

THESIS FOR THE DEGREE OF DOCTOR OF PHILOSOPHY

# Founders and Beyond: Anchoring Competencies in Entrepreneurial Careers

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Founders and Beyond: Anchoring Competencies in Entrepreneurial Careers  
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## ABSTRACT

This thesis challenges the prevailing norm that equates entrepreneurial careers solely with firm founding. Traditionally, entrepreneurship research has emphasized startup creation as the hallmark of entrepreneurial activity, resulting in a binary categorization of individuals as either "entrepreneurs" or "non-entrepreneurs". This narrow perspective overlooks the diversity of career paths where entrepreneurial competencies are applied. Through a mixed-method approach, combining quantitative surveys and qualitative interviews with Venture Creation Program graduates, this thesis expands the understanding of entrepreneurial careers by positioning entrepreneurial competencies as central to career development.

Key findings reveal that entrepreneurial competencies are not confined to firm founding but are extensively utilized across various organizational contexts, including intrapreneurship, hybrid careers, and other roles outside the traditional entrepreneur label. The thesis identifies four entrepreneurial career archetypes: firm-builder, intrapreneur, surrogate, and nomad. These archetypes demonstrate that entrepreneurial careers are sustained through the continuous utilization of entrepreneurial competencies, rather than being defined by the singular event of founding a firm.

By reframing entrepreneurial careers to focus on competencies rather than firm founding, this thesis challenges conventional measures entrepreneurial competencies used in entrepreneurship research. It advocates for a broader, more inclusive definition of entrepreneurial careers that acknowledges the various ways individuals create value across their professional lives. This research contributes to a more nuanced and accurate understanding of entrepreneurial careers, offering valuable insights for educators, policymakers, and researchers by highlighting the broader outcomes of VCPs beyond startup creation.

**Keywords:** entrepreneurial career, entrepreneurial competencies, venture creation program, career anchors



## LIST OF APPENDED PAPERS

**Paper 1:** Alsos, G., Hägg, G., Lundqvist, M., Politis, D., Stockhaus, M., Williams-Middleton, K., & Djupdal, K. (2023). Graduates of venture creation programs – where do they apply their entrepreneurial competencies? *Small Business Economics*, 60(1), 133–155. <https://doi.org/10.1007/s11187-022-00641-6>

*I had the main responsibility of analyzing the data and writing the associated method and findings sections. The paper was co-authored.*

**Paper 2:** Aadland, T., Hägg, G., Lundqvist, M., Stockhaus, M., & Williams Middleton, K. (2024). Mitigating the lack of prior entrepreneurial experience and exposure through entrepreneurship education programs. *International Journal of Entrepreneurial Behaviour and Research*, 30(11), 19–44. <https://doi.org/10.1108/IJEBr-07-2022-0607>

*I had the main responsibility of analyzing the data and writing the associated method and findings sections. The paper was co-authored.*

**Paper 3:** Lundqvist, M., Stockhaus, M., & Williams Middleton, K. Anchoring sustained entrepreneurial careers beyond firm-founding. [submitted to *International Journal of Entrepreneurial Behaviour and Research*]

*I conceived the idea and design together with my co-authors. The paper was co-authored.*

**Paper 4:** Stockhaus, M., Lundqvist, M., & Williams Middleton, K. Shifting tides, stable grounds: career mobility of entrepreneurship education graduates. [submitted to *Journal of Business Venturing Insights*]

*I conceived the idea and design together with my co-authors. I had the main responsibility of writing the paper.*

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As you will read in this thesis, I have drawn significant inspiration from Edgar H. Schein. In his book *Humble Inquiry*, he writes: "We do not think and talk about what we see; we see what we are able to think and talk about." This quote encapsulates the heart of my research: we have viewed entrepreneurs as individuals who start companies because that is the way we have been conditioned to think. Instead, I have focused on seeing individuals first, and then think about them as entrepreneurial in the diverse ways they navigate their lives and careers.

Along the way, I have been fortunate to have the support and guidance of many incredible individuals, without whom this thesis would not have been possible. First and foremost, I owe my deepest thanks to my supervisor, **Karen**, and my examiner, **Mats**. Karen, your critical insights, thoughtful feedback, and ability to provide clarity when things seemed tangled have shaped my journey to become a competent researcher. Mats, thank you for your steady encouragement and reminders to keep curiosity and passion at the core of my research. I am deeply grateful for the opportunity I have been given and the sense of purpose you both instilled in me along the way. Your mentorship has been invaluable throughout this process.

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Martin Stockhaus

Gothenburg, October 2024





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## 1. INTRODUCTION

Professional careers such as those in engineering, medicine, or law are often grounded in university-based education, where graduates acquire the core competence necessary for their chosen fields. While individual career paths within these professions may vary, professionals typically remain in their original discipline (Burton et al., 2016). In contrast, the notion of an entrepreneurial career is often depicted in the temporal act of founding a firm. This perspective, while prevalent, provides only a partial view of the diverse paths that entrepreneurial careers can take.

The focus on firm founding is deeply rooted in the historical development of entrepreneurship research, which has traditionally celebrated firm founding as the hallmark of entrepreneurial success. Influential models, particularly those inspired by Silicon Valley's startup culture, have reinforced this perspective, shaping both academic research and policy frameworks (Baker & Welter, 2024; Burton et al., 2016; Hegde & Tumlinson, 2021). While firm founding plays a critical role in economic growth, innovation, and job creation, this emphasis can also limit our understanding of the full spectrum of entrepreneurial activities (Thorgren & Williams, 2023). It narrows the focus to firm founding, overlooking how individuals apply entrepreneurial competencies throughout the unfolding sequence of their work experiences, which collectively constitute a career.

There is therefore a question of what characterizes entrepreneurial careers in and beyond the temporal firm founding moment, stemming from the collective understanding of these careers as studying the individual and the firm vis-à-vis. In a 1995 *Entrepreneurship Theory and Practice* special issue addressing entrepreneurial careers, Edgar Schein argued that research (at that time) on entrepreneurial careers did not distinguish enough the role of being competent in entrepreneurship in comparison to being self-employed. This suggested that being self-employed does not necessarily qualify an individual to be an entrepreneur, as the firm can be used as a tool for conducting mundane tasks such as sending invoices etc., and the activities in the firm may be commonplace, lacking novelty. The firm in itself is therefore not a characteristic of entrepreneurial career if it is not a vehicle for entrepreneurial activities and associated competencies (Schein, 1995; Williams-Middleton et al., 2021). Twenty years on, this issue was echoed, then also illustrating lack of resolution, in another special issue on

entrepreneurial careers (Burton et al., 2016) advocating for more research of the individual and his/her entrepreneurial career spanning beyond the temporal firm founding moment.

Recent developments in policy also point to a need to broaden our understanding of what characterizes an entrepreneurial career. The European Commission's 2016 framework of entrepreneurial competencies positions entrepreneurship as a process of creating cultural and social value, in addition to economic value (Bacigalupo et al., 2016). This broader positioning encourages expanding the landscape of where entrepreneurial careers may occur, including not only those of startup founders but also intrapreneurs, social entrepreneurs, and other roles where entrepreneurial competencies are utilized.

A growing body of literature examines entrepreneurial careers through the lens of career theories discussing individuals' professional self-concept (Dyer, 1995; Katz, 1995a, 1995b; Lee & Wong, 2004; Rusko et al., 2019). Self-concept refers to the understanding or perception a person has of themselves, encompassing various dimensions like beliefs, feelings, and thoughts about one's abilities, personality, and identity (Schein, 1985). The aforementioned research stream highlights how one's professional self-concept, that encompasses one's competencies, values, and motives, shapes career paths by influencing how individuals perceive opportunities, navigate uncertainties, and align their personal values with their professional endeavors. Such a perspective aligns with modern career theories that emphasize the role of competencies, motives, and values as stabilizing factors in otherwise fluid and unpredictable career paths (Schein et al., 2023; Sugiyama et al., 2024). The most common description of career in career literature draws on Arthur et al.'s, (1989) definition as "the unfolding sequence of any person's work experiences over time" (p. 8). While simple, it provides important focusing language, and it does not specifically state that a career should be studied within a specific organizational context, but rather the individual's sequence of work experiences.

The narrative surrounding entrepreneurial careers is important in the context of entrepreneurship education. Entrepreneurship education has undergone significant evolution since its inception in the 1970s (Kuratko, 2005). Today, Venture Creation Programs (VCPs) represent a mature form of entrepreneurship education that focus on developing a broader set of entrepreneurial competencies through experiential learning (Lackéus & Williams-Middleton, 2015). Despite this evolution, the dominant narrative surrounding entrepreneurial careers continues to emphasize that the educational aim is to develop entrepreneurial

competencies for firm founding as the primary outcome. This narrative often therefore overlooks other valuable applications of entrepreneurial competencies in various organizational contexts (Jones et al., 2017; Kozlinska et al., 2023).

The implications of this research can extend far beyond the individual level of analysis, particularly when considering the differences in entrepreneurship education approaches. Neck and Greene (2011) highlight the critical distinctions between various types of entrepreneurship education, particularly emphasizing the "learning through entrepreneurship" format, which focuses on training individuals for practical application and practice. This type of education is particularly relevant for developing entrepreneurial competencies that are applicable in diverse contexts, not just in firm founding. In the context of this thesis, I argue that these competencies, cultivated through practice-based entrepreneurship education, have a broader reach than just the creation of new firms. While Neck and Greene focus on the importance of experiential learning for future practice, this thesis suggests that the competencies developed through such educational formats equip individuals to navigate entrepreneurial activities in and beyond firm founding in a variety of organizational contexts. By extrapolating these findings to a wider population of graduates from entrepreneurship education, we can better understand how these competencies contribute to sustained entrepreneurial careers.

