish between conservative (risk-averse, reactive, and non-innovative) and entrepreneurial (risk-taking, proactive and innovative) firms. Whereas Brazeal and Herbert (1999) discuss different degrees of entrepreneurial representation within firms, ranging from entrepreneurially-challenged organizations (with no commitment to entrepreneurship) to entrepreneurial organizations (who dedicate total commitment to entrepreneurship). The following section will substantiate an outline of literature based on innovation at the organizational level. After that, a more narrow focus on the individual level will be explained, which is the focal perspective with regards to this research trajectory.



Different approaches related to firm-level innovative behavior can be distinguished. At first, entrepreneurial orientation (EO) can be understood as innovations being a dimension of strategy making within firms (Wales, 2016). EO can be explained by the mutual effort being part of the entire organization and a collection of organizational behaviors (Covin & Wales, 2012). The EO of a firm can be measured based on three dimensions: innovativeness, risk-taking, and proactiveness, which is in line with the previously mentioned antecedents of intrapreneurial behavior (Bouchard & Basso, 2011; Escriba-Carda et al., 2020; Farrukh et al., 2016; Neessen et al., 2019; Valsania et al., 2016). Innovativeness is reflected as the value creation of the organization, which includes new service creation and developing novel working processes (Gawke et al., 2019). Risk-taking involves the perceived probability of receiving a positive outcome related to the success of a situation while individually subjecting to the consequences of failure (Brockhaus, 1980). Proactiveness is related to the propensity of an individual to take action in the face of constraints experienced externally (Zhao & Smallbone, 2019). With these factors, a basic strategic orientation was created to measure the EO of an organization (Bouchard & Basso, 2011; Covin & Slevin, 1991).

Later on, two additional dimensions were added, autonomy and competitive aggressiveness. Autonomy deals with the decentralization of decision-making power to those involved in carrying out work (Alpkan et al., 2010). Whereas competitive aggressiveness is the tendency to directly and intensely challenge competitors, rather than avoid their presence to maintain or improve the firm's market position (Tieying et al., 2009). The accumulation of these factors ended up as a five-dimensional construct measuring the EO of a firm (Lumpkin & Dess, 1996; Wales, 2016).

The following identified stream of firm-level innovative behavior focused on fostering innovation and exploitative opportunity-seeking behavior within a firm (Rigtering & Weitzel, 2013). This so-called corporate entrepreneurship (CE) approach (Dess et al., 2003; Ireland et al., 2009) is very much related to the previously defined EO approach. However, within the CE approach, there are two distinguished streams. Namely, CE can either result in corporate venturing (CV) or the renewal of an existing organization and the creation of new businesses. Research dedicated to this specific field of entrepreneurship has substantially differentiated between the individual-level and the organizational-level perspectives (Moriano et al., 2014; Wakkee et al., 2010). Prior research has indicated that CE and intrapreneurship share similar characteristic however, they are not identical to one another (Åmo, 2010). One specific characteristic which sets them apart is the fact that CE can be seen as innovation processes initiated top-down, whereas intrapreneurship is the bottom-up approach concerning



intrapreneurial behavior performed by employees within an organization (Åmo & Kolvereid, 2005; Rigtering & Weitzel, 2013; Sinha & Srivastava, 2013).

EO and CE can be seen as the nest in which intrapreneurship exists and vice versa (Blanka, 2019). However, as already mentioned before, both the individual self-determined behavior of employees and the organizational antecedents enable this intrapreneurial behavior within firms (Åmo & Kolvereid, 2005). Some key behavioral elements of intrapreneurship are opportunity recognition, idea generation and, idea implementation. These behavioral elements are required to generate and implement either incremental or radical innovations (West & Farr, 1990). Additionally, at the level of the employee, pro-activeness could also be described as, and added to, the element of personal initiative (Rigtering & Weitzel, 2013). Since intrapreneurs are required to sustain and persevere in case of obstacles, individuals' personal initiative appears to be a useful add-on to pro-activeness (Rigtering & Weitzel, 2013). It is only the intrapreneur that takes the initiative, displays persistence and, can find organizational support that survives in overcoming organizational barriers. Furthermore, intrapreneurs challenge the status quo within institutional settings or behave in a determinant pro-active manner. They are more likely to show behaviors out of scope linked to their job descriptions and or try to sell issues that are considered controversial from the viewpoint of the organization (Parker & Collins, 2010). At last, employees' attitudes, such as intention, satisfaction and, motivation are additional key determinants of intrapreneurial behavior (Neessen et al., 2019).

Prior research suggests that intrapreneurial behavior amongst employees assists firms in innovating, adapting to external changes, enhancing internal performance and reinvigorating their operations (Felicio et al., 2012). Additionally, nurturing intrapreneurial behavior amongst employees positively plays a part in the development of an organization (Falola et al., 2018). Revolutionary organizations take great effort in the development of strategies that are focused on internally fostering innovation efforts (Asiaei et al., 2020). As it turns out that these strategies may enhance organizations' efforts to reinvigorate their business practices, innovate, adapt to changes in the external and internal environments, and improve their performance (Skarmeas et al., 2016). The primary defined outcome variables of intrapreneurial behavior are innovation, organizational performance, business renewal, and individual success (Baggen et al., 2016; Rigtering & Weitzel, 2013; Sundin & Tillmar, 2008).

## Self-efficacy

The concept of perceived self-efficacy was first introduced by Bandura (1977); he defined self-efficacy beliefs (or expectancies) as the view regarding an individual's ability to perform



specific tasks that he or she considers as necessary for attaining valued goals. These self-efficacy beliefs are developed from four primary sources: performance attainments and failures (what is tried by an individual and the success or failure of this), vicarious performances (what is perceived about how others do it), verbal persuasion (what others tell us about what not, and what we can do) and imaginal performance (how we imagine ourself doing something, and how well or poor this is perceived). Since this concept was first introduced in 1977, it has guided thousands of studies in psychology and other related fields.

A more practical definition of self-efficacy is that it involves an individual's belief about their ability to carry out a specified task within a given context and to successfully achieve their set objectives (Arslanagic-Kalajdzic et al., 2019; Lee et al., 2011; Sequeira et al., 2007). When work-related motivational processes are at stake, the perceived level of self-efficacy will determine what kind of work behaviors employees will adopt, how much effort they will put into the related task, and how long they would sustain this effort (Bandura, 1994). Additionally, research has indicated that people with high perceived levels of self-efficacy generally have a more positive work-related approach and attitude than those with low perceived levels of self-efficacy (Luthans et al., 2006).

Self-efficacy is considered to be acquired gradually through the development of complex social, cognitive, linguistic, and or physical skills that are attained through the development of task execution and experience (Bandura, 1982; Gist, 1987). Therefore, acquiring skills through past achievements and experiences reinforces levels of individual self-efficacy and contribute to higher objectives and future performance (Herron & Sapienza, 1992). However, contradictory to this perception of the relationship between self-efficacy and improved future performance, Stone (1994) found out that higher levels of self-efficacy might lead to overconfidence. In turn, this could lead to dedicating less resources to execution of one's task, with possible failing results as a consequence. This is line with Bandura and Jourden's (1991, p. 949) explanation that "complacent self-assurance creates little incentive to expend the increased effort needed to attain high levels of performance".

Bandura (1997) stated that an employee's self-efficacy related to innovative processes at the front end of an organization (also referred to as intrapreneurial self-efficacy) explains the emergence of bootlegging. Bootlegging is referred to as the process by which individuals take the initiative to work on ideas which are not formally supported by the organization and are often hidden from management but are aimed at undertaking activities that will benefit organizational outcomes (Augsdorfer, 2005; Criscuolo et al., 2014). This bootlegging process shares consensus with pro-active behavior, which is one of the elements explaining



intrapreneurial behavior. Furthermore, self-efficacy influences the tasks individuals attempt to and take part in, implying that they believe they have the opportunity to complete a task successfully or not. Besides, it impacts an individual's willingness to put time and effort into a task and their perseverance. Nevertheless, it affects the effective response to approaching a task, leading to positively impacting their innovative behavior (Arslanagic-Kalajdzic et al., 2019; Bandura, 1997).

Next to this view on self-efficacy outcomes, Krueger and Dickson (1993; 1994) found out that a higher sense of self-efficacy leads to perceptions of fewer threats and more opportunities which, in turn, leads to an increased likelihood of risk-taking behavior, which is one of the main antecedents of intrapreneurial behavior. In their study on risk-taking at the managerial level, Krueger and Dickson (1994) mention that managers high on perceived self-efficacy should take greater risks, as they do not emphasize failure and threats that are out of their control. Instead, they tend to frame high-risk choices as opportunities they manage and control through their skill development.

Douglas & Fitzsimmons (2013) found a positive and significant relationship between entrepreneurial self-efficacy and intrapreneurial intentions. This provides further evidence, underlining the importance of self-efficacy and its relation to intentions engaging in intrapreneurial endeavors. Subsequently, empirical research suggests that self-efficacy has a positive effect on innovative behavior amongst employees, such as idea submissions (Axtell & Parker, 2003), constructive deviance behavior such as taking charge (Morrison & Phelps, 1999) and taking personal initiative (Speier & Frese, 1997). Moreover, self-efficacy is essential for intrapreneurial behavior to occur at the individual level (Ibrahim et al., 2016; Wakkee et al., 2010). Nevertheless, increased levels of self-efficacy permit individuals to sense less threats for stress and increased opportunity recognition, which in turn would lead to risk-bearing behaviors (Hostager et al., 1998). Considering the research available based on the relationship between self-efficacy and intrapreneurial behavior, the following hypothesis is proposed:

 $H_1$ : "Self-efficacy is positively related to intrapreneurial behavior".

# The Moderating Role of Perceived Organizational Support

Eisenberger et al. (1986) were the first to introduce the concept of POS. They view POS as the extent to which an organization values an individual's contributions and cares about their well-being. POS would be influenced by various features of an organization's treatment of their internal employees, which in turn would influence the interpretation of the organizational rationale underlying that specific treatment. With their theory, they build upon knowledge



related to organizational commitment, which can be categorized as the "relative strength of an employee's identification with and involvement in a particular organization" (Porter et al., 1974, p. 605). The effects of POS have been researched extensively in various studies since it was first introduced in 1986. The primary outcome variables of positive POS are, amongst others, organizational commitment, job satisfaction, employee performance (weak relationship) and lower intentions to leave the organization (Riggle et al., 2009).

Alpkan et al. (2010, p. 736) propose, in light of intrapreneurship, that organizational support constitutes five factors: "management support for generating and developing new business ideas, convenient organizational structures concerning in particular decentralization level of decision-making autonomy, allocation of free time, appropriate use of incentives and rewards and tolerance for trial-and-errors or failures in cases of creative undertakings or risky project implementations". The performance of organizational intrapreneurs narrowly impacts the organization's performance (Carrier, 1994). Considering intrapreneurial behavior involves risk-taking, creating an allowance for this behavior and support by the organization is considerably helpful (Camelo-Ordaz et al., 2012). However, perception of the quality and level of POS and its impact on the intrapreneurial process have been neglected in existing research (Yariv & Galit, 2017).

According to previous research concerning the relationship between POS and self-efficacy, POS is expected to lead to higher levels of self-efficacy through the self-enhancement processes whereby employees' essential socio-emotional wants (e.g., approval, affiliation, emotional support, and recognition) have been effectively satisfied (Caesens & Stinglhamber, 2014; Eisenberger & Stinglhamber, 2011). Additionally, Kurtessis et al. (2017) build upon this enhancement of employees' socio-emotional needs by POS in that it increases employees' expectancy that organizational help is available during challenging times, which ultimately boosts perceived self-efficacy with positive outcomes on motivation in return. For example, whenever a supervisor would recognize an individual's capability of work execution, the employee's confidence levels would be enhanced, leading to demonstrating appropriate behavior in the designated work-related situation (Tan et al., 2022).

It is crucial for employees that a supportive and collaborative atmosphere is created by the organization, this way initiatives for exploring new businesses and pursuing business excellence will be positively stimulated (Arnab, 2014; Parker, 2011). POS initiates a climate of social exchange wherein employees feel the obligation to assist the organization in achieving its goals and objectives (Kurtessis et al., 2017). Additionally, whenever perception of POS is positive, individual confidence and trust are stimulated, which could ultimately lead to risk-



taking and innovative behavior (Rich et al., 2010). Besides, whenever employees experience little energy and doubt about their capabilities to successfully perform a specific task (e.g., low levels of self-efficacy) and are thus less motivated to be engaged with work and achieve their goals, POS would deliver assurance that organizational support is accessible to attain their goals and that their efforts will be rewarded (Ott et al., 2019)

According to Eisenberger & Stinglhamber (2011) optimistic assumptions of POS increases employees' interest in the tasks associated with their job in several ways, including reinforcing their self-efficacy levels. The higher the level of self-efficacy, the more individual's become absorbed by their task, and put the effort into accomplishing them (Bandura, 1997) and it would likely increase intrinsic interest in an activity that had failing results in the past (Bandura, 1997; Wood & Bandura, 1989). Furthermore, whenever individuals develop trust and positive perceptions of support, they are stimulated to not only venture beyond standardized job routines and their comfort zone (Bendickson & Liguori, 2014) but also triggered to engage in intrapreneurial behavior (Chouchane et al., 2021). Moreover, Hon et al. (2012) and Michel et al. (2013) propose that POS fosters personal resources, such as positive affectivity, intrinsic motivation and self-efficacy. Based on the theoretical line of argumentation and empirical evidence at hand, the following hypothesis is proposed:

H2: "Perceived organizational support (POS) moderates the positive relationship between self-efficacy and intrapreneurial behavior".

## The Moderating Role of Internal Knowledge Sharing

For organizations to develop a competitive sustainable advantage, employees must share their knowledge and apply this in their daily work practices (Cabrera & Cabrera, 2005; Dalkir, 2017; Nonaka et al., 2000). The success of these intraorganizational knowledge sharing policies pivots around the knowledge sharing between employees and the resulting outcomes of these behaviors (Hislop et al., 2018). Knowledge sharing can be defined as "the exchange of task-related information, advice and expertise to help others and to collaborate with others to carry out daily tasks, solve problems and develop new ideas" (Ahmad, 2018, p. 249). Some of the main researched benefits of knowledge sharing are cost reduction, shorter product development cycles, improved innovation, increased customer satisfaction, and performance capabilities (Ozer & Vogel, 2015; Wang & Noe, 2010).