To construct a theoretical lens for this problem seen in both research and policy, I build on career theories positioning the individual rather than the organization as the denominator of a career. General career theory recognizes career as an interaction of person, context and time (Arthur & Rousseau, 1996). In modern career theories, protean career theory and boundaryless career theory, the individual is the level of analysis while also viewing the type of organization the career is enacted in as less important. I argue for entrepreneurial competencies as a key concept for studying an individual's approach to entrepreneurial activities in their career. This stance is supported by DeFillippi and Arthur's (1994) position in (boundaryless) career theory that competencies are not confined to a specific organization and can provide stability in interfirm mobility. Professional self-concept is an additional concept used in career theory connected to the strategic decision ground individuals take relative to the perception of self, referred to as self-concept, in terms of their own underlying personal values and motives, (Schein, 1985). Building upon these theories, I position that competencies serve as a stabilizing force, allowing individuals to navigate various organizational contexts while maintaining a coherent self-concept. I use this position to ground in individually applied entrepreneurial competencies when developing a broader understanding of entrepreneurial careers. In concrete

terms I will decoupling the individual from the organization and recognizing entrepreneurial competencies as more of a property of the individual (Radu-Lefebvre et al., 2021).

The central problem addressed in this thesis is the limited understanding of entrepreneurial careers, beyond the temporal act of founding a firm. This narrow focus leads to a lack of awareness and appreciation for the ways in which individuals utilized their entrepreneurial competencies in an array of career paths and career contexts. This further leads to a misalignment in how entrepreneurship education is evaluated, with an undue emphasis on the number of startups created rather than on the broader application of entrepreneurial competencies across various organizational and professional contexts. To address this, the thesis investigates entrepreneurial careers from a competencies-perspective, specifically focusing on the entrepreneurial competencies developed and refined through VCPs and subsequent careers. I also build on the concept of career anchors (Schein, 1985), which is understood as a stabilizing mechanism, encapsulating one's professional self-concept and guides career decisions. This thesis proposes that entrepreneurial careers should be understood as the unfolding sequence of work experiences over time, characterized by the application of entrepreneurial competencies, particularly towards an individually aligned career (Schein et al., 2023). This perspective allows for a more inclusive definition of entrepreneurial careers, recognizing the value of entrepreneurial skills in a wide range of roles and industries.

The empirical focus on VCP graduates provides a unique opportunity to explore these diverse career paths. These programs are deeply rooted in experiential learning, which emphasizes the close interrelation of competence and entrepreneurial activities (Lackéus, 2015). By examining the ways in which VCP graduates utilize their entrepreneurial competencies, this research challenges prevailing norms in entrepreneurship research and contributes to an increased understanding of what it means to have an entrepreneurial career. In doing so, it seeks to substantiate entrepreneurial careers and illuminate the significant avenues for the application of entrepreneurial competencies beyond self-employment, ultimately contributing to a more comprehensive understanding of entrepreneurial careers.

There has also been works made that argue for a typology of entrepreneurs. A noteworthy early contribution is Gartner's (1982) categorizing archetypes of business startups, and their founders, under the argument that: "Archetypes are useful because they provide a means of classification that reduces and integrates a large body of data without sacrificing complexity." (p. 155). In light of this argument, I also investigate identifying distinct career archetypes from

VCPs, that will elevate the individual-level analysis made for my first research question, to an increased understanding of VCP population level careers as well.

Given this reasoning, the purpose of this thesis is to build understanding of entrepreneurial careers from an entrepreneurial competencies-perspective, thus also emphasizing an individual level analysis. The main object of study is individual entrepreneurial careers, where the concept of career is recognized as an interaction of person, context and time, with particular emphasis on a career aligned with self-concept. To fulfill this purpose, the thesis explores the following questions:

**RQ1:** What characterizes entrepreneurial careers?

**RQ2:** What distinct entrepreneurial career archetypes are found in Venture Creation Program graduates?

This thesis is grounded in a mixed-methods approach, combining one main quantitative study (Study 1) and one main qualitative study (Study 2). Study 1 employs an explorative quantitative approach to investigate the utilization of entrepreneurial competencies in the population of VCP graduates. It also explores the relative effect of having a VCP education, considering factors like entrepreneurial family backgrounds and prior startup experiences.

Building on these findings, Study 2 adopts a qualitative approach to delve deeper into the 'how' and 'why' of entrepreneurial careers. This study shifts from broad quantitative observations to a more in-depth exploration, through the lenses of modern career theories, investigating career anchors and mobility. It emphasizes the complexity and diversity of entrepreneurial careers, moving beyond traditional measures to offer a comprehensive understanding of how entrepreneurial careers evolve over time. Study 2 also addresses the influence of organizational- and professional contexts on career paths.

Following this research overview, the thesis will review relevant literature and key concepts in the theory chapter. The methodology chapter will then detail the methods used in the appended papers and the overall thesis approach. Summaries of the four papers are then followed by a discussion of the research questions and suggestions for future research. Finally, the four papers, supporting central argument components of the thesis, are appended.





## 2. THEORY

In framing the entrepreneurial career as a phenomenon, the main challenge highlighted in the introduction stems from the lack of a common definition of what characterizes an entrepreneurial career (Burton et al., 2016). Additionally, the limited body of work on entrepreneurial careers is often clouded by biases, which complicates the task of finding relevant theory and literature (Burton et al., 2016; Kuckertz et al., 2023). This theory chapter seeks to identify key concepts and research that contribute to the goal of enhancing our understanding of entrepreneurial careers from a competencies-perspective. Arthur and Rousseau (1996) argue that a career can be studied through three main components: self, context, and time. This framework provides the foundation for introducing key theoretical concepts. The chapter is organized into two parts: the first addresses theories and concepts from career research, and the second focuses on entrepreneurial competencies research.

Arthur et al. (1989) provides a foundational definition of a career as a sequence of an individual's work experiences over time. The concept of 'over time' is a recurring theme in career literature, but it is often inconsistently and vaguely defined. For instance, some literature equates occupational choice with career choice, which can be misleading (de Vos et al., 2020; Lawrence et al., 2015; Mayrhofer & Gunz, 2023). According to Arthur et al. (1989), an occupational choice represents a single work experience rather than a sequence of work experiences over time. This subtle yet important distinction sheds light on the intention bias in entrepreneurship research, where the intention to start a firm is often treated as a career choice, although it might be more accurately viewed as an intention for an occupational choice.

While careers are inherently dynamic, with individuals adapting to new roles and contexts, there is a significant element of stability that anchors these experiences (Schein et al., 2023; Sugiyama et al., 2024). This stability is deeply rooted in one's self-concept, who one is, which takes years to develop and evolve (Schein, 1985). Stability in a career comes from more than just the competencies one have; it also involves the motives and values that guide an individual's actions and decisions over time. Schein's concept of career anchors illustrates this well, as it explains that individuals integrate their motives, values, and competencies from past career experiences into a coherent career self-concept. This anchor serves as a stabilizing force, influencing decisions about where to engage professionally, and providing continuity in a person's career path (Schein et al., 2023).

Sugiyama et al. (2024) build on this by discussing careers as a balance between "stable anchors and dynamic evolution". They argue that individuals manage maintaining a consistent self-concept while also experiencing evolution of the self-concept when external sources over time induce this. In that sense dynamic evolution doesn't always lead to observable career changes; instead, it reflects an ongoing internal process where one's self-concept evolves and adapts, even if their external career path remains stable. Therefore, is the stability in one's career anchor more important than external episodic tensions when studying the unfolding sequence of work experiences over time (Sugiyama et al., 2024).

## **2.1 Protean and boundaryless career theory**

Since the 1990s<sup>1</sup>, career research has been significantly shaped by two theories: protean and boundaryless career theories (Chan et al., 2015; Hirschi & Koen, 2021; Sullivan & Baruch, 2009; Wiernik & Kostal, 2019). Protean<sup>2</sup> career theory, introduced by Hall (1996), emphasizes increased self-direction in career paths, where careers are seen as flexible, adaptive, and changeable. Briscoe and Hall (2006) further define a protean career as one driven by personal values and self-directed career management, highlighting that success is measured by personal goals rather than traditional markers like salary or prestige. This theory emphasizes that individuals, rather than organizations, hold agency over their career decisions, strategically shaping their paths based on personal values and long-term aspirations (Briscoe & Hall, 2006; Gerber et al., 2009). For the purpose of this thesis, it highlights the individual's strategic decision-making in relation to their chosen career path. This focus is critical as it aligns with the distinction between opportunity-based entrepreneurship, where individuals actively pursue entrepreneurial ventures out of choice, and necessity-based entrepreneurship, which is driven by external pressures or lack of alternatives (Burton et al., 2016). Furthermore, this underscores that a career itself can be viewed as a privileged space, particularly for highly trained individuals, where the ability to make self-directed career decisions is often predicated on a solid educational foundation.

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<sup>1</sup> A pivotal moment of the new paradigm of career research can be attributed to the forming of the Career division at Academy of Management in 1979, consisting of researchers such as Arthur, Driver, Hall, Lawrence, Schein, Van Maanen, etc. The work of these researchers has been instrumental for building the theoretical framework in this thesis.

<sup>2</sup> Hall's metaphor is that of Proteus in ancient Greek mythology who had the gift of prophecy and metamorphosis.

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Complementing this perspective, research on career mobility has increasingly focused on careers that span across organizations, industries, and geographical boundaries, what Arthur and Rousseau (2001) define as boundaryless careers. These careers are characterized by their lack of confinement to a single organization, diminished vertical trajectories, and a reliance on external networks and personal interpretations of career success. For example, in a traditional career like that of a lawyer, the journey typically starts with attending law school, passing the bar, and then working as an associate or paralegal. Sequence of work tends to follow a structured, linear path, moving through a series of roles with the goal of achieving partnership in a law firm (Vinkenbug & Weber, 2012). This system can sometimes involve an "up or out" pressure, where individuals must either climb the corporate ladder or leave the firm (Verbruggen & de Vos, 2020). In some cases, stagnation or lack of advancement leads individuals to leave and establish their own practice (Verbruggen & de Vos, 2020). The terms 'firm' and 'practice' highlight the structured and organization-bound nature of such traditional professional paths (Arthur, 2014). In contrast, boundaryless careers are defined by their flexibility, crossing organizational boundaries, and focusing on personal networks and self-defined markers of success (Arthur & Rousseau, 2001; Miner & Robinson, 1994). Unlike traditional careers, which are strongly tied to specific organizations and hierarchical progression, boundaryless careers allow individuals to seek opportunities and growth outside of a single company or industry.