In their paper on knowledge sharing within the hospitality industry, Kim & Lee (2013) refer to knowledge sharing behaviors as a combination of knowledge collecting and knowledge donating. This behavior includes employees' willingness to communicate with their fellow



colleagues (e.g. knowledge donating) and consultation with colleagues to learn from their experiences and skills (e.g. knowledge collecting) in the developing new skills and individual capabilities. Both of these processes can be considered as highly active (either actively consulting colleagues to discover what they know or actively communicating towards colleagues what an individual knows), and both processes are different by nature (Van Den Hooff & De Ridder, 2004). Individual motivation is recognized as one of the critical factors in successfully managing knowledge flows within organizations (Bock et al., 2005; Tohidinia & Mosakhani, 2010); understanding the factors that contribute to motivation in being actively engaged or not with this knowledge-sharing behavior has gained considerable attention in recent research (Bock et al., 2005; Kankanhalli et al., 2005; Lin, 2007; Van Den Hooff & Huysman, 2009).

Whenever employees perceive that they have high levels of self-efficacy (e.g., their perceived ability and skills to successfully complete a particular task) that assist in improving productivity and work efficiency, they are more likely to display collecting behavior of skills, experiences, knowledge, and know-how from and donate them to fellow colleagues (Bock et al., 2005; Kankanhalli et al., 2005). Even though these knowledge-sharing processes can be experienced as time-consuming, difficult and there is a risk of losing knowledge power, which could be influenced by the knowledge-sharing behaviors towards fellow colleagues (Davenport & Prusak, 1998; Kankanhalli et al., 2005). Additionally, employees who are learning-oriented tend to increase their personal work-related goals over time for the reason that they want to challenge themselves (Button et al., 1996). Whenever these goals are achieved, they are stimulated to engage more in knowledge-sharing processes, in addition to their daily workloads (Kim & Lee, 2013).

The availability of resources within an organization is crucial in stimulating involvement in intrapreneurial activities (Kuratko, 2017; Neessen et al., 2019). For example, financial resources (rewards stimulating intrapreneurial behavior) influence the intrapreneurial attitude (Neessen et al., 2019). In addition, Rigtering and Weitzel (2013) stated that horizontal participation within organizations affects intrapreneurial behavior amongst employees. The knowledge-sharing process of peers accelerates the venture process of a firm, resulting in sustainable intrapreneurial effects. Next, research has suggested that autonomy is an essential factor contributing positively to intrapreneurship (Felicio et al., 2012). At last, a culture in which tolerance for failure is existent is critical for intrapreneurial participation (Aramburu & Sáenz, 2011). This way taking risk and learning from trial and error is promoted, positively affecting intrapreneurial growth and experience.



In their research on HR practices and intrapreneurial behavior, Escribá-Carda et al. (2020) claim that the process of knowledge sharing results in collectively shared knowledge. This can be attributed to the fact that individuals' knowledge is combined with that of others. Furthermore, knowledge sharing serves as an intensified attribute in increasing the creativity of employees (Wang & Noe, 2010), which is one of the characteristics associated with intrapreneurs. Hayton (2005), Kuratko et al. (2005), and Dal Zotto and Gustafson (2008) mention that organizations are responsible for implementing HRM practices that are focused on knowledge acquisitions and integration, with the purpose of boosting the emergence of entrepreneurial opportunity recognition within the organization.

Building on co-working literature, Bouncken and Reuschl (2018) argued that spaces, where shared working is promoted, can improve entrepreneurial self-efficacy through the professional and social tie development being involved with the process. Within such situations, shared learning is stimulated, and knowledge is distributed amongst the actors (Semrau & Werner, 2014). These knowledge-sharing processes and the employment of collective wisdom accordingly assist in solving complex organizational problems (Bizzarri, 2014; Rus & Orel, 2015) for original and innovative ideas (Capdevila, 2015). This creative atmosphere and social exchange processes will improve coincidental idea generation, which promotes innovation and entrepreneurial behavior (Bilandzic & Foth, 2013).

Herein, the interplay of the variables related to this research project is outlined in previous research. To conclude, based on the above-mentioned findings related to knowledge-sharing, the following hypothesis is, and full conceptual model is proposed:

H3: "Internal knowledge sharing (IKS) moderates the positive relationship between self-efficacy and intrapreneurial behavior".

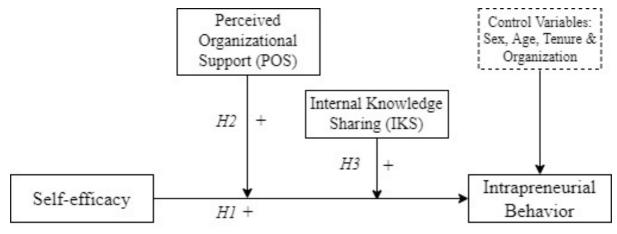


Figure 1: Conceptual Framework Research Project



#### The Role of the Selected Control Variables

Different control variables were added to the analysis that deemed important in describing intrapreneurial activity within organizations. At first, gender was included. For example, Adachi and Hisada (2017) mention that the percentage of women participating in entrepreneurial employee activity is considerably lower compared to men. Additionally, gender is researched to be a decisive factor influencing, amongst others, risk-taking behavior, self-efficacy, strategic opportunity recognition, and social capital (Arenius & Kovalainen, 2006). Nevertheless, Forlani (2013) has indicated that a higher representation of women in a board results in a decrease for risk assumption and strategic opportunism.

Next, the control variable age was included. Research has verified that age also has a considerable impact on intrapreneurial activity. Existent research on the relationship between age and intrapreneurship is quite dispersed; some researchers found a negative connection (Parker, 2011; Urbano & Turró, 2013), indicating that younger employees have the tendency to be more intrapreneurial oriented than their older counterparts. While others suggest a U-shaped relationship, and some did not find any significant connections at all (Douglas & Fitzsimmons, 2013). Nevertheless, Kautonen et al. (2017) address that an individual's tendency and likelihood of entrepreneurial intentions or start-up engagements are different across different stages of life.

At last, tenure was included as the final control variable impacting intrapreneurial behavior. De Jong et al. (2011) indicate that the longer people work within an organization, the more they have experienced their skills, enhanced experiences, and domain-specific knowledge accumulate. Resulting in an increased likelihood of exploiting opportunities because of this enhanced knowledge development. Additionally, higher risk propensity is hypothesized, because of more experience and higher abilities in intrapreneurial efforts (Gifford, 2003).



# Methodology

# Research Design & Case Selection

The design of this research project will be an explanatory quantitative multiple case study. By doing so, already defined significant relationships examined for previous research purposes will be tested. This hypothesis testing will be done through conducting surveys within two different case organizations, creating the opportunity to gather a large body of data related to a large number of different subjects, making it a considerably efficient approach to research. The style of this research project will be inductive by nature, meaning that all steps taken in the course of the study will be specified and decided upon beforehand (Van Thiel, 2014). Furthermore, the starting point will be the theory that is already available. After the hypothesis development further knowledge will be added to the theory or contradicted utilizing the data collected within this research project.

The two organizations involved with this study can be categorized as IT-consultancy firms that deliver IT-related solutions, such as services, software, and hardware, to their client base. These two specific organizations have been selected because of a personal bias concerning the perception that IT-related organizations are focused on technology where some sort of entrepreneurial behavior of employees is expected. Likewise, organizations should be supporting this behavior due to the high-velocity market they are situated within. Data within each situation and across situations can be analyzed and compared by doing a multiple case study (Yin, 2009). Additionally, evidence created from a multiple case study can be regarded as being more strong and reliable (Baxter & Jack, 2008)

The previously mentioned hypothesis will be tested throughout different divisions within these case companies to test the robustness of the findings across these different divisions. The examined divisions serve different purposes, apply different procedures and differ in size. The respondent will vary between operational-level employees, middle-management, and team leads. To allow for data collection at a large scale the writer of this research project will use standard forms of measurement (DeVilles, 2012; Fowler, 2002). In specific, answer scales that have been used in previous research projects, related to the variables addressed within this research project, will be utilized. The questions will be validated in Dutch and English, instructions will be provided at the beginning of the survey and participation will be entirely voluntary and anonymous.

The required response rate of participants for the quantitative data to be collected is at least 60. Hair et al. (2019) recommended that a 15 to 20 observation per independent variable



is strongly recommended. Therefore, the required response rate of 66 would be sufficient, leading to adequate statistical power. As already suggested, considering the distribution amongst participants, a random sampling procedure will be used. This way every member employed in both organizations have an equal chance of being selected. This technique would most likely lead to a non-biased interpretation of the results, reducing the risk of over- or underrepresentation, ensuring the results would represent the sampling frame at stake. Besides, minimal knowledge about the population is required, the internal, as well as the external validity is high, and it is easy to interpret the data (Acharya et al., 2013).

#### Measurements

In order to measure the constructs of intrapreneurial behavior, self-efficacy, POS, and involvement in IKS processes, validated and structured surveys will be used. The distribution of the surveys will be tailored to the remote work setting, meaning that they will be distributed online, as many employees would be working from home given the current circumstances. All statements included in the survey will be composed based on different Likert scales, with different sample items associated with each question.

At first, the items related to the construct of *Intrapreneurial Behavior* will be measured using the scale of Stull (2005). The scale covers the three elements related to entrepreneurial orientation, similar to the concepts related to intrapreneurial behavior mentioned earlier, namely innovative behavior, pro-activeness and, risk-taking behavior. The scale consists of 15 items, all to be answered on a five-point Likert scale ranging from (1) "Strongly Disagree" to (5) "Strongly Agree". Questions related to the scale assess individuals' perception of their behavior related to the course of work they employ. The Cronbach's alpha for the construct of intrapreneurial behavior is ,789 for this performed study.

Secondly, the items related to the construct of *Self-efficacy* are based on previous research on self-efficacy by Arslanagic-Kalajdzic et al. (2019), who make use of an abbreviated scale developed by Schwarzer and Jerusalem (1995). The questions related to the proposed scale deal with the confidence that individuals have in their abilities to engage in intrapreneurial projects. In total, the construct consists of six sample items, which will be used to define individuals' self-efficacy levels. The entire construct will be measured using a four-point Likert scale ranging from (1) "Not at all true" to (4) "Exactly True". Cronbach's alpha related to the construct of self-efficacy is ,811, indicating the reliability of the instrument.

Thirdly, the items related to the construct of *Perceived organizational support (POS)* will be based on research performed by Eisenberger et al. (1986). This survey of perceived



organizational support (SPOS) originally consisted of 36 statements. However, within this research project, a shorter 8-item version will be used. According to Rhoades and Eisenberger (2002), it would not be problematic to use this shortened version due to the internal reliability and unidimensionality of the original scale. The Cronbach's alpha of the reduced construct of POS is ,867, indicating a strong and reliable construct. The survey statements related to perceived organizational support are based on a seven-point Likert scale, consisting of answers ranging from (1) "Strongly Disagree" to (7) "Strongly Agree".

Lastly, the items related to *Internal Knowledge Sharing (IKS)* will be based on previous research done by Kim and Lee (2013), who make use of an adapted version of Van den Hoof and Hendrix (2004). Two types of knowledge sharing behaviors conceptualize the moderating variable. The first four items will be related to knowledge collecting. The following four items are related to knowledge donating. Within this 8-item construct, respondents will be asked to indicate their answers on a seven-point Likert scale, ranging from (1) "Strongly Disagree" to (7) "Strongly Agree". Reliability analysis resulted in a Cronbach's alpha of ,832, indicating strong reliability.

Concerning the control variables associated with this research project, sex, age, tenure, and organization were included. These control variables might influence the answering pattern of individuals, which indicates that they can interfere with what will be measured. This interference will be limited by incorporating these control variables (Van Thiel, 2014). Additionally, by including them, results will be purified, and underlying relationships can be uncovered within the analysis (Bernerth & Aguinis, 2016). Therefore, by including the control variables within this research project, despite considering the effect of the other included variables, possible relationships between the control variables and the other variables at stake can be hypothesized. *Gender* will be measured on a nominal scale, ranging from (1) Male to (2) Female (these items have been dummied in a later stage), whereas *Age* will be measured on an interval scale. *Tenure* will be based on a six-point Likert scale, ranging from (1) less than a year, (2) 1-2 years, (3) 3-5 years, (4) 5-10 years, (5) 10-25 years to (6) over 25 years. At last, *Organization* will be measured on a nominal scale and dummied in a later stage of the analysis.

Incorporating these control variables is beneficial, as the effect of these variables has been substantiated in existing literature up to date. At first, motivation for intrapreneurial behavior should decrease with an individual's age (De Jong et al., 2011). For example, it has been shown that with people who age, in general, their attitude and openness to change and new experiences decreases (Terracciano et al., 2005). Such behavioral patterns apply to work-related settings as well (Carstensen et al., 1999; de Lange et al., 2010). Additionally, individuals with



a longer organizational tenure are less involved in intrapreneurial activities (Camelo-Ordaz et al., 2012; Parker, 2011). Nevertheless, according to research, women are less likely to be involved with intrapreneurship as opposed to men (Adachi & Hisada, 2017; Parker, 2011).

Three supplementary statements have been added to the existing scales of the moderating variables. The reason for including these statements is to discover whether respondents are even interested in or value the moderating conditions regarding their intrapreneurial behavior. Additionally, two additional open-ended questions related to the moderating variables have been incorporated within the survey to gather valuable supplementary data. This way, respondents are not limited solely or influenced by predefined answers. Furthermore, individual perceptions related to organizational processes can be evaluated, and the case organizations might receive suggestions for improvement. Nevertheless, by incorporating these open ended questions respondents are given a voice, letting them know their personal opinion is important and that their answers would not be exclusively used for statistical purposes. A full version of the survey is provided in Appendix 1.