While protean and boundaryless career theories offer valuable insights into modern careers, the connection between the two is not universally accepted. Some scholars see them as distinct, i.e., no, little, or complementary overlap in their theoretical description (Briscoe & Hall, 2006), while others consider them as complementary in explaining modern careers (Gerber et al., 2009). Though quantitative meta-analysis indicates that in how protean and boundaryless career theories are utilized in quantitative research yields similar results, i.e. loads onto the same factor (see Wiernik & Kostal, 2019). On top of this, while there is substantial discussion of protean and boundaryless career theories within the broader career theory literature, their application to entrepreneurial careers has not been extensively investigated, with some notable exceptions (e.g., Chan et al., 2012). Although career theorists have recognized shifts from linear, organizational careers to more flexible, self-directed ones, it remains unclear whether entrepreneurial careers are best understood as protean, boundaryless, or a combination of both. For example, Chan et al. (2012) discuss the dramatic shifts in work and career attitudes, particularly in the transition from industrial to knowledge-based economies.

They highlight how career has shifted from a fixed, organizational path to more subjective, person-centered career development, aligning with both boundaryless and protean career frameworks (Briscoe & Hall, 2006). This shift emphasizes personal values, self-direction, and lifelong learning, which are critical for entrepreneurial careers. However, despite the increasing relevance of entrepreneurship, Chan et al. (2012) argue that career research has tended to overlook entrepreneurial careers in favor of more traditional organizational contexts, calling for new frameworks that better account for the entrepreneurial individuals' careers.

In the context of this thesis, the concept of boundaryless careers is particularly relevant, as it aligns with the focus on entrepreneurial competencies. DeFillippi and Arthur (1994) discuss boundaryless careers through the lens of competencies, arguing that competencies are not confined to any single organization and can provide stability in interfirm mobility. This perspective shifts the source of career stability from the organization to the individual, where competencies serve as the primary stabilizing force (which connects to the stability in careers as discussed by Schein et al. (2023) and Sugiyama et al. (2024)). In traditional career models, stability was derived from long-term employment within a single organization, but as careers have evolved to become more dynamic, competencies provides continuity and coherence in one's career (Arthur, 2014).

By centering the discussion on competencies as the stabilizing factor in entrepreneurial careers, it opens up new avenues for evaluating these careers. The stability once provided by organizational affiliation is now embedded within the individual's competencies, which guide their professional self-concept and career progression over time (Arthur, 2014; Schein et al., 2023). Protean and boundaryless career theories thus provide a theoretical lens for the potential so study and frame how entrepreneurial careers are characterized not just by the roles or positions individuals hold, but by the strategic choices they make in applying their competencies in their careers.

The protean career model highlights the autonomy with which individuals navigate their careers, aligning their paths with personal values and long-term goals (Briscoe & Hall, 2006). Similarly, the boundaryless career underscores the fluidity and adaptability of modern careers, where competencies enable individuals to transcend traditional organizational boundaries and seize opportunities in diverse organizational- and professional contexts (Arthur & Rousseau, 2001; Sullivan & Baruch, 2009). Organizational context refers to the physical organization one is located in, for example a start-up or SME (Sullivan & Arthur, 2006). Professional context

refers to the set of boundaries, expectations, and norms that shape the roles, behaviors, and relationships within a specific profession (extrapolated through Briscoe et al., 2006; DeFillipi & Arthur, 1994; Gubler et al., 2014; Rodrigues et al., 2016; Sullivan & Baruch, 2009). For example, if one sees themselves as having the profession of a software engineer, their corresponding professional context is software engineering and IT.

Both protean and boundaryless career theories challenge the traditional, linear view of career progression; a challenge that equally or even particularly applies to entrepreneurship. Instead of focusing solely on the organizational context of the founded firm, a common emphasis in existing entrepreneurial career literature (Hytti, 2010; Marshall, 2016), protean and boundaryless career theories allow for an individual-level competencies view on sequence of work experiences that constitute an entrepreneurial career. However, the literature applying these career theories to entrepreneurship remains limited, often centering on firm founding as the primary marker of an entrepreneurial career (Burton et al., 2016). This narrow focus overlooks the diverse ways in which entrepreneurial competencies can be expressed and utilized beyond new firm founding. By applying these theory lenses on entrepreneurial competencies, this thesis seeks to fill this gap.

## **2.2 Career anchor theory**

A *career anchor* is a fundamental aspect of an individual's professional self-concept, encompassing their beliefs, attitudes, and perceptions about their abilities and traits (Schein, 1985; Schein et al., 2023). This multifaceted construct, shaped by personal experiences, social feedback, and introspection, is crucial for resilience and adaptability in facing challenges (Sugiyama et al., 2024). The concept of career anchors was initially derived from interviews with 44 graduates from the MIT Sloan School of Management, a group assumed to possess high ability and diverse career choices, similar to the VCP graduates that are the focus of this thesis. Their diverse careers were later discussed as career anchors being an extension of the discussion laid forth in protean career theory. Hall (1996) elaborated on this in a special issue of the *Academy of Management Perspectives* journal, where Schein (1996) contributed a paper on the career anchor perspective. Over time, the descriptions of career anchors have undergone iterative development (see Schein, 1985, 1996; Schein et al., 2023), culminating in the identification of distinct career anchors, as shown in Table 1.

*Table 1. Description of career anchors.*

<b>Security/stability</b>	as feeling economically secure and stable
<b>Autonomy</b>	as having work life under one's own control and a resistance to rules and routines
<b>Technical/functional</b>	as exercising particular talent and seeking peer recognition and avoidance of general management work
<b>General management</b>	as a desire to raise to a high level affecting the performance of the organization and making tough decisions, having skills to analyze and synthesize information together with interpersonal/emotional skills
<b>Entrepreneurship*</b>	as creating a business of your own, where success is due to your own effort. Initiates new enterprises rather than managing established ones.
<b>Creativity*</b>	as creating and building something, a product or idea, that is the result of your own ideas and efforts.
<b>Service/dedication to a cause</b>	as a career based in core values that improves the world
<b>Challenge</b>	as overcoming impossible barriers such as competitors, challenges or extreme turnaround cases
<b>Lifestyle</b>	as work and life (family and/or personal growth needs) are integrated and balanced.

\*Originally presented as one anchor – Entrepreneurial creativity – by Schein (1985) subsequently separated as per Danziger et al. (2008) and Marshall and Bonner (2003).

Originally, Schein's 'Entrepreneurial Creativity' anchor was tied exclusively to firm formation, with Schein arguing that those with this anchor would eventually leave an organization to start their own business (Schein, 1996). However, subsequent studies (Danziger et al., 2008; Marshall & Bonner, 2003) advocated for separating Creativity and Entrepreneurship into distinct anchors, highlighting key differences in applied competencies. Kao (1989) supports this distinction, arguing that the ability to generate new ideas (creativity) differs from the ability to implement them (entrepreneurship) (see also Rosso, 2014). This perspective has led to the separation of Entrepreneurial Creativity into two distinct anchors, as reflected in Table 1.

Despite distinguishing between Creativity and Entrepreneurship, my argument is that these categories alone are insufficient to capture the essence of entrepreneurial careers. For example, an individual may prioritize Entrepreneurship and Autonomy as equally important anchors, driven by the need for self-directiveness and flexibility in managing family life. Secondly, personal ambivalence may also contribute to changes or conflicts between different career paths.

Schein initially posited that individuals could not have multiple career anchors, attributing unclear anchor emergence to a lack of life and career experience in prioritizing decision-making (Schein, 1985, 1996). However, later studies (e.g., Feldman & Bolino, 1996; Rodrigues et al., 2013; Rusko et al., 2019) advocate for the coexistence of multiple anchors, especially during critical career phases. Schein's later work reflects a shift towards a pluralistic perspective on career anchors, acknowledging the complexity of career decisions in response to changing external pressures, such as those from the COVID-19 pandemic (Cao & Hamori, 2022).

Schein et al. (2023) now suggest that career anchors should be viewed as a pattern of preferences rather than a single guiding principle. For example, an individual might have an Entrepreneurship anchor reflected in the preference for having a business of their own. But the other rationales behind that career choice can also be a desire for autonomy (with the corresponding anchor) and the pure challenge of the task of growing a firm (with the Challenge anchor). Additionally, the boundaryless nature of modern careers supports the development of transferable competencies across various contexts, which means that competencies can be shared among career anchors (Feldman & Bolino, 1996; Rodrigues et al., 2013; Rusko et al., 2019). Schein et al. (2023) echoes the same argument when saying that “We can still think of anchors as stabilizers, but the winds of the pandemic and rapid social and technological change have pushed us into many different directions. These changes in our occupational and organizational worlds have led us to *new ways* [emphasis added] of looking at career anchors.” (p. 40). This is one of the objectives of this thesis.