## Analytical Approach

This research project examines a dependence relationship, as the relationship between one dependent and several independent variables will be tested using different statistical methods. Different dependence techniques can be categorized based on the number of dependent variables and the type of measurement scales deployed (Hair et al., 2019). Only one dependent variable is associated with this research project, which is intrapreneurial behavior. Additionally, the measurement scale of the dependent variable is based on a five-point Likert scale, indicating it is metric. Two appropriate methods can be applied in this case: multiple regression analysis and conjunction analysis. Considering this research project involves different hypotheses to be tested, the regression analysis technique is most applicable. This statistical technique can be used to analyze the relationship between one dependent variable and multiple independent variables, which is very relevant to this research project. At last, one of the main assumptions of this test is that it requires variables to be metrically scaled. This applies to the proposed research project.

Multiple regression has two classes of research problems: prediction and selection. The prediction measures the extent to which the indicated regression variate (consisting of one or more IV's) can predict the DV. In contrast, the explanation examines the regression coefficient (statistical significance and magnitude) for each of the IV's and tries to develop a theoretical reason for the effects of these IV's (Hair et al., 2019). Considering all variables at stake are of



metric scale level and the goal of predicting the moderating effects within the analysis, the purpose of multiple regression fits with the intended research project.

#### Research Limitations & Ethics

Particular limitations have been identified associated with this research project. Due to circumscribed timing and access to a case organization, it might be the case that it would not be able to reach out to a large number of respondents, which might harm the validity of the data gathered. Accordingly, this might harm the degree of generalization of the entire population related to this research project. Furthermore, the approval process for conducting the survey can take up considerable time, which would in turn affect the time frame linked to the data gathering process. Besides, this study will be conducted within a specific industry in the Netherlands. Therefore, concerned findings do not represent people from other industries or nations and no generalizations can be made about other industries or nations. In conclusion, the interpretations should be tested more extensively in future research projects. Other limitations have been identified later in the discussion section of this product.

According to Saunders et al. (2009), ethical considerations within research settings relate to the appropriate behavior of the researcher concerning the people affected by the research. When conducting research, also for educational purposes, it is considered to be of high importance to keep ethical considerations in mind. This way, research remains within the academic boundaries, and a safe environment for the research project's participants is safeguarded. Furthermore, this involves that the participants should not feel embarrassed, harmed or disadvantaged by the process or results involved with the performed research. Therefore, this research project will consider several practices to guarantee an ethical research design.

Firstly, the research project's aim, together with the input application will be communicated with the respondents before the filling-in procedure occurs. Subsequently, permission to use the output of the survey will be requested. The conducted survey will include an introductory section explaining the moral of the study, addressing participants' anonymity, and explaining what will be done with the study's results. Safeguarding anonymity involves that answers could not be traced back, and no personal information will be reported throughout the study. Moreover, the participants would have the opportunity to end the survey at all times, without any consequences. Nevertheless, participants have the opportunity to come up with suggestions or ask questions after completing the survey. This way, adjustments could be made to the existing survey to improve its value and strength. Lastly, if requested, the respondents would have the chance to receive the results once the research project is completed.



# Analysis & Results

Within this section, the main research question will be answered by means of different quantitative research approaches. First, a description of the samples (organization X & Y) will be substantiated. Second, the performed factor analysis will be analyzed and discussed, followed by a reliability analysis of the results. Third, the previously mentioned hypotheses will be tested through multiple regression analysis. At last, subsequent findings related to the additionally included statements will be briefly discussed.

# Description of the Sample

To provide primary findings about the conducted research, general information on the samples involved in this project will be outlined. At organization X the questionnaire has been filled in by 57 respondents (N=57), which is a response rate of 31,5%, since the questionnaire has been distributed along the total population of 181 employees. At organization Y the questionnaire has been filled in by 56 respondents (N=56), which is a response rate of 8%, since the questionnaire has been distributed along the total population of 703 employees. However, this dataset could not be considered clean as multiple respondents did not complete the entire survey. After deleting the no response sets, the complete interpretable clean set consisted out of 41 respondents for organization X and 25 for organization Y, respectively.

The average age of people working at organization X is 41 (M=41,56, SD=14,372), 63% is man (N=26) and 37% is woman (N=15). Most of the respondents work between 10 to 25 years at the organization (36.6%) and the mean lies within the region of 3 to 5 years (M=3,17, SD=1,626). Most people work in consultancy at organization X, which is also considered the prime department. Furthermore, the average age of people working at organization Y is 40 (M=40,00, SD=11,551), 72% is a man (N=18), 28% is a woman (N=7). Most of the respondents work between 1-2 years within the organization, and the mean also lies within this region (M=1,32, SD=,557). The respondents are distributed evenly throughout the different departments within organization Y, touching upon various positions.

In order to make explicit assumptions about the main variables included within this analysis different items needed to be recoded. The items that have been recoded are POS2, POS3, POS5 and POS7 (of both organization X and Y) since these statements are negatively worded in the questionnaires. The reversed coded items Rev\_POS2, Rev\_POS3, Rev\_POS5, and Rev\_POS7 capture the dimension of POS with greater accuracy after these items have been recoded for interpretative purposes. Appendix 2 displays the descriptive statistics and the correlations (for organization X and Y separately) of the variables included in this analysis.



At first, the average score on Intrapreneurial Behavior at organization X (IB\_X) is 3,47 (M=3.4683, SD=.31322), indicating that respondents in general score in between "Neither agree, nor agree" to "Somewhat agree", and therefore perceive themselves somewhat intrapreneurial. Additionally, the average score of Self-efficacy at organization X (SE\_X) is 3.32 (M=3.3211, SD=.38978), indicating that respondents in general score between "Moderately true" nearing "Exactly true", and therefore display high levels of self-efficacy. Moreover, the average score on POS at organization X (POS\_X) is 5,68 (M=5.6829, SD=.74744), indicating that respondents "Somewhat agree" to "Agree", sharing positive feelings towards the support of organization X. At last, the average score on IKS at organization X (IKS\_X) is 5.67 (M=5.6738, SD=.6738), indicating that respondents "Somewhat agree" to "Agree", evaluating both knowledge collecting and sharing to be of importance.

Organization Y displays similar results to organization X, and only POS scored relatively lower (M=5.1550, SD=1.03032) compared to organization X (M=5.6829, SD=.74744). Furthermore, the higher standard deviation indicates that the data is more dispersed around the mean. For the upcoming statistical analysis procedures, the datasets of organizations X and Y will be jointly analyzed. Since both organizations work in similar markets, the unit of analysis can be interpreted as somewhat similar. Merging the two datasets would create a more powerful aggregated analysis compared to analyzing both cases separately.

#### **Factor Analysis**

Factor analysis provides a tool for analyzing the structure of the correlations among several different variables by defining specific sets of variables highly related to each other, known as components or factors (Hair et al., 2019). The ultimate goal of factor analysis is data reduction and summarization, and this would eventually lead to an increase in the validity and reliability of the measurement involved with the analysis. The criteria, related to the number of factors involved, are multiple folds: analyzing the scree plot and interpreting the elbow point, the eigenvalues (>1), the total stated variance (cumulative > 60%), interpretability, and based on theoretical reasoning (Blazevic, 2022). A factor solution with four factors would be desirable since the conceptual framework consists of 4 variables. Therefore, the amount of factors is determined a-priori, based on theory.

The type of factor analysis performed in this study is exploratory by nature, with its primary purpose of defining the underlying structure among the included variables within the analysis. Several assumptions need to be adhered to before the actual analysis takes place. At first, the variables are preferably metrically scaled, all variables (except for the control variables) are



measured based on Likert scales, indicating this requirement is met. Additionally, Bartlett's test for sphericity tests the presence of correlations among the variables, and the test should be significant (p <.05). Nevertheless, the Kaiser-Meyer-Olin (KMO) test measures the sampling adequacy, anything below .50 indicates a wide spread in the correlations, which is not suitable for factor analysis. The KMO test is >.50 (.590), and Bartlett's test is significant (p <.001). Therefore, these assumptions are adhered to. Appendix 3 provides the output related to the performed factor analysis.

Next, the factor rotation methods should be selected. In this case, principle component analysis is most applicable since data reduction is the primary concern. This technique focuses on the minimum number of factors needed to account for the maximum proportion of the total variance present in the existing variable set. Subsequently, a factor rotation method should be selected. In this case, an orthogonal rotation method was applied (using VARIMAX in SPSS) since the coefficients turned negatively when an oblique rotation method was applied. Rotating the initial factor matrix allows redefining what the factors actually represent. The rotated factor matrix is presented in Appendix 3, with coefficients suppressed with a smaller value than absolute .3. The resulting rotated matrix suffers from cross-loaders, and therefore items need to be deleted to create more representative constructs.

Most of the items related to intrapreneurial behavior load on component 4, most of the items related to self-efficacy load on component 3, most of the items related to POS load on component 1, and most of the items related to IKS load on component 2. At first, the items that load on different components were excluded from the analysis (e.g., IB1, IB3, IB6, IB8, IB10, IB15). Subsequently, SE1 has been deleted since it loaded negatively on the assigned factor. After the deletion of these items, only a few cross-loaders remained. Hair et al. (2019) suggest a technique for identifying cross-loading problems: square each loading, and compute the ratio of the largest to the smallest loading (between 1-1,5 is problematic, between 1,5-2 is a potential for deletion and greater than 2 is ignorable). This process revealed that only the cross-loading on IKS1 was problematic (=1,36), and therefore this item was excluded as well. A final rotated matrix solution and other relevant tables are provided in Appendix 3.

Due to the deletion of multiple items, the original scales have been reduced to represent a more clear factor sheet. After multiple iterations, IB is measured using nine items, SE is measured using five items, POS is measured using eight items and IKS is measured using seven items. The a-priori selected four constructs explain 53,24% of the variance, and all have an Eigenvalue that is higher than 2,5. Even more underlying components could have presented the items, this is not the design of the proposed research however. When assessing the pattern



matrix, it can be noticed that the loadings of the items on the underlying components have shifted. In specific, items related to intrapreneurial behavior load on underlying component two, the items related to self-efficacy load on underlying component four and the items related to IKS load on underlying component three.

## Reliability Analysis

A proceeding step after the performed factor analysis is evaluating the reliability of the properties related to the measurement scales and the underlying items that compose those scales. Cronbach's alpha is used as a model to assess the internal consistency of a construct based on the average inter-item correlations. George & Malley (2003) provide the following rules of thumb to interpret Cronbach's alpha: >.9 is excellent, >.8 is good, >.7 is acceptable, >.6 is questionable, >.5 is poor, and everything below .5 is unacceptable. Thus, higher values indicate a significantly greater amount of internal consistency, and a Cronbach's alpha of .8 is generally a reasonable goal.

Appendix 4 evaluates the independent reliability analysis of the four constructs. Nearly all constructs score above .8, indicating good internal consistency. Only IB scores just below this threshold but is still considered to be rather reasonable as it scores .789, being closer to good than to acceptable. The "Item-Total Statistics" table displays multiple figures, among others "Cronbach's Alpha if Item Deleted". This column suggests improvements or deteriorating effects on the construct when specific items are deleted. However, deleting any of the factors would not lead to significant improvements related to internal consistency, and therefore no additional items have been deleted in this process. Besides, deleting items of already concise constructs would harm the validity of these constructs.

#### **Regression Analysis**

Multiple regression analysis is a statistical method within the general linear model used to examine the relationship between a single dependent (criterion) variable and several independent (predictor) variables. It is used for various purposes and is by far the most widely used statistical dependence technique used in research. Both are equally applicable to research questions involved with either prediction or explanation. One main criteria is that the data must be metrically scaled or transformed appropriately for statistical purposes. Within the upcoming section, a bivariate analysis is provided, followed by the multiple regression analysis, which would assist in testing the hypotheses stated earlier in this report.



#### **Bivariate Analysis**

The bivariate analysis is provided before the intended multiple regression takes place. Table 1 provides the means, standard deviations, and pairwise correlations among the variables included in the analysis. Both the control variables (Age, Organization, Sex, and Tenure), the dependent variable (Intrapreneurial Behavior), and the independent variables (Self-efficacy, Perceived Organizational Support, and Internal Knowledge Sharing) are included to test the correlations among the different measurements. The star signs indicate the significant correlations among the variables and are therefore the only subjects relevant for interpretative purposes. According to Dancey and Reidy (2007), Pearson's r values of (-).7 to (-).9 indicate strong correlations, between (-),4 and (-),6 indicate moderate correlations, and between (-)1 and (-3) indicate weak correlations.

The first significant correlation is between Age and Tenure (r(64) = ,366\*\*, p < 0.01), which is somewhat understandable, people who work longer within a specific organization are most likely older than people who just started. The second significant correlation is between Sex and Tenure (r(64) = -,292\*, p < 0.05), indicating that there is a weak negative correlation between the sex of a person and the years of experience within the organization. The third significant correlation is between POS and Organization (r(64) = -,288\*, p < 0.05), indicating there is a weak negative correlation between the organization an individual works at and the perceived POS. The fourth significant correlation is between POS and intrapreneurial behavior (r(64) = ,266\*, p < 0.05), indicating that there is a weak positive correlation between POS and intrapreneurial behavior. The fifth significant correlation is between IKS and Tenure (r(64) = ,249\*, p < 0.05), indicating that there is a weak negative correlation between IKS and Tenure. The last significant correlation is between IKS and intrapreneurial behavior (r(64) = ,302\*, p < 0.05), indicating that there is a weak positive correlation between IKS and intrapreneurial behavior. All the correlations can be found in Table 1 below. The SPSS output is provided in Appendix 5.

Table 1: Descriptive Statistics and Correlation Coefficients

Variable	M	SD	1	2	3	4	5	6	7
1. Age	41,0	13,3							
2. Organization	1,4	,49	-,057						
3. Sex	1,4	0,5	-,193	-,044					
4. Tenure	3,0	1,6	,366**	-,112	-,292 <sup>*</sup>				
<ul><li>5.Intrapreneurial behavior</li><li>6. Self-efficacy</li></ul>	3,6 3,4	0,5 0,4	-,154 ,225	-,005 ,087	-,212 -,204	,093 ,171	,150		



7. Perceived	
Organizationa	ıl

Support	5,5	0,9	-,174	-,288*	-,067	-,205	,266*	,022	
8. Internal									
Knowledge Sharing	5,6	0,7	,137	,038	-,207	-,249 <sup>*</sup>	,302*	,090	,166

<sup>\*\*</sup> p < 0.01 (2-tailed); \* p < 0.05: N=66

#### Multiple Regression Analysis

Regression analysis involves multiple assumptions that must be adhered to before it is considered as a valid technique to be applied. At first, the minimum number of respondents for multiple regression is 50. In total, 66 individuals are involved in this study, indicating that this assumption is being met. Furthermore, the variance of the residuals should be constant, indicating homoscedasticity. The scatterplot in Appendix 6 shows a somewhat homoscedastic relationship, with some outliers that may influence the regression line. However, Hair et al. (2019) suggest different approaches for identifying records for possible deletion. One includes that Cook's distance ( $D_i$ ) for the observations should be < 1. None of the observations exceeds ,226, as can be depicted from the table "Residual Statistics". Therefore, this assumption is adhered to, displaying clean equality of variance in the data. Nevertheless, a subsequential assumption is normality of the distribution of the residuals. This can be evaluated through a visual assessment of the histogram and P-P plot. Both seem to be relatively normally distributed, as can be depicted in Appendix 6.