## 2.3 Entrepreneurial competencies

In this thesis, entrepreneurial competencies are defined as practice-integrated, encompassing knowledge, skills, abilities, and attitudes demonstrated through the execution of realistic professional tasks (Hager & Gonzi, 1996). An important distinction of the concept competence is that there are three dimensions to the term (Arifin, 2021). Competence refers to task-oriented knowledge, skills, and abilities, and focuses on the result. Competency refers to the behavior(s) supporting an area of work through knowledge, skills, abilities, and attitude and focuses on a person's behaviors. Competencies refers to the attributes underpinning a behavior and focuses on more than one behavior of a person. Arifin's (2021) description of competence can be extended to Alvesson and Sandberg (2014) discussing the “competence-problem fit”, where

competence A is applied to solve problem B (Kyndt & Baert, 2015). However, this mechanical view does not fully capture an individual's motives for approaching the problem. A person-centric view of competence—competencies emphasizes that individuals embody these competencies through their behavior (Arifin, 2021). Moving from competence to competencies involves individualizing knowledge, skills, and abilities for specific problems, incorporating one's motives and values. In this sense, career anchors (Schein, 1985; Schein et al., 2023) reflect these values and motives, implying that competencies, as observed through individual behavior, represent a self-concept\* competencies integration.

Previous research on entrepreneurial knowledge, conceptualizing entrepreneurial competencies as a multidimensional construct that includes various knowledge areas essential for engaging in entrepreneurial activities (Kyndt & Baert, 2015; Mitchelmore & Rowley, 2010; Morris et al., 2013; Obschonka et al., 2011; Obschonka & Silbereisen, 2012; van Gelderen, 2020, 2023). Previous research typically focuses on identifying core entrepreneurial activities, such as planning and managing for business growth, evaluating different sources of information as a basis for entrepreneurial action, and handling challenges related to team processes in a new business (Haase & Lautenschläger, 2011). Table 2 outlines the key entrepreneurial competencies associated with these distinct activities, ranging from business planning and financial forecasting to social skills and networking abilities.

For example, an individual displaying entrepreneurial competencies related to the entrepreneurial process might complete the activity of creating a business plan, which involves not only outlining the strategy for business development but also conducting financial forecasting, assessing market conditions, and navigating regulatory requirements. This activity is not only a declarative skill (i.e. knowing how to write a business plan) but also wider and more holistic utilization of competence when also incorporating know-when, where, and why, for engaging in that specific activity (Alexander & Judy, 1988; Johannisson, 1991). This example illustrates the integration of multiple competencies to succeed in entrepreneurial activities.



Table 2. Entrepreneurial competencies associated with distinct entrepreneurial activities.

Entrepreneurial competencies and associated activities	Selection of references
Entrepreneurial competencies related to the entrepreneurial process	
Developing business plans	<ul style="list-style-type: none"><li>• Johannisson (1991)</li><li>• Mwasalwiba (2010)</li><li>• Jones et al. (2017)</li><li>• Kyndt &amp; Baert (2015)</li><li>• Mitchelmore &amp; Rowley (2010)</li></ul>
Financial forecasting in new businesses	
Entrepreneurial marketing (including marketing with limited means)	
Planning and managing for business growth	
Developing a sustainable and enduring business model	
Generating new business opportunities	
Entrepreneurial competencies related to judgmental ability and decision-making	
Making decisions in situations characterized by risk or uncertainty (e,g, using effectual or causal reasoning)	<ul style="list-style-type: none"><li>• Mwasalwiba (2010)</li><li>• Jones et al. (2017)</li><li>• Alexander et al. (1991)</li><li>• Hägg (2017)</li><li>• Mitchelmore &amp; Rowley (2010)</li><li>• Haase &amp; Lautenschläger (2011)</li></ul>
Evaluating business opportunities	
Evaluating different sources of information as a basis for entrepreneurial action	
Entrepreneurial competencies related to social interactions	
Communicating a business idea for investors or other stakeholders	<ul style="list-style-type: none"><li>• Mwasalwiba (2010)</li><li>• Jones et al. (2017)</li><li>• Hägg (2017)</li><li>• Kyndt &amp; Baert (2015)</li><li>• Mitchelmore &amp; Rowley (2010)</li><li>• Baron &amp; Markman (2003)</li></ul>
Promoting and selling a product or service to a target audience	
Collaborating with members in a team	
Engaging in social activities to promote a business idea	
Handling challenges related to team processes in a new business	

Thus, entrepreneurial competencies are not isolated traits but are actively expressed through specific activities that integrate various forms of knowledge. These competencies enable entrepreneurs to navigate complex processes, make informed decisions, and build and maintain networks essential for business success. The interplay between these competencies and activities underscores the importance of a comprehensive understanding of what it means to be entrepreneurial. Building on the entrepreneurial activities discussed in relation to entrepreneurial competencies as outlined in Table 2, I approach the construct of entrepreneurial competencies as follows:

*Entrepreneurial competencies related to the entrepreneurial process:* referring to domain-specific competence for entrepreneurial activities tied to starting and running a business, which has been argued to be core competence when teaching entrepreneurship in higher education, reflecting both declarative (know-what) and procedural (know-how) knowledge (Johannisson, 1991; Jones et al., 2017; Mwasalwiba, 2010).

*Entrepreneurial competencies related to judgmental ability and decision-making:* built on the argument that entrepreneurs need to embrace and deal with uncertainty. This refers to conditional competence in asserting why, when and where to engage in entrepreneurial activities (Alexander et al., 1991; Sarasvathy, 2001).

*Entrepreneurial competencies related to social interactions:* These competencies focus on the social competencies and networking abilities required to unlock the potential of social capital and to navigate other in entrepreneurial activities (Baron & Markman, 2003; Johannisson, 1991; Williams-Middleton et al., 2020).

As a whole, entrepreneurial competencies involve understanding factual information about entrepreneurial activities, procedural competencies to perform entrepreneurial activities, and the ability to judge when, where, and why to apply these competencies (Haase & Lautenschläger, 2011; Kyndt & Baert, 2015; Mitchelmore & Rowley, 2010; van Gelderen, 2023). While the categorization of competencies is well-established in educational science and has been proposed in entrepreneurship education literature (Morris et al., 2013), the discourse on entrepreneurial competencies continues to evolve, particularly in exploring how different competencies interrelate.

### **2.3.1 Entrepreneurship education and competencies**

Entrepreneurship and its educational aspects have been closely linked to experiential learning, underscoring the belief that active involvement in entrepreneurial activities is crucial for acquiring entrepreneurial competencies (Hägg & Gabrielsson, 2020; Neck & Greene, 2011).

While there is broad support for promoting entrepreneurial thinking and action in education (Lackéus, 2015; Neck & Corbett, 2018; Neck & Greene, 2011; Pittaway & Cope, 2007), most studies predominantly assess entrepreneurship education outcomes through indicators like the intention to form a new firm (Nabi et al., 2017; Rauch & Hulsink, 2015). However, Rideout and Gray (2013) critically argue that methodological weaknesses undermine confidence in the

belief that entrepreneurship education can consistently produce entrepreneurship. Henry and Lewis (2018) echo this sentiment, recommending a greater focus on evaluating the outcomes of entrepreneurship education to validate its effectiveness.

Research on the long-term impact of entrepreneurship education often examines the number of startups initiated by graduates or explores the factors influencing graduates' entrepreneurial intentions or startup endeavors (Killingberg et al., 2020; Lange et al., 2014). Galloway et al. (2015) show that career experiences and outcomes can be highly idiosyncratic, with original intentions changing over time, regardless of initial ambitions. This suggests that the timing of inquiries into entrepreneurship education outcomes is crucial, as entrepreneurial intentions alone may not fully capture whether such education leads to sustained entrepreneurial careers and also limits the understanding of entrepreneurial careers to the singular episodic event of founding a firm. Despite some longitudinal studies, there remains a strong call for more research on this subject (Galloway et al., 2015; Nabi et al., 2017).

A significant knowledge gap exists concerning the broader spectrum of entrepreneurial career paths taken by graduates, extending beyond self-employment to include alternative paths such as hybrid entrepreneurship (combining self-employment with paid employment) and intrapreneurship (entrepreneurial activities within an existing organization) (Killingberg et al., 2023). One of the few studies addressing the versatile applicability of entrepreneurial competencies developed during entrepreneurship education is by Jones et al. (2017). They emphasize the need for employees with entrepreneurial competencies, stating that small business owner-managers require resourceful graduates with relevant entrepreneurial knowledge and skills, including knowledge of assets, capabilities, organizational processes, attributes, and information. Jones et al. (2017) also highlight the individual perspective, noting that entrepreneurship education programs provide value not only in enabling firm founding but also in supporting alternative career paths through the enterprising knowledge and skill sets graduates acquire.

Kozlinska et al. (2023) further investigated the connection between entrepreneurship education, entrepreneurial competencies, and careers, concluding that being skilled in various aspects of entrepreneurship does not necessarily mean immediate engagement in related behavior. More positive measurable effects may emerge later in one's career. This aligns with findings from Eesly and Lee (2021) and Galloway et al. (2015), suggesting that the immediate intention to start a firm may have a critical time window shortly after completing

entrepreneurship education. However, entrepreneurial competencies can persist and be further developed in intrapreneurial roles, potentially leading to self-employment later in a career. Both Jones et al. (2017) and Kozlinska et al. (2023) indicate that the impact and value of entrepreneurship education likely have longer-term effects for both individuals and organizations than previously recognized.

The importance of learning from and through action, as seen in practicing entrepreneurs, has influenced entrepreneurship education design, with the core assumption being that to learn entrepreneurship, one must engage in entrepreneurial activities (Hägg & Gabrielsson, 2020; Lackéus et al., 2016; Morris, 2022; van Gelderen, 2023).

Over the past three decades, entrepreneurship education has expanded to include various action-based forms, with the most immersive format, VCPs, situating students in real-life venture creation as the primary learning experience (Lackéus & Williams-Middleton, 2015). VCPs have become recognized as a premier form of entrepreneurship education, designed to foster the competencies essential for transforming opportunities into viable businesses (Lundqvist & Williams-Middleton, 2024). These programs employ a pedagogical approach grounded in real-life venture development, emphasizing experiential learning (Lackéus & Williams-Middleton, 2015). Within VCPs, the 'learning through' approach is central, with a strong emphasis on enactive mastery, enabling students to act as entrepreneurs while simultaneously fulfilling their roles as students (Hägg & Kurczewska, 2019; Williams-Middleton, 2013).