Another assumption that needs to be adhered to is the multicollinearity of the independent variables included within the analysis. Within multiple regression, it is assumed that the independent variables do not share high correlations. First, the tolerance values ought to be higher than .01. Additionally, the Variance Inflation Factor (VIF) levels should be below 10 to ensure no multicollinearity amongst the independent variables. Both assumptions are being adhered to since the tolerance levels are well above .01 and the VIF levels are below 10, as can be derived from the "Coefficients" table in Appendix 6.

For interpretative purposes, all the independent variables were mean-centered before the regression analysis. The reason for mean-centering the independent variables included in the analysis is because it has been suggested that doing so alleviates the potential threat of multicollinearity in moderated multiple regression analysis (Shieh, 2011). This eventually results in all the metrical independent variables ending up with a mean of 0. Additionally, sex was dummied before the analysis, and female was chosen to be the reference case. Moreover, organization was dummied as well, and organization Y was chosen to be the reference case.



In Appendix 6 a model summary is provided. The main findings are also described in Table 2. Block analysis was performed to determine whether a new set of variables entered as a new block can increase the multiple correlation coefficient R. In the first block Age, Sex\_Dummy and Organization\_Dummy have been included as control variables. Tenure was decided to be excluded from the analysis, as the high correlations suggested that these items would share similar results. Additionally, in the second block, the independent variables related to this research project were included to assess the direct relationships between the independent variables and the dependent variable. At last, in the last block, the interaction terms of the independent variable with the moderators were included.

The first block indicates that the control variables have an explanatory power of ,026 (Adjusted R Square= ,026), which indicates that these control variables explain only 2,6% of the variance in intrapreneurial behavior. However, the F-change significance value is not significant at an alpha level of ,202. By adding the independent variables the Adjusted R Square changes to ,185, which is an increase of 15,9% of the variance explained in the dependent variable. The last block, in which the interaction terms are included, ended up explaining less variance in the dependent variable (Adjusted R Square= ,178). However, the F-change significance value is not significant at an alpha level of ,4885. Therefore, inclusion of the interaction term does not significantly improve the model's predictive power.

The ANOVA test the null hypotheses that the slope of the line is 0. The test revealed that only models 2 and 3 are statistically significant at an alpha level of .05. A significant regression-equation was found (F(6,59) = 3,465, p < 0.05) with an adjusted  $R^2$  of the previously mentioned ,185 when the independent variables were included. Additionally, a significant regression equation was found (F(6,59) = 2,756, p < 0.05) with an adjusted  $R^2$  of the previously mentioned ,178 when the moderating interaction term was included. The first model, in which the control variables were included turned out to be insignificant at an alpha level of ,05 (F(3,62) = 1,586, p = ,202).

The table "Coefficients" (table 2) describe the relationships between the different predictor variables and the dependent variable when all other variables are held constant. The first hypothesis suggested that self-efficacy is positively associated with intrapreneurial behavior. The second block of the coefficients table suggests that this relationship is positive but not significant at an alpha level of 0.05 (B = 0.162, p = 0.310), and therefore, this hypothesis is rejected. The second hypothesis suggested that POS moderates the positive relationship between self-efficacy and intrapreneurial behavior. The second and third block of the model



suggest that the direct relationship (B = .082, p = .275) and the interaction effect (B = .059, p = .788) are not significant, and therefore this second hypothesis is rejected as well. The third hypothesis suggested that IKS moderates the positive relationship between self-efficacy and intrapreneurial behavior. The second block suggests a positive and significant (B = .274, p < 0.05) relationship between IKS and intrapreneurial behavior. However ,the interaction term is not positive (B = .295, p = .239), and therefore the final hypothesis is rejected as well.

Table 2: Coefficients Regression Analysis

Variable	Model 1	Model 2	Model 3
Constant	3,801	3,871	3,863
	(,231)	(,216)	(,220)
Age	-,009*	-,012**	-,011**
	(,005)	(,005)	(,005)
Organization	,041	,035	,022
	(,136)	(,133)	(,141)
Sex	,257*	,335**	,338**
	(,144)	(,141)	(,142)
Self-efficacy		,162	,150
		(,158)	(,162)
Perceived		,082	,077
Organizational Support		(,075)	(,077)
Internal Knowledge		,274**	,292**
Sharing		(,090)	(,092)
Self-efficacy x Perceived			,059
Organizational Support			(,219)
Self-efficacy x			-,295
Internal Knowledge Sharing			(,248)
$\mathbb{R}^2$	,071	,261	,270
Adj. R <sup>2</sup>	,026	,185	,178
F	1,586	3,465**	2,756**
N	65	65	65

<sup>\*</sup> p < .10, \*\* p < .05



#### Multiple Regression Analysis – Outlier Excluded

It is not unusual to find different outcomes than expected when involved with hypothesis testing. However, the previous section suggested that different techniques can be used to identify potential outliers. Cook's distance threshold value of <1 has not been overruled in the initial regression analysis. Another criterion analysis suggests different outcomes for potential outliers included within the analysis. One of them is the so-called standardized residuals. The absolute value of 3 should be surpassed to be identified as a potential outlier. The initial regression analysis identified case number 2 as a potential outlier, as the standardized residual for this observation is -3,484. The response pattern of this observation seemed unusual compared to the others. Therefore, this observation was excluded, the regression analysis was re-run, and significant findings were yielded that seem controversial to the initial analysis. The SPSS output of the regression analysis with the exclusion of the outlier is provided in Appendix 6. A model summary is provided in table 3.

Again the assumptions related to regression analysis were evaluated to ensure that regression analysis was an appropriate test. At first, the minimum required number of observations was still above 50 with exclusion of the identified outlier. Second, the variance of the residuals should be constant. After deletion of case number 2, none of the standardized residuals exceeded the threshold of 3. Therefore, indicating clean equality of variance in the data. Additionally, a visual assessment of the histogram and P-P plot displayed a more normal distribution of the residuals, and thus the first assumptions are met.

Next, multicollinearity of the independent variables, included within the analysis, should be adhered to. It is assumed that the independent variables do not share high correlations within regression analysis. The coefficients table in Appendix 6 suggests that the VIF levels are below 10 and the tolerance levels are well above .01, indicating that multicollinearity of the independent variables is not the case for this specific regression analysis. With all the assumptions being adhered to, interpretation of the regression results was initiated, and the stated hypotheses were tested.

The first block indicated that the control variables have an explanatory power of 4,4% (Adjusted R Square= ,044), which indicates that these control variables explain only 2,6% of the variance in intrapreneurial behavior. However, the F-change significance is not significant at an alpha-level of ,126. By adding the independent variables, the Adjusted R Square changes to ,245, which is an increase of 21,1% of variance explained in the dependent variable. The last block, in which the interaction terms are included, ended up explaining slightly more variance



in the dependent variable (Adjusted R Square=,260). However, the F-change significance value is not significant at an alpha-level of ,207. Therefore, inclusion of the interaction term does not significantly improve the model's predictive power.

The ANOVA test the null hypotheses that the slope of the line is 0. The test revealed that only models 2 and 3 are statistically significant at an alpha level of .05. A significant regression equation was found (F(6,58) = 4,455, p < 0.05) with an adjusted R<sup>2</sup> of the previously mentioned ,245 when the independent variables were included. Additionally, a significant regression equation was found (F(8,56) = 3,817, p < 0.05) with an adjusted R2 of the previously mentioned ,260 when the moderating interaction term was included. The first model, in which the control variables were included turned out to be not significant at an alpha-level of ,05 (F(3,61) = 1,586, p = ,126).

The table "Coefficients", and table 3 below describe the relationship between the different predictor variables and the dependent variable when all variables are held constant. The initial regression analysis proposed that none of the hypotheses were supported. However, by excluding the identified outlier, the results are to be interpreted differently. The first hypothesis suggested that self-efficacy is positively associated with intrapreneurial behavior. The initial analysis indicated that the relationship was positive but not significant (B = ,162, p = ,310). However, the second block in the table below suggests that the relationship is positive and significant at an alpha level of .05 (B = ,264, p < 0.10). Therefore, the first hypothesis is supported when the outlier is excluded from the analysis.

The second hypothesis suggested that POS moderates the positive relationship between self-efficacy and intrapreneurial behavior. The initial analysis suggested that both the direct relationship (B = .082, p = .275) and the interaction effect (B = .059, p = .788) are both not significant. With exclusion of the outlier similar outcomes were generated, with both the direct relationship (B = .079, p = .244) and the interaction effect (B = .085, p = .663) being not significant. Therefore, the second hypothesis is rejected, implying that removal of the outlier does not change the underlying effects of POS.

The third hypothesis suggested that IKS moderates the positive relationship between self-efficacy and intrapreneurial behavior. The initial analysis indicated that the direct effect of IKS on intrapreneurial was positive and significant (B = ,274, p < 0.05), the interaction effect was not however (B = -,295, p = ,239). Therefore, the third hypothesis was rejected, since only the direct effect was identified as being significant. By excluding the outlier, contradicting results were generated. The direct effect is positive and significant (B = ,252, p < 0.05) and the



interaction effect is negative and significant (B = -,393, p < 0.10). This moderation effect implies that the hypotheses is still rejected, as the interaction effect turns out to be negative, instead of positive. The interaction plot (figure 2) below displays this negative moderation effect. In general, individuals with low self-efficacy levels require high levels of IKS to display higher levels of intrapreneurial behavior. On the contrary, individuals with high self-efficacy levels require lower levels of IKS to display higher levels of intrapreneurial behavior.

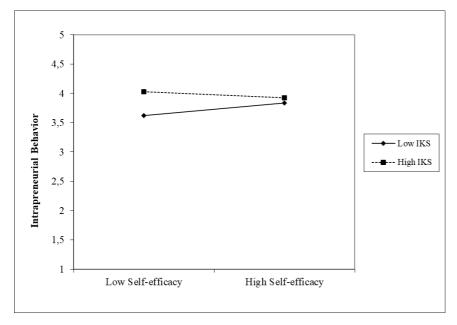


Figure 2: Interaction Plot IKS Moderation

Table 3: Coefficients Regression Analysis - Outlier Excluded

Variable	Model 1	Model 2	Model 3	
Constant	3,727	3,820	3,806	
	(,215)	(,195)	(,195)	
Age	-,007	-,011**	-,010**	
	(,005)	(,005)	(,005)	
Organization	,083	,086	,072	
	(,136)	(,120)	(,125)	
Sex	,291*	,349**	,354**	
	(,134)	(,141)	(,125)	
Self-efficacy		,264*	,253*	
		(,144)	(,145)	
Perceived		,079	,077	
Organizational Support		(,067)	(,068)	



Internal Knowle	dge	,252**	,275**	
Sharing		(,081)	(,082)	
Self-efficacy x				
Perceived			,085	
Organizational			(,193)	
Support				
Self-efficacy x			-,393*	
Internal Knowle	dge		•	
Sharing			(,220)	
$\mathbb{R}^2$	,089	,315	,353	
Adj. R <sup>2</sup>	,044	,245	,260	
F	1,981	4,455**	3,817**	
N	64	64	64	

<sup>\*</sup> p < .10, \*\* p < .05

## **Subsequent Findings**

Additional questions which have not been reflected upon in previous parts of this research report were included in the created questionnaire. As already mentioned, three additional closed questions were included within the POS and IKS section of the questionnaire. Additionally, two open-ended questions were included to identify meaningful qualitative data next to the data used for statistical analysis. The two questions/statements related to POS are: "I find it important that the organization promotes my idea generation" and "What can my organization do to improve my idea generation behavior?". The three questions/statements related to IKS are: "I find it important to share information with colleagues", "Sharing of information stimulates my idea generation behavior", and "What can my organization do to improve my knowledge sharing behavior?".

At organization X, individuals in general somewhat agree to agree that they find it important that the organization promotes their idea generation (M= 5,41, SD= 1,284). At organization Y, individuals somewhat agree with this statement (M= 5, SD= 1,291). Furthermore, at both organizations, in general, individuals agree that they find it important to collect and donate knowledge to colleagues. For organization X, this statement has a mean score of 6,22 (SD= ,652), and for organization Y it has mean score of 6,04 (SD= ,790) respectively. At last, at both organizations, individuals in general somewhat agree to agree that information sharing stimulates their idea generation behavior. For organization X, this statement has a mean score of 5,71 (SD= 1,188), and for organization Y this statement has a mean score of 5,88 (SD= 1,092) respectively. See Appendix 7 for the descriptive statistics of the concerned statements.



As can be depicted from the results, at both organizations, POS and IKS have been perceived to be important for enhancing idea generation behavior. This dimension of idea generation behavior has been incorporated as a synonym for intrapreneurial behavior, as it is perceived as one of the leading factors describing intrapreneurial activity. However, these dimensions have not been included within the other performed analyses as they are not part of the applied validated constructs. The answers related to the open questions have been communicated with both organizations, as they might function as possible points of improvement to strengthen idea generation behavior amongst employees.



### Discussion

This research report constitutes an analysis of what factors contribute (or not) to the intrapreneurial behavior employees display within an organizational context. The purpose of this study was to shed light on the interplay between self-efficacy and intrapreneurial behavior and how POS and IKS influence this assumed relationship. In the upcoming section, multiple theoretical and practical implications will be discussed, followed by the suggested limitations and possible directions for future research.

#### Theoretical Implications

The performed study revealed to have multiple valuable theoretical contributions. This study examined the relationship between intrapreneurial behavior. This concept has been studied broadly in previous research settings, together with multiple factors that ought to be influencing the behavior of individuals. At first, high levels of self-efficacy were expected to be important determinants for intrapreneurial behaviors, such as risk-taking (Krueger & Dickson, 1994), innovative behavior (Arslanagic-Kalajdzic et al., 2019), idea submission (Axtell & Parker, 2003) and intrapreneurial intentions (Douglas & Fitzsimmons, 2013). The performed analysis confirmed what has been researched so far: higher levels of self-efficacy positively affect intrapreneurial behavior.

Within the boundaries of this research setting, respondents perceive their self-efficacy levels to be considerably high. For organization X a mean score of 3,3211 (SD= ,38978) and for organization Y a mean score of 3,387 (SD= ,29938) respectively, on a four-point Likert scale. The subsequent statistical analysis suggested that the relationship between self-efficacy and intrapreneurial behavior is statistically positive and significant (B = ,264, p < 0.10). However, other factors that have not been included in this analysis might explain the intrapreneurial behavior of employees for these two case organizations as well. Such as, among others, innovation-supporting climates (De Jong et al., 2011) and pro-active leadership (Afsar et al., 2014).

Next to researching the relationship between self-efficacy and intrapreneurial behavior, the relationship between POS and intrapreneurial behavior was also tested within the designated research setting. Again, both organizations scored relatively high on POS, specifically for organization X a mean score of 5,6892 (SD=,74744), and for organization Y a mean score of 5,1550 (SD= 1,03032) respectively on a seven-point Likert scale. However, surprisingly both the direct effect of POS (B=,079, p=,244) and the interaction effect of self-efficacy and POS (B=,085, p=,663) on intrapreneurial behavior are not significant within this research setting.



These results imply that, even though individuals deem the organizations to be supportive, other factors contribute to their intrapreneurial behavior.

Leaning on social exchange theory, individuals who perceive to receive positive socioeconomic and emotional support from their organization are more likely to be inclined to display positive behaviors and attitudes (Tang et al., 2017). This positive behavior includes, among others, innovative work behavior and extra-role behavior, such as intrapreneurial behavior (Mustafa et al., 2013; Schmelter et al., 2010). The results indicate that this does not apply for organizations X and Y. However, it should be mentioned that POS has been measured involving the scale of Eisenberger et al. (1986), which is focused on general features related to POS, as opposed to Alpkan et al. (2010) who created a construct measuring POS in light of intrapreneurial behavior. This alternative approach will be touched upon later within this research report in the limitations and future research directions section.

Subsequently, the direct effect of IKS on intrapreneurial behavior and the interaction effect with self-efficacy was researched in light of the designated research setting. Similarly, both organizations scored relatively high on their inclination towards sharing with and receiving information from colleagues, for organization X a mean score of 5,6738 (SD= ,65424) and for organization Y a mean score of 5,7050 (SD= ,79123) respectively. Additionally, the direct effect of IKS on intrapreneurial behavior is significant and positive (B = ,252, p < 0.05). This implies that one unit increase in information sharing and receiving results in an increase of ,252 in intrapreneurial behavior. However, the interaction effect of IKS with self-efficacy turned out to be negative and significant (B = -,393, P < 0.10) for this specific study. This notion is interestingly not found in the performed literature study and therefore one of the significant contributions of this research project.

As already suggested, people who display high levels of self-efficacy that contribute to increasing productivity and efficiency are more likely to display collecting behavior of skills, experiences and know-how from and donate them to colleagues at work (Bock et al., 2005; Kankanhalli et al., 2005). This interplay stresses essential factors such as productivity and efficiency. However, the effect on intrapreneurial behavior is not addressed. The performed regression analysis suggests that people who display high levels of self-efficacy require less IKS than those who display lower levels of self-efficacy, if higher levels of intrapreneurial behavior are required.

At last, although not included within the theoretical background, intrapreneurial behavior of employees at organizations X and Y could be attributed to the nature of their work.



Crant (2000) and Deprez & Euwema (2017) found out that intrapreneurs prefer autonomy, freedom, opportunities to develop themselves, and learn new skills and competencies. The researched case organizations are operating in the IT-consultancy sector. Individuals are expected to perform their work somewhat autonomously, in which freedom is required. Therefore, it might be suggested that with regards to the line of work, predictors such as self-efficacy, POS and IKS are not strict requirements for improved levels of intrapreneurial behavior.

#### **Practical Implications**

This research emphasizes several occurrences which are expected to be of importance when manifesting intrapreneurial behavior within organizations. At first, intrapreneurial behavior decreases when aging (B= -.010, p < .10) implying that aging individuals participate less in intrapreneurial activities. This confirms what has been stated by de Jong et al. (2011), who hypothesized that motivation for intrapreneurial activity decreases when individuals age. As a result, organizations must devote sufficient time and resources to motivate these aging individuals. For example, Hatak et al. (2015) suggest creating more mixed-age teams in which different backgrounds and experiences are accumulated, this way, positive outcomes can be expected.

Furthermore, a positive relationship between IKS and intrapreneurial behavior has been found. Indicating that IKS positively affects intrapreneurial behavior of employees (B = ,264, p < 0.10). Specifically, a one unit increase of IKS results in a ,274 increase in intrapreneurial behavior for individuals within this specific research setting. This significant relationship has been stressed in research previously. For example, as mentioned before, human resource management should act as a facilitator for knowledge acquisition and integration. In exchange, entrepreneurial activity within firms will be boosted (Dal Zotto & Gustafsson, 2008; Hayton, 2005; Kuratko et al., 2005). With this the crucial role of organizations in supporting knowledge sharing to enhance entrepreneurial processes within organizations is underlined.

Moreover, a significant relationship between self-efficacy and intrapreneurial behavior was found. However, the hypothesis suggested that this relationship would be positive, the regression analysis stated the contrary. Organizations should consider that individuals who express high levels of self-efficacy do not require the same amount of IKS as individuals who display lower levels. This occurrence could be in line with what has been stated by Stone (1994), who suggests that high levels of self-efficacy could lead to overconfidence. However, Bandura (2000) stated that personal efficacy is crucial, not as being referenced to individualism,



but because of its vitality for successful functioning whether something is achieved individually or by group members working together.

At last, a significant positive relationship was found between the predictor control variable sex and the outcome variable intrapreneurial behavior. Within the regression analysis, it becomes visible that every block displays a significant positive relationship, underlining that males display more intrapreneurial behavior than woman within this performed research setting. This confirms what has been stated previously, that women are less likely to be involved in intrapreneurial activities (Adachi & Hisada, 2017; Parker, 2011). Turro et al. (2020) suggest that role models, within organizations with a track record of implementing successful innovation in the past, function as crucial factors in explicitly recognizing and rewarding employees who have started intrapreneurial initiatives in the past. This could be highly relevant in the case of female employees, who identify with and look up to female role models within the organization (Rocha & Van Praag, 2020). Therefore, creating a gender-diversified board or management department might be advisable.

#### Limitations and Future Research Directions

The performed study has several limitations, which should be addressed to come up with possible future research directions that may strengthen and broaden the findings generated during this study. At first, even though the sample requirements have been met for the statistical analyses that have been performed, the response ratio and thus the actual sample can be interpreted as relatively small. Since it was considerably difficult to find organizations that would be willing to participate in this research project, much time was dedicated to finding case organizations instead of retrieving responses. Additionally, organization Y was in the middle of a corporate restructuring process, which might have led to a lower response ratio. A higher response ratio might have resulted in a more accurate and robust analysis. Nevertheless, even though speculating, it could have alternated the yielded results.

The second limitation is associated with the constructs of intrapreneurial behavior and that of POS. The performed factor analysis resulted in a reduced construct measuring the overall intrapreneurial behavior of individuals. In total six items were deleted, indicating that the scale developed by Stull (2005) might not be the strongest predictor of intrapreneurial behavior. Furthermore, the construct Eisenberger et al. (1986) developed to measure POS does not necessarily focus on POS stimulating intrapreneurial behavior. In case a different construct would have been used, primarily focusing on POS concerning intrapreneurial behavior, similar



to that of Alpkan et al. (2010) for example, different outcomes explaining the relationship between POS and intrapreneurial behavior might have been generated.

The last limitations are concerned with the research setting. First, the data collected during this research process is self-reporting, meaning that all participants evaluated the statements from their points of view. The results could therefore be subject to response bias. Future studies could be focused on managerial reporting of subordinates to provide a two-way perspective of the phenomena at stake in stead. Additionally, for organization X, the questionnaire was translated into Dutch. This could be harmful when providing specific answers to the statements as they could be interpreted differently by the participant when translated. Moreover, the questionnaire was distributed amongst two Dutch IT consultancy organizations which is a rather specific target group. Future studies could focus on different sectors and compare the correspondences and differences along these different sectors. Besides, analyzing different departments or layers within the organization could have also generated exciting findings.

A possible suggestion for other research projects, next to the future research directions associated with the identified limitations of the study, could be to include other variables in the analysis. It would be interesting to evaluate if autonomy (associated with the type of work) would influence the intrapreneurial behavior of individuals and whether it affects their perceptions of POS and the value placed on IKS. Additionally, given that organizations tend to switch to hybrid style working environments more often due to the pandemic crisis, it might be interesting to evaluate if this work style impacts the intrapreneurial behavior of employees. Individuals who work from out-of-office locations might perceive POS differently and value IKS even more than colleagues who work at the office. All of the suggested research topics might impact how individuals perceive their intrapreneurial behavior.



#### Conclusions

Over the years, the role of employees has changed. They need to deal with highly changing environment businesses are situated in and adopt a more intrapreneurial way of working that directly impacts a firm's strategic direction (Hart, 1992; Peters & Waterman, 1982). This way, the crucial role of employees is underlined and further interest is created in how this intrapreneurial behavior is affected. The main defined research question for the performed study is: "What is the relationship between Self-efficacy and Intrapreneurial Behavior, and is this relationship moderated by Perceived Organizational Support (POS) and Internal Knowledge Sharing (IKS)?". Initially, it was expected that the relationship between self-efficacy and intrapreneurial behavior is positive and that higher levels of POS and IKS even strengthen this relationship. However, this research project yielded different results that only partially confirm what was previously hypothesized.

Within this specific research setting both organization X and Y in general display fairly high levels of intrapreneurial behavior. Additionally, high levels of self-efficacy, POS, and IKS processes with colleagues were found. However, only some statements can be made about the relationships between these variables. The direct relationship of POS and POS included as a moderator between self-efficacy and intrapreneurial behavior are insignificant for this specific research setting. However, the direct relationship between self-efficacy and intrapreneurial behavior and IKS and intrapreneurial behavior was analyzed as being significant and positive. Nevertheless, the direct relationship between self-efficacy and intrapreneurial behavior with IKS included as a moderator is negative and significant. At last, age is negatively associated with intrapreneurial behavior, and women tend to be less intrapreneurial oriented than men for this specific research setting.

Intrapreneurs are seen as valuable assets in creating competitive advantages for organizations. They are placed at the center to deal with the competitive economic environment, as it has been emphasized that their behavior leads to strategic renewal and firm growth (Veenker et al., 2008). The analysis enlightened the relevance of different factors contributing to intrapreneurial behavior. At first, organizations should dedicate time and resources to boosting self-efficacy levels. Furthermore, IKS opportunities need to be provided and managed. However, only for the individuals who require this. In the end, the personal characteristics of individuals, together with organizational factors, determine how intrapreneurial behavior is flourishing within organizations.



## Bibliography

- Acharya, A. S., Prakash, A., Saxena, P., & Nigam, A. (2013). Sampling: Why and how of it. *Indian Journal of Medical Specialties*, 4(2), 330-333. https://doi.org/http://dx.doi.org/10.7713/ijms.2013.0032
- Adachi, T., & Hisada, T. (2017). Gender differences in entrepreneurship and intrapreneurship: an empirical analysis. *Small Business Economics*, 48(3), 447-486. https://doi.org/https://doi.org/10.1007/s11187-016-9793-y
- Afsar, B., Badir, Y. F., & Bin Saeed, B. (2014). Transformational leadership and innovative work behavior. *Industrial Management & Data Systems*, 114(8), 1270-1300. https://doi.org/10.1108/imds-05-2014-0152
- Ahmad, F. (2018). Knowledge sharing in a non-native language context: Challenges and strategies. *Journal of Information Science*, 44(2), 248-264. <a href="https://doi.org/https://doi.org/10.1177/0165551516683607">https://doi.org/https://doi.org/10.1177/0165551516683607</a>
- Alpkan, L., Bulut, C., Gunday, G., Ulusoy, G., & Kilic, K. (2010). Organizational support for intrapreneurship and its interaction with human capital to enhance innovative performance. *Management Decision*, 48(50), 732-755. https://doi.org/https://doi.org/10.1108/00251741011043902
- Åmo, B. W. (2010). Corporate entrepreneurship and intrapreneurship related to innovation behaviour among employees. *International Journal of Entrepreneurial Venturing*, *2*(2), 144-158. <a href="https://doi.org/http://dx.doi.org/10.1504/IJEV.2010.034819">https://doi.org/http://dx.doi.org/10.1504/IJEV.2010.034819</a>
- Åmo, B. W., & Kolvereid, L. (2005). Organizational strategy, individual personality and innovation behavior. *Journal of Enterprising Culture*, *13*(01), 7-19. https://doi.org/http://dx.doi.org/10.1142/S0218495805000033
- Antoncic, B., & Hisrich, R. D. (2001). Intrapreneurship: Construct refinement and cross-cultural validation. *Journal of Business Venturing*, *16*(5), 495-527. https://doi.org/https://doi.org/10.1016/S0883-9026(99)00054-3
- Aramburu, N., & Sáenz, J. (2011). Structural capital, innovation capability, and size effect: An empirical study. *Journal of Management & Organization*, *17*(3), 307-325. https://doi.org/http://dx.doi.org/10.5172/jmo.2011.17.3.307
- Arenius, P., & Kovalainen, A. (2006). Similarities and differences across the factors associated with women's self-employment preference in the Nordic countries. *International Small Business Journal*, 24(1), 31-59.
- Arnab, B. (2014). Intrapreneurship as an employee retention tool. *International Journal of Research in Business Management*, 2(3), 134-136.
- Arslanagic-Kalajdzic, M., Cerne, M., & Kadic-Maglajlic, S. (2019). Uncertainty avoidance and intrapreneurship: a Four-Level investigation. *Journal of Macromarketing*, *39*(4), 431-446. <a href="https://doi.org/https://doi.org/10.1177%2F0276146719884602">https://doi.org/https://doi.org/10.1177%2F0276146719884602</a>
- Asiaei, K., Barani, O., Bontis, N., & Arabahmadi, M. (2020). Unpacking the black box How intrapreneurship intervenes in the intellectual capital-performance relationship? *Journal of Intellectual Capital*, 21(6), 809-834. <a href="https://doi.org/http://dx.doi.org/10.1108/JIC-06-2019-0147">https://doi.org/http://dx.doi.org/10.1108/JIC-06-2019-0147</a>
- Augsdorfer, P. (2005). Bootlegging and path dependency. *Research Policy*, *34*(1), 1-11. <a href="https://doi.org/https://doi.org/10.1016/j.respol.2004.09.010">https://doi.org/https://doi.org/10.1016/j.respol.2004.09.010</a>
- Axtell, C. M., & Parker, S. K. (2003). Promoting role breadth self-efficacy through involvement, work redesign and training. *Human Relations*, 56(1), 113-131. https://doi.org/http://dx.doi.org/10.1177/0018726703056001452
- Baggen, Y., Lans, T., Biemans, H. J., Kampen, J., & Mulder, M. (2016). Fostering Entrepreneurial Learning On-the-Job: evidence from innovative small and medium-sized companies in Europe. *European Journal of Education*, *51*(2), 193-209. https://doi.org/https://doi.org/10.1111/ejed.12171
- Bandura, A. (1977). Self-efficacy Toward A Unifying Theory of Behavioral Change. *Psychological Review*, 84(2), 191-215. https://doi.org/10.1037/0033-295x.84.2.191
- Bandura, A. (1982). Self-efficacy mechanism in human agency. *American psychologist*, *37*(2), 122. https://doi.org/https://psycnet.apa.org/doi/10.1037/0003-066X.37.2.122