In VCPs, the simultaneous development of entrepreneurial competencies related to the entrepreneurial process, judgmental ability and decision-making, and social interactions, are particularly evident. These programs are deeply rooted in experiential learning, which emphasizes the close interrelation of competencies and entrepreneurial activities (Lackéus, 2015). This educational approach goes beyond mere action-based learning, integrating reflective processes that engage students in understanding why certain actions are taken, thus fostering competencies for situational awareness, which are critical in making judgment calls under uncertainty (Donnellon et al., 2014; Haase & Lautenschläger, 2011; Williams-Middleton & Donnellon, 2014).

Additionally, VCPs place significant emphasis on the development of social competencies, including networking abilities and "know-who", which are vital for interacting within entrepreneurial ecosystems and creating value for both entrepreneurs and their stakeholders

(Baron & Markman, 2003; Johannisson, 1991). These social competencies are cultivated through early career socialization into specific organizational contexts and cultural dispositions, allowing students to learn how to navigate in these settings (Williams-Middleton et al., 2020). This process equips individuals with the competencies necessary to unlock the potential of interactions within ecosystems and organizations (Alvesson & Sandberg, 2014; Thomassen et al., 2020).

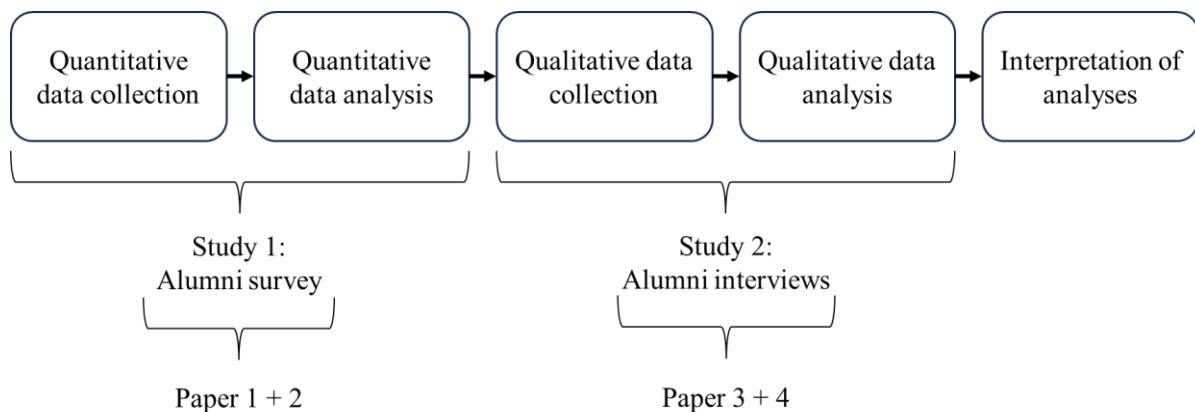


### 3. METHODOLOGY

#### 3.1 Research design

The purpose of this thesis is to investigate careers of VCP graduates, their utilization of entrepreneurial competencies and self-concept. The aim is to identify and describe entrepreneurial career paths, including those that do not involve firm formation. This research does not inherently favor any particular method; instead, it is designed with both quantitative and qualitative methods in mind. By employing a mixed-method strategy, the research mitigates the limitations associated with relying on a single method and captures the strengths of both quantitative and qualitative data (Creswell et al., 2003; Fetter et al., 2013). Given that a competencies-perspective of entrepreneurial careers of VCP graduates is a novel research area, starting with quantitative methods provides a foundation for generating relevant qualitative research questions and facilitates the integration of findings.

Figure 1 illustrates the process of data collection and analysis within this research. To create synergies between quantitative and qualitative questions, data collection occurred in partly overlapping phases, enabling an iterative exchange of insights between studies.



*Figure 1. The process of a sequential explanatory design (adapted from Creswell et al. (2003)) and the positioning of my two research studies with subsequent papers.*

The decision to use a sequential explanatory design, where quantitative methods are followed by qualitative methods, was not merely pragmatic but a deliberate strategy to maximize the depth and breadth of the findings. This design allowed for the mapping of patterns across a broader population through quantitative surveys, which was necessary due to the limited knowledge about VCP graduates careers. The subsequent qualitative interviews provided a

means to explore and explain the underlying mechanisms suggested by these patterns, offering insights into non-numerical data such as motives, reasons, and opinions.

One of the key strengths of this mixed-method approach, particularly the qualitative phase, is its ability to uncover the underlying mechanisms that quantitative data alone cannot reveal. While surveys effectively identify correlations and patterns, they fall short of explaining why these patterns exist or how entrepreneurial competencies are utilized in their careers. By integrating qualitative interviews, the research delves deeper into the motives, values, and self-concepts that drive these patterns.

There are additional reasons why qualitative interviews are essential to this research. They provide a more nuanced understanding of how individuals perceive and utilize their entrepreneurial competencies, especially in exploring the non-linear and often complex career paths that do not fit neatly into predefined categories. Through interviews, the research captures subjective experiences and personal narratives that provide context to the quantitative data, offering insights into the "why" and "how" behind the "what." This is the primary rationale behind the chosen research design: it mitigates some of the weaknesses inherent in a purely quantitative approach, particularly the challenge of transforming quantitative findings into substantiated theoretical developments (Teddle & Tashakkori, 2010).

Moreover, the interviews facilitate the exploration of constructs like motive and values, which are crucial for understanding the application of entrepreneurial competencies. These constructs are inherently difficult to quantify and require a more interpretative approach to be fully understood. The interviews thus serve as a tool for theory development, helping to bridge the gap between empirical findings and theoretical advancement. The mixed-method design, particularly the integration of qualitative interviews, provides a comparative advantage over single-method approaches. While quantitative methods alone could map out the prevalence and distribution of entrepreneurial competencies, they would likely miss the deeper, more complex aspects of how these competencies are enacted and experienced.

Conversely, a purely qualitative approach, although rich in detail, might lack the generalizability needed to make broader claims about the population of VCP graduates. By combining both methods, this research not only achieves a more comprehensive understanding of VCP graduates' careers but also mitigates the limitations inherent in each method when used in isolation.



### **3.2 Thesis research context - venture creation programs**

In practical terms, students actively engage in various aspects of venture creation, including exploring new business opportunities, validating value propositions, securing positions, collaborating in teams, attracting customer interest, obtaining resources, applying entrepreneurial methods, and making decisions throughout the venture creation journey. The curriculum integrates action and reflection in iterative cycles, allowing students to learn through their experiences. Assessment methods predominantly include written assignments, reflective tasks, and the presentation of a master's thesis, evaluated through opposition and examination by supervisors. The integration of curricular and venturing activities ensures that students achieve the defined learning objectives, culminating in the awarding of a master's degree upon graduation (EQF/RQF level 7).

In a VCP, the learning environment is often expanded beyond the faculty to include other institutional actors supporting innovative activity, as well as external actors, such as investors, advisors, mentors, and business competition panels (Williams-Middleton et al., 2020). These external actors can impart social persuasion, which extends beyond the peer-to-peer influence created by classmates and recent graduates from the program (Kubberød et al., 2018; Williams-Middleton et al., 2020).

Furthermore, VCPs allow students to experience the emotional, visceral, and contextual factors and consequences associated with entrepreneurship, using these affective experiences as a critical part of the learning journey (Haneberg & Aadland, 2020; Ollila & Williams-Middleton, 2011). By doing so, VCPs develop not only competencies for entrepreneurial activity but also foster a deeply seated understanding of the ‘why’ for each individual involved (Hägg, 2017; Williams-Middleton & Donnellon, 2014).

VCPs are generally categorized into two main types: independent venture creation (Ind-VCP) and corporate entrepreneurship within established organizations (Corp-VCP) (Winborg & Hägg, 2023). While Corp-VCPs internalize the venturing process within organizational structures, they share pedagogical similarities with Ind-VCPs. Both types aim to contribute to early career socialization into specific organizational environments, though they differ in focus. Ind-VCPs guide students through startup ecosystems, while Corp-VCPs focus on navigating intraorganizational politics and structures related to innovative projects within established environments (Winborg & Hägg, 2023).

Despite the shared emphasis on learning through entrepreneurial experience, subject-related differences impact what knowledge students acquire and how it is acquired. Kuratko and Morris (2018) argue that Corp-VCPs provide specific knowledge applicable to corporate environments. While the underlying similarity with Ind-VCPs in learning approaches is acknowledged, there remains limited understanding of how high levels of experiential, action-based learning in VCPs may mitigate other antecedents of entrepreneurial careers.

The empirical context of this thesis and its appended papers are anchored in three VCPs. The aim of my research is to investigate the entrepreneurial competencies of VCP graduates, regardless of the career path they have pursued. This research seeks to understand how these entrepreneurial competencies are applied and the extent to which their application is influenced by their education. The three universities involved are Chalmers School of Entrepreneurship (Chalmers University of Technology) and Sten K. Johnson Centre for Entrepreneurship (Lund University) in Sweden, and NTNU School of Entrepreneurship (Norwegian University of Science and Technology) in Norway. The VCPs at Chalmers and NTNU are two-year programs situated within departments of technology management, while Lund University's VCP is a one-year program within a Business School. Consequently, Chalmers and NTNU VCPs primarily consist of engineering students, whereas Lund University's VCP is predominantly composed of business students. Over time, however, all three programs have attracted students from increasingly diverse educational backgrounds. Despite these differences, there are strong similarities between the VCPs, most notably the shared geographical, social, and cultural contexts. Below is a brief description of each educational program.

**Chalmers Graduates** – Between 1997 and 2018, 837 students graduated from the Chalmers School of Entrepreneurship, the Master's program in Entrepreneurship and Business Design at Chalmers University of Technology in Gothenburg, Sweden. Since its inception in 1997, class cohorts have grown, and the educational design has evolved. In addition to its tech-focused Ind-VCP, Chalmers School of Entrepreneurship also launched a Corp-VCP in 2014 with a corporate focus and a track on intellectual capital management in 2003 (discontinued in 2023). All three programs share a common set of courses and an action-oriented pedagogy, with individual differences emerging primarily in the projects undertaken in the second year of the program. The education is two years long, and the primary language of instruction is English.