- Bandura, A. (1994). Self-efficacy. John Wiley & Sons, Inc.
- Bandura, A. (1997). Self-efficacy: The exercise of control. In. New York: Freeman.
- Bandura, A. (2000). Self-efficacy: The foundation of agency. In *Control of human behavior, mental processes, and consciousness: Essays in honor of the 60th birthday of August Flammer*. (pp. 17-33). Lawrence Erlbaum Associates Publishers.
- Bandura, A., & Jourden, F. J. (1991). Self-regulatory mechanisms governing the impact of social comparison on complex decision making. *Journal of personality and social psychology*, 60(6), 941-951. <a href="https://doi.org/https://psycnet.apa.org/doi/10.1037/0022-3514.60.6.941">https://doi.org/https://psycnet.apa.org/doi/10.1037/0022-3514.60.6.941</a>
- Baruah, B., & Ward, A. (2015). Metamorphosis of intrapreneurship as an effective organizational strategy. *International Entrepreneurship and Management Journal*, 11(4), 811-822.
- Baxter, P., & Jack, S. (2008). Qualitative Case Study Methodology: Study Design and Implementation for Novice Researchers. *Qualitative Report*, *13*(4), 544-559, Article 2. https://doi.org/https://doi.org/10.46743/2160-3715/2008.1573
- Bendickson, J., & Liguori, E. (2014). A look at the corporate entrepreneurship-employee commitment relationship through the HR architecture. *Journal of Business and Entrepreneurship*, 25(2), 33.
- Bernerth, J. B., & Aguinis, H. (2016). A critical review and best-practice recommendations for control variable usage. *Personnel Psychology*, 69(1), 229-283. https://doi.org/https://doi.org/10.1111/peps.12103
- Bilandzic, M., & Foth, M. (2013). Libraries as coworking spaces: Understanding user motivations and perceived barriers to social learning. *Library Hi Tech*, *31* (2), 254-273. https://doi.org/http://dx.doi.org/10.1108/07378831311329040
- Bizzarri, C. (2014). The emerging phenomenon of coworking. A redefinition of job market in networking society. *Social Dimension of Innovation, Prag*, 195-206.
- Blanka, C. (2019). An individual-level perspective on intrapreneurship: a review and ways forward. *Review of Managerial Science*, *13*(5), 919-961. <a href="https://doi.org/https://doi.org/10.1007/s11846-018-0277-0">https://doi.org/https://doi.org/10.1007/s11846-018-0277-0</a>
- Blazevic, V. (2022). #1.4 Factor Analysis Determining Number of Factors and Rotation. In: Radboud University.
- Bock, G.-W., Zmud, R. W., Kim, Y.-G., & Lee, J.-N. (2005). Behavioral intention formation in knowledge sharing: Examining the roles of extrinsic motivators, social-psychological forces, and organizational climate. *MIS quarterly*, 29 (1), 87-111. https://doi.org/https://doi.org/10.2307/25148669
- Bouchard, V., & Basso, O. (2011). Exploring the links between entrepreneurial orientation and intrapreneurship in SMEs. *Journal of Small Business and Enterprise Development*. https://doi.org/http://dx.doi.org/10.1108/14626001111127043
- Bouncken, R. B., & Reuschl, A. J. (2018). Coworking-spaces: how a phenomenon of the sharing economy builds a novel trend for the workplace and for entrepreneurship. *Review of Managerial Science*, 12(1), 317-334. <a href="https://doi.org/https://doi.org/10.1007/s11846-016-0215-y">https://doi.org/https://doi.org/10.1007/s11846-016-0215-y</a>
- Brazeal, D. V., & Herbert, T. T. (1999). The genesis of entrepreneurship. *Entrepreneurship Theory and Practice*, 23(3), 29-46. https://doi.org/https://doi.org/10.1177%2F104225879902300303
- Brockhaus, R. H. (1980). Risk taking propensity of entrepreneurs. *Academy of Management Journal*, 23(3), 509-520. https://doi.org/http://dx.doi.org/10.2307/255515
- Button, S. B., Mathieu, J. E., & Zajac, D. M. (1996). Goal orientation in organizational research: A conceptual and empirical foundation. *Organizational Behavior and Human Decision Processes*, 67(1), 26-48. <a href="https://doi.org/10.1006/obhd.1996.0063">https://doi.org/10.1006/obhd.1996.0063</a>
- Cabrera, E. F., & Cabrera, A. (2005). Fostering knowledge sharing through people management practices. *The International Journal of Human Resource Management*, *16*(5), 720-735. <a href="https://doi.org/https://doi.org/10.1080/09585190500083020">https://doi.org/https://doi.org/10.1080/09585190500083020</a>
- Cadar, O., & Badulescu, D. (2015). Entrepreneur, entrepreneurship and intrapreneurship. A literature review. *Munich Personal RePEc Archive*(82793), 685-664.
- Caesens, G., & Stinglhamber, F. (2014). The relationship between perceived organizational support and work engagement: The role of self-efficacy and its outcomes. *European Review of*



- *Applied Psychology-Revue Europeenne De Psychologie Appliquee*, 64(5), 259-267. https://doi.org/10.1016/j.erap.2014.08.002
- Camelo-Ordaz, C., Fernández-Alles, M., Ruiz-Navarro, J., & Sousa-Ginel, E. (2012). The intrapreneur and innovation in creative firms. *International Small Business Journal*, 30(5), 513-535.
- Capdevila, I. (2015). Co-working spaces and the localised dynamics of innovation in Barcelona. *International Journal of Innovation Management*, 19(03), 1540004. https://doi.org/http://dx.doi.org/10.1142/S1363919615400046
- Carrier, C. (1994). Intrapreneurship in large firms and SMEs: A comparative study. *International Small Business Journal*, *12*(3), 54-61. https://doi.org/http://dx.doi.org/10.1177/0266242694123005
- Carrier, C. (1996). Intrapreneurship in small businesses: an exploratory study. *Entrepreneurship Theory and Practice*, 21(1), 5-20. https://doi.org/https://doi.org/10.1177%2F104225879602100101
- Carstensen, L. L., Isaacowitz, D. M., & Charles, S. T. (1999). Taking time seriously A theory of socioemotional selectivity. *American psychologist*, *54*(3), 165-181. https://doi.org/10.1037/0003-066x.54.3.165
- Chouchane, R., Fernet, C., Austin, S., & Zouaoui, S. K. (2021). Organizational support and intrapreneurial behavior: on the role of employees' intrapreneurial intention and self-efficacy. *Journal of Management & Organization*, 1-17. https://doi.org/https://doi.org/10.1017/jmo.2021.14
- Corbett, A., Covin, J. G., O'Connor, G. C., & Tucci, C. L. (2013). Corporate Entrepreneurship: State-of-the-Art Research and a Future Research Agenda. *Journal of Product Innovation Management*, 30(5), 812-820. https://doi.org/10.1111/jpim.12031
- Covin, J. G., & Slevin, D. P. (1989). Strategic management of small firms in hostile and benign environments. *Strategic Management Journal*, 10(1), 75-87.
- Covin, J. G., & Slevin, D. P. (1991). A conceptual model of entrepreneurship as firm behavior. *Entrepreneurship Theory and Practice*, 16(1), 7-26. <a href="https://doi.org/https://doi.org/10.1177%2F104225879101600102">https://doi.org/https://doi.org/10.1177%2F104225879101600102</a>
- Covin, J. G., & Wales, W. J. (2012). The measurement of entrepreneurial orientation. Entrepreneurship theory and practice, 36(4), 677-702.
- Crant, J. M. (2000). Proactive behavior in organizations. *Journal of management*, 26(3), 435-462. https://doi.org/10.1177/014920630002600303
- Criscuolo, P., Salter, A., & Ter Wal, A. L. (2014). Going underground: Bootlegging and individual innovative performance. *Organization Science*, *25*(5), 1287-1305. <a href="https://doi.org/https://doi.org/10.1287/orsc.2013.0856">https://doi.org/https://doi.org/10.1287/orsc.2013.0856</a>
- Dal Zotto, C., & Gustafsson, V. (2008). Human resource management as an entrepreneurial tool. *International handbook of entrepreneurship and HRM*, 89-110.
- Dalkir, K. (2017). Knowledge Management in Theory and Practice. MIT press.
- Dancey, C. P., & Reidy, J. (2007). Statistics without maths for psychology. Pearson education.
- Davenport, T. H., & Prusak, L. (1998). Working knowledge: How organizations manage what they know. Harvard Business School Press.
- De Jong, J. P., Parker, S. K., Wennekers, S., & Wu, C. (2011). Corporate entrepreneurship at the individual level: measurement and determinants. *EIM research reports. Zoetermeer: EIM*, 11(13), 3-27.
- de Lange, A. H., Van Yperen, N. W., Van der Heijden, B. I., & Bal, P. M. (2010). Dominant achievement goals of older workers and their relationship with motivation-related outcomes. *Journal of vocational behavior*, 77(1), 118-125. https://doi.org/http://dx.doi.org/10.1016/j.jvb.2010.02.013
- Deprez, J., & Euwema, M. (2017). You can't always get what you want? Leadership expectations of intrapreneurs. *Journal of Managerial Psychology*, *32*(6), 430-444. https://doi.org/https://doi.org/10.1108/JMP-04-2016-0107
- Dess, G. G., Ireland, R. D., Zahra, S. A., Floyd, S. W., Janney, J. J., & Lane, P. J. (2003). Emerging issues in corporate entrepreneurship. *Journal of management*, 29(3), 351-378. https://doi.org/https://doi.org/10.1016/S0149-2063(03)00015-1
- DeVilles, R. (2012). Scale development: Theory and applications. In. London: SAGE.



- Douglas, E. J., & Fitzsimmons, J. R. (2013). Intrapreneurial intentions versus entrepreneurial intentions: distinct constructs with different antecedents. *Small Business Economics*, 41(1), 115-132. https://doi.org/https://doi.org/10.1007/s11187-012-9419-y
- Eisenberger, R., Huntington, R., Hutchison, S., & Sowa, D. (1986). Perceived organizational support. *Journal of Applied psychology*, 71(3), 500. <a href="https://doi.org/https://psycnet.apa.org/doi/10.1037/0021-9010.71.3.500">https://doi.org/https://psycnet.apa.org/doi/10.1037/0021-9010.71.3.500</a>
- Eisenberger, R., & Stinglhamber, F. (2011). *Perceived organizational support: Fostering enthusiastic and productive employees*. American Psychological Association.
- Escriba-Carda, N., Revuelto-Taboada, L., Canet-Giner, M. T., & Balbastre-Benavent, F. (2020). Fostering intrapreneurial behavior through human resource management system. *Baltic Journal of Management*, *15*(3), 355-373. <a href="https://doi.org/https://doi.org/10.1108/BJM-07-2019-0254">https://doi.org/https://doi.org/10.1108/BJM-07-2019-0254</a>
- Falola, H. O., Salau, O. P., Olokundun, M. A., Oyafunke-Omoniyi, C. O., Ibidunni, A. S., & Oludayo, O. A. (2018). Employees' intrapreneurial engagement initiatives and its influence on organisational survival. *Verslas: teorija ir praktika/business: Theory and practice*, *19*, 9-16. https://doi.org/http://dx.doi.org/10.3846/btp.19.21576
- Farrukh, M., Ying, C. W., & Mansori, S. (2016). Intrapreneurial behavior: an empirical investigation of personality traits. *Management & Marketing. Challenges for the Knowledge Society*, 11(4), 597-609. https://doi.org/https://doi.org/10.1515/mmcks-2016-0018
- Felicio, J. A., Rodrigues, R., & Caldeirinha, V. R. (2012). The effect of intrapreneurship on corporate performance. *Management Decision*, 50(10), 1717-1738. https://doi.org/10.1108/00251741211279567
- Floyd, S. W., & Wooldridge, B. (1992). Managing strategic consensus: the foundation of effective implementation. *Academy of Management Perspectives*, *6*(4), 27-39. https://doi.org/https://doi.org/10.5465/ame.1992.4274459
- Forlani, D. (2013). How task structure and outcome comparisons influence women's and men's risk-taking self-efficacies: A multi-study exploration. *Psychology & Marketing*, 30(12), 1088-1107.
- Fowler, F. J. (2002). Survey research methods (Vol. 1). *Thousand Oaks, CA: Applied Social Research Methods Series*.
- Gawke, J. C., Gorgievski, M. J., & Bakker, A. B. (2019). Measuring intrapreneurship at the individual level: Development and validation of the Employee Intrapreneurship Scale (EIS) [Article]. *European Management Journal*, *37*(6), 806-817. <a href="https://doi.org/10.1016/j.emj.2019.03.001">https://doi.org/10.1016/j.emj.2019.03.001</a>
- George, D., & Mallery, P. (2003). edition 4. SPSS for Windows step by step: A simple guide and reference. 11.0 update. In: Boston. Allyn & Bacon.
- Gifford, S. (2003). Risk and uncertainty, In: Z. Acs & D. Audretsch (Eds.),. In *Handbook of entrepreneurship research: An interdisciplinary survey and introduction*
- (pp. 37-52). Kluwer Academic Publishers.
- Gist, M. E. (1987). Self-efficacy: Implications for organizational behavior and human resource management. *Academy of Management Review*, *12*(3), 472-485. https://doi.org/https://doi.org/10.2307/258514
- Hair, J. F., Black, W. C., Babin, B. J., & Anderson, R. E. (2019). *Multivariate Data Analysis*. Cengage Learning EMEA.
- Hanson, J. (2017). Exploring Relationships Between K-12 Music Educators' Demographics, Perceptions of Intrapreneuring, and Motivation at Work. *Journal of Research in Music Education*, 65(3), 309-327. https://doi.org/10.1177/0022429417722985
- Hart, S. L. (1992). An integrative framework for strategy-making processes. *Academy of Management Review*, *17*(2), 327-351. <a href="https://doi.org/https://doi.org/10.2307/258775">https://doi.org/https://doi.org/10.2307/258775</a>
- Hatak, I., Harms, R., & Fink, M. (2015). Age, job identification, and entrepreneurial intention. *Journal of Managerial Psychology*, 30(1), 38-53. https://doi.org/10.1108/jmp-07-2014-0213
- Hayton, J. C. (2005). Promoting corporate entrepreneurship through human resource management practices: A review of empirical research. *Human resource management review*, *15*(1), 21-41. <a href="https://doi.org/https://doi.org/10.1016/j.hrmr.2005.01.003">https://doi.org/https://doi.org/10.1016/j.hrmr.2005.01.003</a>



- Herron, L., & Sapienza, H. J. (1992). The entrepreneur and the initiation of new venture launch activities. *Entrepreneurship Theory and Practice*, 17(1), 49-55. https://doi.org/https://doi.org/10.1177%2F104225879201700106
- Hislop, D., Bosua, R., & Helms, R. (2018). *Knowledge management in organizations: A critical introduction*. Oxford university press.
- Hon, A. H. (2012). Shaping environments conductive to creativity: The role of intrinsic motivation. *Cornell Hospitality Quarterly*, *53*(1), 53-64. https://doi.org/https://doi.org/10.1177%2F1938965511424725
- Hornsby, J. S., Kuratko, D. F., Holt, D. T., & Wales, W. J. (2013). Assessing a Measurement of Organizational Preparedness for Corporate Entrepreneurship *Journal of Product Innovation Management*, 30(5), 937-955. <a href="https://doi.org/10.1111/jpim.12038">https://doi.org/10.1111/jpim.12038</a>
- Hornsby, J. S., Kuratko, D. F., Shepherd, D. A., & Bott, J. P. (2009). Managers' corporate entrepreneurial actions: Examining perception and position. *Journal of Business Venturing*, 24(3), 236-247. https://doi.org/https://doi.org/10.1016/j.jbusvent.2008.03.002
- Hostager, T. J., Neil, T. C., Decker, R. L., & Lorentz, R. D. (1998). Seeing environmental opportunities: effects of intrapreneurial ability, efficacy, motivation and desirability. *Journal of organizational change Management*, 11(1), 11-25. https://doi.org/10.1108/09534819810369536
- Ibrahim, N., Mahmood, R., & Bakar, M. (2016). Linking strategic improvisation and entrepreneurial self-efficacy to corporate entrepreneurship in Nigerian higher education institutions (HEIs). *Management Science Letters*, *6*(12), 742-752. https://doi.org/http://dx.doi.org/10.5267/j.msl.2016.10.006
- Ireland, R. D., Covin, J. G., & Kuratko, D. F. (2009). Conceptualizing corporate entrepreneurship strategy. *Entrepreneurship Theory and Practice*, *33*(1), 19-46. https://doi.org/https://doi.org/10.1111%2Fj.1540-6520.2008.00279.x
- Ireland, R. D., Hitt, M. A., & Sirmon, D. G. (2003). A model of strategic entrepreneurship: The construct and its dimensions. *Journal of management*, 29(6), 963-989. https://doi.org/https://doi.org/10.1016%2FS0149-2063 03 00086-2
- Kankanhalli, A., Tan, B. C., & Wei, K.-K. (2005). Contributing knowledge to electronic knowledge repositories: An empirical investigation. *MIS quarterly*, *29 (1)*, 113-143. https://doi.org/https://doi.org/10.2307/25148670
- Kautonen, T., Kibler, E., & Minniti, M. (2017). Late-career entrepreneurship, income and quality of life. *Journal of Business Venturing*, 32(3), 318-333.
- Kim, T. T., & Lee, G. (2013). Hospitality employee knowledge-sharing behaviors in the relationship between goal orientations and service innovative behavior. *International journal of hospitality management*, 34, 324-337. https://doi.org/https://doi.org/10.1016/j.ijhm.2013.04.009
- Krueger, N. (1993). The impact of prior entrepreneurial exposure on perceptions of new venture feasibility and desirability. *Entrepreneurship Theory and Practice*, 18(1), 5-21. https://doi.org/http://dx.doi.org/10.1177/104225879301800101
- Krueger, N., & Dickson, P. R. (1994). How believing in ourselves increases risk taking: Perceived self-efficacy and opportunity recognition. *Decision sciences*, 25(3), 385-400. https://doi.org/http://dx.doi.org/10.1111/j.1540-5915.1994.tb00810.x
- Kuratko, D. F. (2017). Corporate entrepreneurship 2.0: research development and future directions. Foundations and Trends® in Entrepreneurship, 13(6), 441-490. https://doi.org/http://dx.doi.org/10.1561/0300000082
- Kuratko, D. F., Covin, J. G., & Hornsby, J. S. (2014). Why implementing corporate innovation is so difficult [Article]. *Business Horizons*, 57(5), 647-655. <a href="https://doi.org/10.1016/j.bushor.2014.05.007">https://doi.org/10.1016/j.bushor.2014.05.007</a>
- Kuratko, D. F., Ireland, R. D., Covin, J. G., & Hornsby, J. S. (2005). A model of middle–level managers' entrepreneurial behavior. *Entrepreneurship Theory and Practice*, *29*(6), 699-716. https://doi.org/https://doi.org/10.1111%2Fj.1540-6520.2005.00104.x
- Kurtessis, J. N., Eisenberger, R., Ford, M. T., Buffardi, L. C., Stewart, K. A., & Adis, C. S. (2017). Perceived organizational support: A meta-analytic evaluation of organizational support theory. *Journal of management*, 43(6), 1854-1884. https://doi.org/https://doi.org/10.1177%2F0149206315575554



- Lee, L., Wong, P. K., Der Foo, M., & Leung, A. (2011). Entrepreneurial intentions: The influence of organizational and individual factors. *Journal of Business Venturing*, 26(1), 124-136. <a href="https://doi.org/https://doi.org/10.1016/j.jbusvent.2009.04.003">https://doi.org/https://doi.org/10.1016/j.jbusvent.2009.04.003</a>
- Levinson, H. (1965). Reciprocation The relationship between man and organization. *Administrative Science Quarterly*, 9(4), 370-390. <a href="https://doi.org/10.2307/2391032">https://doi.org/10.2307/2391032</a>
- Lin, H. F. (2007). Knowledge sharing and firm innovation capability: an empirical study. *International Journal of manpower*, 28 (3/4), 315-332. https://doi.org/https://doi.org/10.1108/01437720710755272
- Lumpkin, G. T., & Dess, G. G. (1996). Clarifying the entrepreneurial orientation construct and linking it to performance. *Academy of Management Review*, *21*(1), 135-172. https://doi.org/https://doi.org/10.5465/amr.1996.9602161568
- Luthans, F., Zhu, W., & Avolio, B. J. (2006). The impact of efficacy on work attitudes across cultures. *Journal of World Business*, 41(2), 121-132. <a href="https://doi.org/https://doi.org/10.1016/j.jwb.2005.09.003">https://doi.org/https://doi.org/10.1016/j.jwb.2005.09.003</a>
- Michel, J. W., Kavanagh, M. J., & Tracey, J. B. (2013). Got support? The impact of supportive work practices on the perceptions, motivation, and behavior of customer-contact employees. *Cornell Hospitality Quarterly*, *54*(2), 161-173. https://doi.org/http://dx.doi.org/10.1177/1938965512454595
- Moriano, J. A., Molero, F., Topa, G., & Mangin, J. P. L. (2014). The influence of transformational leadership and organizational identification on intrapreneurship. *International Entrepreneurship and Management Journal*, 10(1), 103-119. <a href="https://doi.org/10.1007/s11365-011-0196-x">https://doi.org/10.1007/s11365-011-0196-x</a>
- Morris, M. H., Webb, J. W., & Franklin, R. J. (2011). Understanding the manifestation of entrepreneurial orientation in the nonprofit context. *Entrepreneurship Theory and Practice*, 35(5), 947-971. https://doi.org/https://doi.org/10.1111%2Fj.1540-6520.2011.00453.x
- Morrison, E. W., & Phelps, C. C. (1999). Taking charge at work: Extrarole efforts to initiate workplace change. *Academy of Management Journal*, 42(4), 403-419. https://doi.org/https://doi.org/10.2307/257011
- Mustafa, M., Richards, J. J., & Ramos, H. M. (2013). High performance human resource practices and corporate entrepreneurship: The mediating effect of middle managers knowledge collecting and donating behaviour. *Asian Academy of Management Journal*, 18(2), 17-36.
- Neessen, P., Caniëls, M. C., Vos, B., & De Jong, J. P. (2019). The intrapreneurial employee: toward an integrated model of intrapreneurship and research agenda. *International Entrepreneurship and Management Journal*, 15(2), 545-571. <a href="https://doi.org/https://doi.org/10.1007/s11365-018-0552-1">https://doi.org/https://doi.org/10.1007/s11365-018-0552-1</a>
- Nisula, A. M., & Kianto, A. (2016). The antecedents of individual innovative behaviour in temporary group innovation. *Creativity and Innovation Management*, 25(4), 431-444. https://doi.org/http://dx.doi.org/10.1111/caim.12163
- Nonaka, I., Toyama, R., & Konno, N. (2000). SECI, Ba and leadership: a unified model of dynamic knowledge creation. *Long Range Planning*, *33*(1), 5-34. <a href="https://doi.org/https://doi.org/10.1016/S0024-6301(99)00115-6">https://doi.org/https://doi.org/10.1016/S0024-6301(99)00115-6</a>
- Obschonka, M., Silbereisen, R. K., & Schmitt-Rodermund, E. (2010). Entrepreneurial intention as developmental outcome. *Journal of vocational behavior*, 77(1), 63-72. https://doi.org/http://dx.doi.org/10.1016/j.jvb.2010.02.008
- Ott, A. R., Haun, V. C., & Binnewies, C. (2019). Negative work reflection, personal resources, and work engagement: The moderating role of perceived organizational support. *European Journal of Work and Organizational Psychology*, 28(1), 110-123. https://doi.org/http://dx.doi.org/10.1080/1359432X.2018.1550076
- Ozer, M., & Vogel, D. (2015). Contextualized relationship between knowledge sharing and performance in software development. *Journal of Management Information Systems*, 32(2), 134-161. https://doi.org/http://dx.doi.org/10.1080/07421222.2015.1063287
- Parker, S. C. (2011). Intrapreneurship or entrepreneurship? *Journal of Business Venturing*, 26(1), 19-34. <a href="https://doi.org/10.1016/j.jbusvent.2009.07.003">https://doi.org/10.1016/j.jbusvent.2009.07.003</a>