**Lund Graduates** – Between 2007 and 2018, 472 students graduated from the Master's program in Entrepreneurship and Innovation at the Sten K. Johnson Centre for Entrepreneurship, Lund

University, Sweden. The program consists of an Ind-VCP, followed by a Corp-VCP introduced in 2011 (discontinued in 2022). At Lund, the VCP has a majority of international students, primarily from Europe, North America, and Asia. The proportion of international to Swedish students has remained relatively stable since the program's inception, with approximately 80% international students (around 60% from within the European Union). The program is one year long, and the main language of instruction is English.

**NTNU Graduates** – Between 2003 and 2018, 259 students graduated from the NTNU School of Entrepreneurship at the Norwegian University of Science and Technology, Trondheim, Norway. The program focuses solely on independent venture creation (Ind-VCP). The student cohorts at NTNU are predominantly Norwegian, with a few exceptions from Scandinavia, as the program is taught in Norwegian. The education is two years long.

There are several compelling reasons why graduates of VCPs are a suitable group for this thesis. First and foremost, the students of these programs are self-selecting, having chosen this type of education and declared their intention to pursue an entrepreneurial career during the admission process. Secondly, my PhD education at Chalmers, combined with my teaching role at Chalmers School of Entrepreneurship and my status as a graduate of Chalmers' VCP, provides me with an insider perspective on the studied population. In the quantitatively focused Study 1, I draw equally from all three educational programs. However, in the qualitative Study 2, my embeddedness within the Chalmers community made it convenient to source qualitative data exclusively from Chalmers graduates.

### **3.3 Study 1: Alumni survey**

The quantitative data for the three appended papers was collected from two primary sources. The first source was a web-based survey developed during the spring and summer of 2018 by my co-authors as part of a joint research effort to initiate a study on careers following a VCP. The survey was designed using standardized questions derived from prior alumni surveys conducted by institutions such as MIT, Ohio University, the HEDS Alumni Survey, and Cornell University. These questions were translated into variables related to post-graduation career paths, demographics, as well as graduates' contact and engagement with the program. The questions concerning post-graduation career paths were further elaborated and supplemented with questions on intrapreneurial activity, similar to those used in the GEM

project (gemconsortium.org). Additionally, questions related to startup behavior and nascent entrepreneurial activity were inspired by the GEM project.

To align with the research focus on entrepreneurial careers, the survey design also included newly developed questions aimed at assessing competencies, which is a key concept in the interpretation of entrepreneurial careers. Specifically, these questions sought to evaluate the entrepreneurial competencies gained from educational experiences during the VCP and the application of these competencies in graduates' current occupations. The web-based survey was distributed to 1,326 graduates from the three entrepreneurship programs during the fall of 2018. Table 3 presents the response rate statistics for this survey.

*Table 3. Overview of 2018 alumni survey.*

<b>Program</b>	Chalmers School of Entrepreneurship	NTNU School of Entrepreneurship	Sten K. Johnson Centre for Entrepreneurship
<b>Graduate population in 2018</b>	837	259	472
<b>Data collection period</b>	Oct -18 to Nov -18 (three reminders)	Sep -18 to Nov -18 (four reminders)	Oct -18 to Nov -18 (four reminders)
<b>Approached by survey</b>	595	259	472
<b>Response rate</b>	53.0 %	67.6 %	42.6 %

The second source of quantitative data came from mapping the career histories of graduates via LinkedIn, a task undertaken by one of my co-authors. One limitation of the web-based survey was the challenge of capturing detailed information about the specific roles and tasks associated with each occupation graduates had held. To address this limitation, career histories were collected through LinkedIn, primarily for the purpose of career pattern mapping and, to some extent, for a posteriori analysis in the subsequent interview study. This LinkedIn data collection was limited to graduates from the Chalmers School of Entrepreneurship. The dataset allowed for the mapping of parallel occupations as well as key roles and tasks that manifested within and beyond a single occupation. This dataset was particularly useful in Papers 3 and 4, serving as a template for individual interviews where career transitions, motives, and reasons could be explored in greater depth, enriching the timeline established prior to the interviews.

### 3.4 Study 2: Alumni interviews

After the survey responses were collected, qualitative data was necessary to address research questions related to motive, reasoning, views on competencies, and self-concept. Additionally, qualitative interviews were essential for validating the assumptions made during the mapping of career histories based on quantitative data. The initial batch of interviews with VCP graduates was conducted by one of my co-authors for Paper 3 in 2017 at the Chalmers School of Entrepreneurship, prior to the start of my PhD. Building on the findings from these initial interviews, as well as insights gained from the alumni survey and LinkedIn data collection, an updated version of the interview questions was developed. This led to a second round of data collection in 2021, in which I and another co-author participated in addition to the initial co-author. Table 4 provides a summary of the qualitative data collection through interviews.

*Table 4. Summary of qualitative data collection through semi-structured interviews.*

<b>Target population</b>	Chalmers School of Entrepreneurship 1997-2007 cohorts (242 graduates in total)
<b>First batch – collected in 2017</b>	20 interviews
<b>Second batch – collected in 2021</b>	57 interviews
<b>Total</b>	77 interviews (31.8 % of available population)

The first set of interview questions focused on career transitions, particularly what motivated graduates to change jobs. Alongside these questions, interviewees were asked about the types of roles they held and the transitions between these roles to map out their role development over time. For each occupation, interviewees were prompted to elaborate on their intrapreneurial activities, distinguishing between the ideation and implementation of new business activities. This provided insights into how intrapreneurial roles evolved throughout their careers and how entrepreneurial competencies were applied.

The second set of questions centered on self-concept, specifically, how graduates negotiated their roles, social identities, and narrative identities in parallel with their career development. Graduates were asked to reflect on how they perceive themselves as entrepreneurial, exploring their self-concept and identifying the behaviors and mindsets they associate with being entrepreneurial.

The third set of questions focused on their educational experiences, both within the VCP and in any relevant prior education. These questions aimed to map the knowledge and skills acquired through the VCP and how these were applied in their career paths.

### 3.5 Methodological limitations

The research design of this thesis is not without its methodological limitations. One significant limitation lies in the sample, which includes only graduates from VCPs. This focus on a specific form of entrepreneurship education, where individuals have undergone intensive, experiential learning designed to develop entrepreneurial competencies, limits the generalizability of the findings. The lack of a control group for meaningful comparison further complicates the issue. A key limitation is that the extent to which participants already possessed entrepreneurial competencies before entering the program versus the degree to which these competencies were refined, developed, or complemented during the program remains unclear. This gap raises important questions: Who would be an appropriate comparison group, and what meaningful differences could we expect to find, especially when compared to individuals who have pursued other or less intensive forms of entrepreneurship education? These questions remain largely unanswered. However, this limitation is partially mitigated by the inclusion of a large sample drawn from three institutions across two countries, encompassing graduates with diverse educational backgrounds and covering a relatively long timespan.

The thesis' empirical context is anchored in VCPs within Sweden and Norway, specifically involving graduates from Chalmers University of Technology, NTNU, and Lund University. While these programs share similar educational designs, they are embedded in distinct cultural and geographic contexts, which could limit the applicability of the findings to VCPs in other regions or educational systems. This limitation is important because the development of entrepreneurial competencies and the practice of entrepreneurship are often influenced by cultural and contextual factors. Differences in educational approaches, societal attitudes toward entrepreneurship, and the broader economic environment in Scandinavia may lead to variations in how the findings are interpreted or applied in different parts of the world.

Another limitation arises from the thesis' qualitative phase, which exclusively draws data from graduates of the Chalmers School of Entrepreneurship. Although the quantitative phase includes graduates from all three VCPs, the qualitative phase's focus on Chalmers graduates introduces potential sampling bias. This limitation is relevant because the experiences and perceptions of Chalmers graduates may not fully represent those of graduates from other VCPs, given the differences in program length, student demographics, and educational focus. Consequently, the qualitative insights gained might be more reflective of the specific context at Chalmers rather than being broadly applicable across all VCPs. While the mixed-method

approach facilitates broader quantitative generalization, the qualitative phase's focus on a single institution could skew the deeper insights and theoretical developments, potentially limiting the thesis' impact on broader entrepreneurial education research.

Overall, while the thesis provides valuable insights into VCPs within a specific regional context, its findings may not fully capture the diversity of entrepreneurial education experiences on a global scale. Researchers and practitioners in other regions should carefully consider the cultural and contextual differences when applying the insights from this thesis.





## 4. APPENDED PAPERS: SUMMARIES AND CONTRIBUTIONS

In the following chapter, the four appended papers are summarized with an emphasis on findings that inform my subsequent discussion in relation to the thesis RQs. Each paper summary is concluded with an implication the paper has towards the thesis RQs. A summarized overview of the findings towards the thesis research questions are presented in Table 5.

*Table 5. Summary of findings from appended papers addressing thesis research questions.*

<b>Paper</b>	<b>Findings from appended papers addressing RQ1: What characterizes entrepreneurial careers?</b>	<b>Findings from appended papers addressing RQ2: What distinct entrepreneurial career archetypes are found in Venture Creation Program graduates?</b>
<b>1</b>	Entrepreneurial competencies are crucial and consistently applied across different types of entrepreneurs (self-employed, intrapreneurs, hybrids) but less so by conventional employees.	Entrepreneurial competencies are decoupled from organizational context.
<b>2</b>	Prior experiences, such as startup experience or entrepreneurial family background, have some influence, but the impact of VCPs on career choice is greater.	
<b>3</b>	Career anchor dyads explain how entrepreneurial careers are sustained by linking competencies, motive, and values.	Career anchor dyads result in distinct entrepreneurial careers patterns which can be differentiated from non-entrepreneurial careers.
<b>4</b>	VCP graduates demonstrate overall career stability, with many socialized early into a specific career orientation that aligns with their self-concept.	VCP graduates' careers are shaped by the organizational- and professional contexts in which graduates operate, with high mobility only within a set contextual anchoring.