- Parker, S. K., & Collins, C. G. (2010). Taking stock: Integrating and differentiating multiple proactive behaviors. *Journal of management*, *36*(3), 633-662. https://doi.org/http://dx.doi.org/10.1177/0149206308321554
- Peters, T., & Waterman, R. (1982). In search of excellence. Harper & Row.
- Pinchot, G., & Pellman, R. (1999). *Intrapreneuring in action: A handbook for business innovation*. Berrett-Koehler Publishers.
- Pinchot III, G. (1985). Intrapreneuring: Why you don't have to leave the corporation to become an entrepreneur. *University of Illinois at Urbana-Champaign's Academy for Entrepreneurial Leadership Historical Research Reference in Entrepreneurship*.
- Porter, L. W., Steers, R. M., Mowday, R. T., & Boulian, P. V. (1974). Organizational commitment, job satisfaction, and turnover among psychiatric technicians. *Journal of Applied psychology*, 59(5), 603-609. https://doi.org/https://psycnet.apa.org/doi/10.1037/h0037335
- Rhoades, L., & Eisenberger, R. (2002). Perceived organizational support: a review of the literature. *Journal of Applied psychology*, 87(4), 698. https://doi.org/https://psycnet.apa.org/doi/10.1037/0021-9010.87.4.698
- Rich, B. L., Lepine, J. A., & Crawford, E. R. (2010). Job engagement: antecedents and effects on job performance. *Academy of Management Journal*, *53*(3), 617-635. https://doi.org/10.5465/amj.2010.51468988
- Riggle, R. J., Edmondson, D. R., & Hansen, J. D. (2009). A meta-analysis of the relationship between perceived organizational support and job outcomes: 20 years of research. *Journal of Business Research*, 62(10), 1027-1030. https://doi.org/https://doi.org/10.1016/j.jbusres.2008.05.003
- Rigtering, J. C., & Weitzel, U. (2013). Work context and employee behaviour as antecedents for intrapreneurship. *International Entrepreneurship and Management Journal*, *9*(3), 337-360. https://doi.org/https://doi.org/10.1007/s11365-013-0258-3
- Rocha, V., & Van Praag, M. (2020). Mind the gap: The role of gender in entrepreneurial career choice and social influence by founders. *Strategic Management Journal*, *41*(5), 841-866. https://doi.org/https://doi.org/10.1002/smj.3135
- Rus, A., & Orel, M. (2015). Coworking: a community of work. *Teorija in Praksa*, *52*(6), 1017-1038. Rutherford, M. W., & Holt, D. T. (2007). Corporate entrepreneurship: An empirical look at the innovativeness dimension and its antecedents. *Journal of organizational change Management*. https://doi.org/https://doi.org/10.1108/09534810710740227
- Saunders, M., Lewis, P., & Thornhill, A. (2009). Research methods for business students. Pearson Education.
- Schmelter, R., Mauer, R., Boersch, C., & Brettel, M. (2010). Boosting corporate entrepreneurship through HRM practices: Evidence from German SMEs. *Human Resource Management*, 49(4), 715-741. https://doi.org/10.1002/hrm.20366
- Schwarzer, R., & Jerusalem, M. (1995). Optimistic self-beliefs as a resource factor in coping with stress. In *Extreme stress and communities: Impact and intervention* (pp. 159-177). Springer.
- Semrau, T., & Werner, A. (2014). How exactly do network relationships pay off? The effects of network size and relationship quality on access to start—up resources. *Entrepreneurship Theory and Practice*, 38(3), 501-525. <a href="https://doi.org/https://doi.org/10.1111%2Fetap.12011">https://doi.org/https://doi.org/10.1111%2Fetap.12011</a>
- Sequeira, J., Mueller, S. L., & McGee, J. E. (2007). The influence of social ties and self-efficacy in forming entrepreneurial intentions and motivating nascent behavior. *Journal of developmental entrepreneurship*, *12*(03), 275-293. https://doi.org/http://dx.doi.org/10.1142/S108494670700068X
- Shieh, G. (2011). Clarifying the role of mean centring in multicollinearity of interaction effects. *British Journal of Mathematical and Statistical Psychology*, 64(3), 462-477. https://doi.org/https://doi.org/10.1111/j.2044-8317.2010.02002.x
- Simon, M., Elango, B., Houghton, S. M., & Savelli, S. (2002). The Successful Product Pioneer: Maintaining Commitment while Adapting to Change [Article]. *Journal of Small Business Management*, 40(3), 187-203. <a href="https://doi.org/10.1111/1540-627x.00050">https://doi.org/10.1111/1540-627x.00050</a>
- Sinha, N., & Srivastava, K. B. (2013). Association of personality, work values and socio-cultural factors with intrapreneurial orientation. *The Journal of Entrepreneurship*, 22(1), 97-113. <a href="https://doi.org/http://dx.doi.org/10.1177/0971355712469186">https://doi.org/http://dx.doi.org/10.1177/0971355712469186</a>



- Skarmeas, D., Lisboa, A., & Saridakis, C. (2016). Export performance as a function of market learning capabilities and intrapreneurship: SEM and FsQCA findings. *Journal of Business Research*, 69(11), 5342-5347. https://doi.org/https://doi.org/10.1016/j.jbusres.2016.04.135
- Speier, C., & Frese, M. (1997). Generalized self efficacy as a mediator and moderator between control and complexity at work and personal initiative: A longitudinal field study in East Germany. *Human performance*, 10(2), 171-192. https://doi.org/https://doi.org/10.1207/s15327043hup1002 7
- Stone, D. N. (1994). Overconfidence in initial self-efficacy judgments: Effects on decision processes and performance. *Organizational Behavior and Human Decision Processes*, *59*(3), 452-474. <a href="https://doi.org/https://doi.org/10.1006/obhd.1994.1069">https://doi.org/https://doi.org/10.1006/obhd.1994.1069</a>
- Stull, M. G. (2005). *Intrapreneurship in nonprofit organizations: examining the factors that fascilitate entrepreneurial behavior among employees.*
- Sundin, E., & Tillmar, M. (2008). A nurse and a civil servant changing institutions: entrepreneurial processes in different public sector organizations. *Scandinavian journal of management*, 24(2), 113-124. https://doi.org/https://doi.org/10.1016/j.scaman.2008.03.006
- Tan, L. P., Choong, Y. O., Yap, C. S., Choe, K. L., Rungruang, P., & Li, Z. (2022). How ethnic dissimilarity influences perceived organizational support and organizational citizenship behaviors? *Journal of Economic and Administrative Sciences*. https://doi.org/https://doi.org/10.1108/JEAS-08-2021-0145
- Tang, G. Y., Yu, B. J., Cooke, F. L., & Chen, Y. (2017). High-performance work system and employee creativity The roles of perceived organisational support and devolved management. *Personnel Review*, 46(7), 1318-1334. <a href="https://doi.org/10.1108/pr-09-2016-0235">https://doi.org/10.1108/pr-09-2016-0235</a>
- Terracciano, A., McCrae, R. R., Brant, L. J., & Costa, P. T. (2005). Hierarchical linear modeling analyses of the NEO-PI-R scales in the Baltimore longitudinal study of aging. *Psychology and Aging*, 20(3), 493-506. https://doi.org/10.1037/0882-7974.20.3.493
- Tieying, Y., Subramaniam, M., & Cannella Jr, A. A. (2009). Rivalry deterrence in international markets: Contingencies governing the mutual forbearance hypothesis. *Academy of management Journal*, 52(1), 127-147.
- Tohidinia, Z., & Mosakhani, M. (2010). Knowledge sharing behaviour and its predictors. *Industrial Management & Data Systems*, 110 (40, 611-631. https://doi.org/https://doi.org/10.1108/02635571011039052
- Turro, A., Noguera, M., & Urbano, D. (2020). Antecedents of entrepreneurial employee activity: does gender play a role? *International Journal of Entrepreneurial Behavior & Research*, 26(8), 1685-1706. https://doi.org/https://doi.org/10.1108/IJEBR-09-2019-0529
- Urbano, D., Alvarez, C., & Turro, A. (2013). Organizational resources and intrapreneurial activities: an international study. *Management Decision*, *51*(4), 854-870. https://doi.org/10.1108/00251741311326617
- Urbano, D., & Turró, A. (2013). Conditioning factors for corporate entrepreneurship: an in (ex) ternal approach. *International Entrepreneurship and Management Journal*, *9*(3), 379-396.
- Valsania, S. E., Moriano, J. A., & Molero, F. (2016). Authentic leadership and intrapreneurial behavior: cross-level analysis of the mediator effect of organizational identification and empowerment. *International Entrepreneurship and Management Journal*, 12(1), 131-152. https://doi.org/10.1007/s11365-014-0333-4
- Van Den Hooff, B., & De Ridder, J. A. (2004). Knowledge sharing in context: the influence of organizational commitment, communication climate and CMC use on knowledge sharing. *Journal of knowledge management*, 8 (6), 117-130. <a href="https://doi.org/https://doi.org/10.1108/13673270410567675">https://doi.org/https://doi.org/10.1108/13673270410567675</a>
- Van Den Hooff, B., & Hendrix, L. (2004). Eagerness and willingness to share: The relevance of different attitudes towards knowledge sharing. Fifth European Conference on Organizational Knowledge, Learning and Capabilities: Innsbruck, Austria,
- Van Den Hooff, B., & Huysman, M. (2009). Managing knowledge sharing: Emergent and engineering approaches. *Information & management*, 46(1), 1-8. <a href="https://doi.org/https://doi.org/10.1016/j.im.2008.09.002">https://doi.org/https://doi.org/10.1016/j.im.2008.09.002</a>
- Van Thiel, S. (2014). Research methods in public administration and public management: An introduction. Routledge.

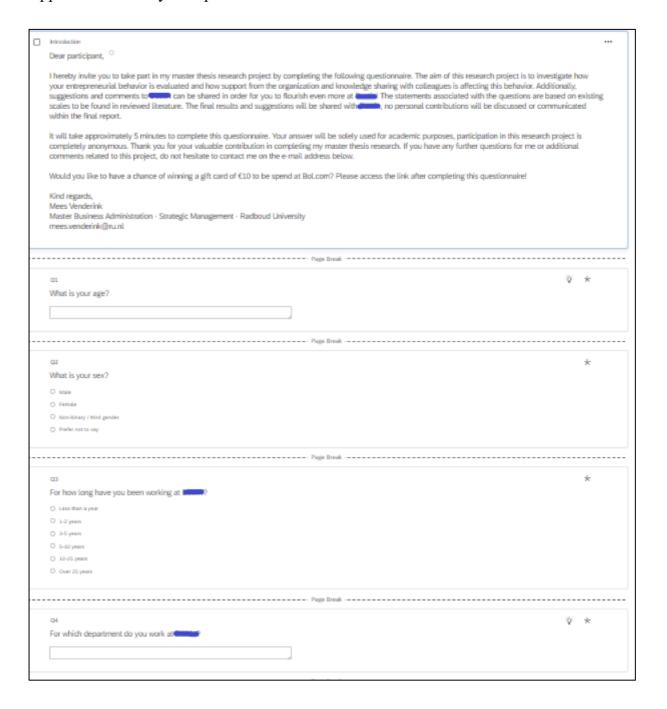


- Veenker, S., Sijde, P. v. d., During, W., & Nijhof, A. (2008). Organisational conditions for corporate entrepreneurship in Dutch organisations. *The Journal of Entrepreneurship*, 17(1), 49-58. <a href="https://doi.org/https://doi.org/10.1007/s11365-008-0078-z">https://doi.org/https://doi.org/10.1007/s11365-008-0078-z</a>
- Vesper, K. H. (1984). *Three faces of corporate entrepreneurship: A pilot study*. University of Washington. Graduate School of Business.
- Wakkee, I., Elfring, T., & Monaghan, S. (2010). Creating entrepreneurial employees in traditional service sectors. *International Entrepreneurship and Management Journal*, 6(1), 1-21. <a href="https://doi.org/https://doi.org/10.1007/s11365-008-0078-z">https://doi.org/https://doi.org/10.1007/s11365-008-0078-z</a>
- Wales, W. J. (2016). Entrepreneurial orientation: A review and synthesis of promising research directions. *International Small Business Journal*, 34(1), 3-15.
- Wang, S., & Noe, R. A. (2010). Knowledge sharing: A review and directions for future research. *Human resource management review*, 20(2), 115-131. https://doi.org/https://doi.org/10.1016/j.hrmr.2009.10.001
- Wang, Y. L., Ellinger, A. D., & Wu, Y. C. J. (2013). Entrepreneurial opportunity recognition: an empirical study of R&D personnel. *Management Decision*, *51(1-2)*, 248-266. https://doi.org/https://doi.org/10.1108/00251741311301803
- Wang, Z. N., & Wang, N. X. (2012). Knowledge sharing, innovation and firm performance. *Expert Systems with Applications*, 39(10), 8899-8908. https://doi.org/10.1016/j.eswa.2012.02.017
- West, M. A., & Farr, J. L. (1990). *Innovation and Creativity at Work: Psychological and organisational strategies*. John Wiley & Sons.
- Wood, R., & Bandura, A. (1989). Social cognitive theory of organizational management. *Academy of Management Review*, *14*(3), 361-384. https://doi.org/https://doi.org/10.5465/amr.1989.4279067
- Yariv, I., & Galit, K. (2017). Can incivility inhibit intrapreneurship? *The Journal of Entrepreneurship*, 26(1), 27-50. https://doi.org/10.1177%2F0971355716677386
- Yin, R. K. (2009). Case study research: Design and methods (Vol. 5). Sage.
- Zampetakis, L. A., Beldekos, P., & Moustakis, V. S. (2009). "Day-to-day" entrepreneurship within organisations: The role of trait Emotional Intelligence and Perceived Organisational Support. *European Management Journal*, *27*(3), 165-175. https://doi.org/https://doi.org/10.1016/j.emj.2008.08.003
- Zhao, D., & Smallbone, D. (2019). What affects nascent entrepreneurs' proactiveness. *Asia Pacific Management Review*, 24(4), 318-326.

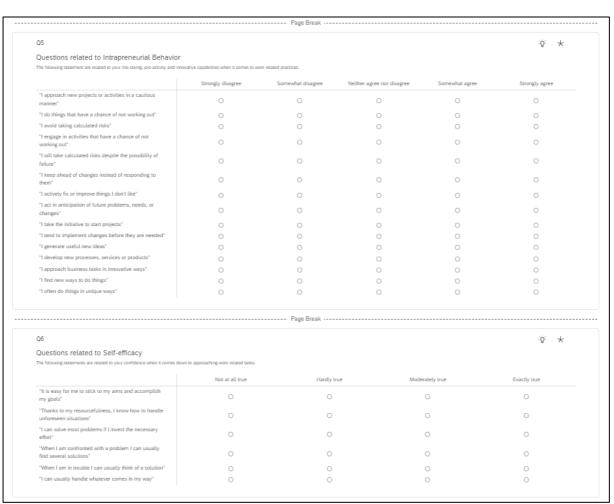


# Appendices

### Appendix 1: Survey Intrapreneurial Behavior







Q7							.Ö. *
Questions related to Organizational Suppor The following statement are related to your perception towards the ove		oressing when it comes	down to your work related contribu	tion.			
	Strongly disagree	Disagree	Somewhat disagree	Neither agree nor disagree	Somewhat agree	Agree	Strongly agree
"The organization values my contribution to its well- being"	0	0	0	0	0	0	0
"The organization fails to appreciate any extra effort from me"	0	0	0	0	0	0	0
"The organization would ignore any complaint from me"	0	0	0	0	0	0	0
"The organization really cares about my well-being"	0	0	0	0	0	0	0
"Even if I did the best job possible, the organization would fail to notice"	0	0	0	0	0	0	0
"The organization cares about my general satisfaction at work"	0	0	0	0	0	0	0
"The organization shows very little concern for me"	0	0	0	0	0	0	0
"The organization takes pride in my accomplishments at work"	0	0	0	0	0	0	0
"I find it important that the organization promotes my idea generation"	0	0	0	0	0	0	0
			Page Break				
Q8							.'ϕ'.
What can my organization do to improve my	v idea generation beh	navior?					•
What can my organization do to improve m	y luca generation bei	idvioi :					