## **4.1 Paper summaries**

### **4.1.1 Paper 1: Graduates of venture creation programs– where do they apply their entrepreneurial competencies?**

The development of entrepreneurial competencies gained through entrepreneurship education can lead to a variety of career paths beyond simply becoming a "startup entrepreneur." In Paper 1, this was investigated using data from graduates of three VCPs, where 28% of graduates are self-employed entrepreneurs, and 72% are employed in hybrid roles or other positions. Traditional categorization often classifies entrepreneurs strictly as startup founders, implying that studies and policies primarily focus on these individuals based on their occupational choice rather than the competencies they have acquired.

The central question in this study was: how can one research entrepreneurial careers when it is unclear who qualifies as having one? Following Hager and Gonzi's (1996) description of competencies, the theoretical assumption was that competencies developed through a VCP are realigned and further developed for specific occupational contexts. Graduates from the three VCPs reported the extent to which they apply their entrepreneurial competencies in their careers through a web-based survey.

The survey covered 14 entrepreneurial competencies categorized into three sections: 1) knowledge and skills related to the entrepreneurial process, 2) judgmental ability and decision-making related to entrepreneurial action, and 3) social skills and networking abilities (see Table 2). Graduates were also asked about their main occupation, revealing that the most common career is as a self-employed entrepreneur, followed by intrapreneurs applying their entrepreneurial competencies within established organizations. A smaller group of graduates pursued hybrid careers, combining paid employment with self-employment, or conventional careers as full-time employees in established companies where entrepreneurial tasks were not their primary focus.

These descriptive findings suggest that VCPs provide fertile ground for graduates to engage in entrepreneurial careers beyond firm founding. Present occupation was used as the dependent variable, while entrepreneurial competencies developed through education and attained in professional work served as independent variables. The analysis, conducted through ANOVA with post hoc analysis between occupations, highlighted the differences and similarities in the utilization of entrepreneurial competencies.

The analysis revealed that careers as either intrapreneurs or self-employed entrepreneurs share more similarities in the utilization of entrepreneurial competencies than when compared to conventional employees. This implies that even though these careers take place within established organizations, the application of entrepreneurial competencies is more pronounced in graduates pursuing intrapreneurial careers. The study thus provides implications that entrepreneurship education involving real-life experience through venture creation contributes to entrepreneurial careers beyond startups. Additionally, it offers a first attempt to assess how entrepreneurial competencies developed through education manifest in subsequent careers, suggesting policy implications for moving beyond the startup-centric perspective typically associated with VCPs.

#### **4.1.2 Paper 2: Mitigating the lack of prior entrepreneurial experience and exposure through entrepreneurship education programs**

To deepen our understanding of how entrepreneurship education impacts entrepreneurial careers, the purpose of Paper 2 is to investigate how VCPs can mitigate or even surpass a lack of other antecedents to entrepreneurial careers, such as entrepreneurial pedigree or prior entrepreneurial experience. The overarching question in Paper 2 is: what role do VCPs play in the subsequent career choices of graduates, particularly in relation to the impact of prior entrepreneurial experience and entrepreneurial pedigree?

There is limited understanding of the extent to which experiential action-based learning in VCPs can mitigate other antecedents to entrepreneurial careers. Typically, these antecedents, such as having an entrepreneurial family background or prior startup experience, are used to explain why some individuals are more inclined toward entrepreneurial careers.

Building on the findings of Paper 1, which identified four occupational forms, self-employed, intrapreneur, hybrid (self-employed and employed in parallel), and conventional employment, this study utilized data from the web-based survey conducted with graduates of the three VCPs. Questions addressed graduate backgrounds before education, yearly occupational employment after graduation, and graduates' perceptions of entrepreneurial activity in their employment positions. Present occupation was again used as the dependent variable, with entrepreneurship education, pedigree, and prior entrepreneurial experience as independent variables in a logistic regression design.

The findings of Paper 2 indicate that the educational context of a VCP, whether Ind-VCP or Corp-VCP, can mitigate the influence of prior entrepreneurial experience. While prior

entrepreneurial experience interacted with Ind-VCP to make a career in self-employment more likely, this was not the case for Corp-VCP graduates choosing intrapreneurial careers. Entrepreneurial pedigree had no significant effect on career choice, except in the case of hybrid careers.

#### **4.1.3 Paper 3: Anchoring sustained entrepreneurial careers beyond firm founding**

Building on insights from Paper 1, which highlighted the widespread application of entrepreneurial competencies among VCP graduates, Paper 3 aimed to delve deeper into the motives driving individuals to pursue entrepreneurial careers and how they derive personal value from such pursuits. By integrating Schein's career anchor framework, this paper sought to uncover the underlying competencies, values, and motives that sustain entrepreneurial careers, expanding the perspective beyond firm-founding and financial success.

To ensure that the selection criteria did not solely hinge on conventional notions of career success, a second study was conducted, as described in the methods chapter as Study 2. The findings revealed a diverse array of sustained entrepreneurial career paths, including intrapreneurs known for their creativity, entrepreneurial managers with strong general management orientations, and individuals who embrace entrepreneurial ventures as temporary challenges.

Central to the findings is the identification and substantiation of career anchor dyads, pairs of career anchors that form the foundation of sustained entrepreneurial careers, distinguishing them from non-entrepreneurial careers. These dyads encapsulate the essence of entrepreneurial competencies and reflect distinct career and role patterns previously undocumented. This discovery suggests a reevaluation of entrepreneurial careers as stable and enduring pursuits characterized by ongoing new business activities, advocating for a competency-based professionalization of entrepreneurship, in contrast to the traditional focus on opportunity, intent, or passion.

Paper 3 contributes a novel theoretical elaboration to the career anchor framework, proposing the exploration of career anchor dyads and more complex configurations in future research. By examining these dyads through an entrepreneurship lens, the paper uncovers a spectrum of entrepreneurial career profiles that extend beyond the singular entrepreneurship anchor, challenging the prevalent emphasis on firm-founding in entrepreneurship scholarship. The persistence of career anchors in entrepreneurial careers sheds light on the foundational

elements guiding individuals throughout their professional journeys, whether by tackling specific challenges, leveraging general management and intrapreneurial skills, or innovating with creativity. These insights not only redefine entrepreneurial careers as a distinct profession but also underscore the fluidity and individuality of entrepreneurial paths, particularly among those educated in entrepreneurship.

#### **4.1.4 Paper 4: Shifting tides, stable grounds: career mobility of entrepreneurship education graduates**

In this paper, my co-authors and I introduced boundaryless career theory as a representation of career mobility among the studied individuals. To avoid confusion between mobility as mere role changes within a similar context, we introduced the concepts of organizational- and professional contexts.

Organizational context covers the physical environment in which role development and transitions occur, such as in corporations, SMEs, or startups. Professional context encompasses the domain-specific knowledge required and the social competencies needed to navigate these contexts. A shift in organizational- or professional context would indicate a substantial shift in how one evaluates the transitional costs in terms of competencies and potentially self-concept. This level of analysis is more indicative of major career shifts than simply changing roles within one's established organizational- and professional context.

The findings revealed that the majority of studied individuals exhibited low career mobility and have a specific organizational- and professional contexts. Conversely, transient careers with high mobility were identified in only two cases, with four careers exhibiting high mobility in organizational contexts and five in professional contexts. Contrary to conventional entrepreneurship literature, stable careers with low mobility demonstrated a high utilization of entrepreneurial competencies, including sustained intrapreneurial careers and firm-founding cases. Through the additional evaluation of entrepreneurial competencies, five distinct career clusters were identified.

For the startup context, two career types emerged: one emphasizing the importance of being a founder (Startup\_1) and the other driven by challenges, open to roles like interim CEO without needing founder status (Startup\_2). In the corporate context, two distinct career patterns were identified: Corp\_1, characterized by creativity and management skills akin to intrapreneurs; Corp\_2, with limited entrepreneurial activity. The final group, defined by their mobility,

exemplifies how many describe entrepreneurial careers as highly dynamic, though they were a minority in this study.

The findings from Paper 4 are significant for several reasons, particularly the identification of entrepreneurial individuals within a matrix of organizational- and professional contexts. A key finding is the “contextual anchoring” in VCP graduates’ careers, which informs the career stability argument that I presented in the theory chapter.

## **4.2 Reflection on paper findings**

The findings from the papers contribute both individually and collectively to addressing the thesis research questions. The first key individual finding is that entrepreneurial competencies are applied equally or more extensively by firm founders, intrapreneurs, and hybrid entrepreneurs across nearly all 14 measured entrepreneurial activities in Paper 1. In contrast, conventional employees apply these competencies less consistently. This supports the initial assumption that entrepreneurial competencies are a significant measure and concept for describing entrepreneurial careers across various organizational contexts.

Furthermore, the conceptual and empirical work presented in Paper 3 positions career anchor dyads as a theoretical framework for understanding individual competencies, motives, and values in entrepreneurial careers. When examining career mobility in Paper 4 from an organizational- and professional context, a pattern emerges indicating contextual anchoring in the careers of VCP graduates. The studied individuals are socialized early into specific career orientations through their type of VCP (as found in Paper 2), and although VCP graduates enter their studies with diverse prior experiences, these pre-existing factors are less impactful compared to the influence of a master’s level VCP. Graduates are not blank slates, but the type and focus of a VCP have a more substantial impact on career choice than other antecedents, see Paper 2.

## 5. DISCUSSION

The purpose of this thesis was to investigate entrepreneurial careers with the aim of characterizing these careers on an individual level, decoupled from their organizations. I have tested the constructed competencies-perceptive and identified archetypical careers in the VCP graduate population. In doing so it has broadened the discussion of entrepreneurial careers beyond the narrow and temporal focus on firm founding that perpetuates the unsatisfactory binary measure of “entrepreneur” or “not entrepreneur”. While there are studies that have examined the pre- and post-events of firm founding, few have investigated the career of entrepreneurial individuals over the extended timeframe and across diverse organizational contexts that I have explored.

My research contributes to positioning entrepreneurial competencies as a stabilizing force within entrepreneurial careers. This contribution is particularly significant to entrepreneurship research, as it applies modern career theories within a well-defined empirical context. It also advances career research by empirically testing evolving concepts, specifically career anchors, in line with current recommendations (Schein et al., 2023). These contributions have practical implications, which will be discussed following the presentation of answers to the research questions.

Moreover, this thesis highlights the complex realities faced by graduates of VCPs, as they embark on entrepreneurial careers, creating value across a variety of contexts and roles. These career paths sharply contrast with the structured trajectories typical of traditional professions like medicine or law (Pratt et al., 2006). The findings from the appended papers provide multifaceted insights, directly informing the two research questions that guide the aim and structure of this thesis:

**RQ1:** What characterizes entrepreneurial careers?

**RQ2:** What distinct entrepreneurial career archetypes are found in Venture Creation Program graduates?

In Chapter 5.1, I delve into how entrepreneurial competencies and career anchors characterize entrepreneurial careers, providing a detailed argument for their significance. This discussion not only addresses the first research question but also elaborates on the contribution my research has made to understanding what characterizes entrepreneurial careers over time. In

Chapter 5.2, I address the second research question by extending the discussion from the first question and then presenting a new framework that reconstructs career anchors together with the mapping of contexts, forming the building blocks for archetypes of entrepreneurial careers.

## **5.1 Characterized entrepreneurial careers through entrepreneurial competencies**

What characterizes entrepreneurial careers? The short answer lies in the sustained and applied utilization of entrepreneurial competencies. While the focus of this thesis is primarily on competencies as a stabilizing mechanism in entrepreneurial careers, it is also important to consider values and motives, which together with competencies form part of career anchors (Schein, 1985; Schein et al., 2023). Building on Schein's career anchor theory, values and motives are recognized to play an equally important role in shaping how individuals engage in their career, evolving to Schein's concept of an "internal career", how individuals defines their career to themselves (Schein et al., 2023), where self-concept as personal alignment with one's career path are key. As in careers in general, this is seen to be important in entrepreneurial careers as well, informing how individuals engage in entrepreneurial activities as part of their sequence of work experiences. In this thesis, values and motives are explored as components within the broader framework of career anchors, but the emphasis remains on competencies as the primary mechanism driving career stability (Sugiyama et al., 2024). To illustrate my thoughts and the subsequent discussion, a summary of my arguments for answering research question 1 is presented in Figure 2.

To structure my argumentation, I following the "layers" in Figure 2 from top to bottom. First, the overarching career definition used in this thesis follows Arthur et al. (1989), emphasizing individuals' sequence of work experiences over time. Arthur and Rousseau (1996) argue that a career can be studied through three main components: self, context, and time. This framework provides the foundation for introducing key theoretical concepts, which I populate with the papers' findings. Schein's career anchors (Schein, 1985; Schein et al., 2023) represent the "self", organizational and professional contexts refine the concept of "context" (Sullivan & Arthur, 2006), and the "time" component is represented by the continuity of work sequences (Arthur et al., 1989).



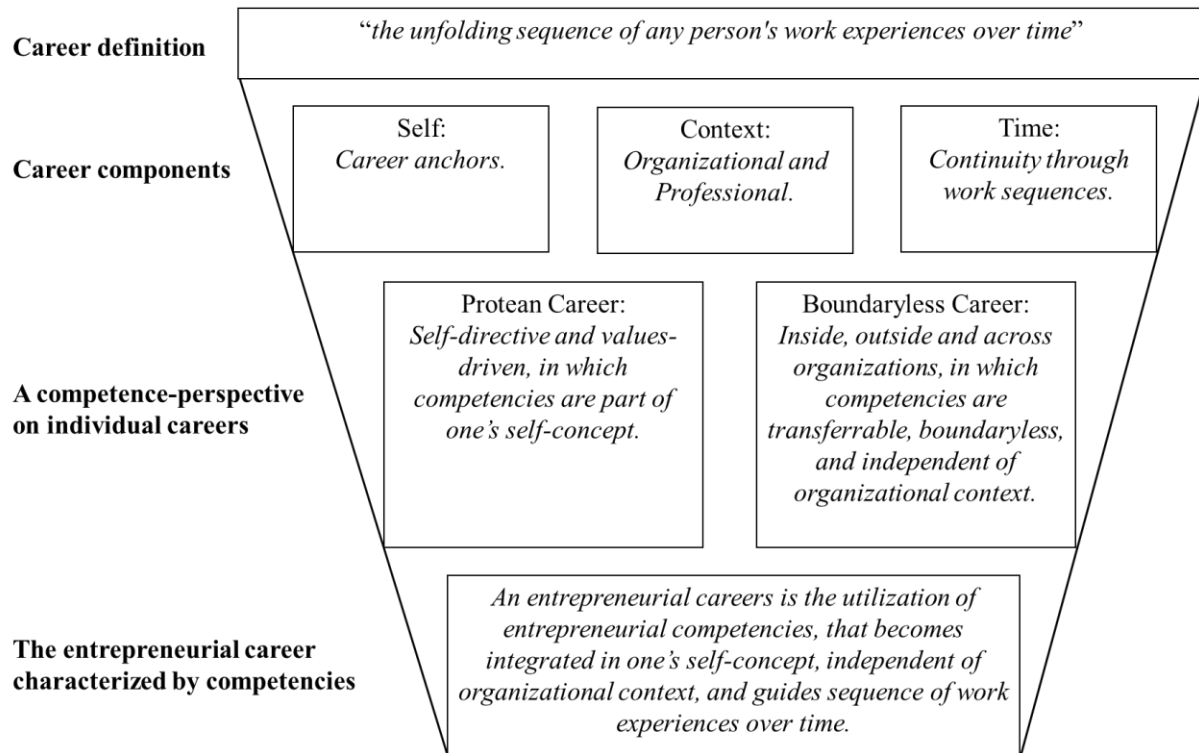


Figure 2. Overview of argumentative process from definition of career to how entrepreneurial careers are characterized by competencies.

Protean career theory provides a straightforward interpretation of entrepreneurial careers, where engagement in entrepreneurial activities is driven by personal values and self-direction. However, this thesis offers a more refined perspective. I find that VCP graduates, whose values align with the development and application of entrepreneurial competencies, tend to remain engaged in entrepreneurial activities, even if they do not become firm founders. These values and self-directed behaviors, traditionally linked to firm founders, are also present in VCP graduates operating in a variety of contexts.

Boundaryless career theory emphasizes the fluidity and adaptability of careers that transcend organizational boundaries (Arthur & Rousseau, 2001; Sullivan & Baruch, 2009). The findings from my research reveal that VCP graduates who have made career transitions embody this boundaryless career mobility. These individuals apply their entrepreneurial competencies across various contexts, including self-employment, intrapreneurship, and hybrid roles, reflecting the adaptability and transferability of their competencies. This supports the idea that entrepreneurial careers are not confined to any specific employment or organizational context but are shaped by the continuous application of competencies, regardless of the setting. The empirical findings has shown that individuals apply these competencies across a variety of contexts, illustrating that entrepreneurial careers can thrive in diverse environments.

Furthermore, this aligns with the central problem addressed in this thesis: the limited understanding of entrepreneurial careers when examined solely through the lens of firm ownership or firm founding, rather than focusing on the broader career of the individual.

A connection between protean and boundaryless career perspectives emerges when interpreting the findings of entrepreneurial competencies and career anchor dyads, and their role as stabilizing elements in entrepreneurial careers. Entrepreneurial competencies is found to be boundaryless as shown in Paper 1 where competencies are applied across diverse contexts. But they are also integrated within protean career theory, where self-direction and personal values guide the VCP graduates towards engaging in entrepreneurial activities with their entrepreneurial competencies, which was found in Paper 3. This I argue enables entrepreneurial individuals to transition smoothly between organizational contexts by re-aligning existing competencies, rather than acquiring new ones (DeFillippi & Arthur, 1994; Sullivan & Baruch, 2009). It implies that what Thorgren and Williams (2023) are arguing for, the need to have a longer perspective on entrepreneurial careers and not just focusing on the firm founding event.

Building on the theoretical construction of the self-concept\* competencies integration, as outlined in chapter 2.3, I see that entrepreneurial careers are stabilized through the alignment of competencies and self-concept in my studies. When entrepreneurial competencies gain salience within an individual's self-concept, they together with the career anchor dyads become an internal stabilizing force for the career. Thus, in entrepreneurial careers, the deliberate decoupling of the individual from the organization underscores the importance of internal stabilizing forces. Competencies, when deeply embedded within the self-concept, offer both adaptability and continuity, through what Sugiyama et al. (2024) describes as a "paradoxical anchoring and evolving" that keeps one's professional self-concept steady enough to guide action while keeping open possibilities for change. In other words, it is the competencies, when deeply embedded into one's self-concept, that provide the structure and stability traditionally supplied by organizations or established career paths. It resonates with Schein et al.'s (2023) "Internal Career" where career stability comes from within rather than from external structures.

This interpretation of competencies introduces a novel perspective: competencies are not only functional but also individualized, moderated by one's self-concept. This explains why entrepreneurial competencies are evenly distributed among intrapreneurs and self-employed VCP graduates (as seen in Paper 1), yet still manifest differently in their self-concepts (as evidenced by the career anchor dyads from Paper 3). Developing competencies along a learning

continuum from novice to expert reflects a deep commitment to one's professional identity. A decision to forgo these accumulated competencies suggests a profound shift in self-concept, as individuals must weigh the significant costs of disrupting an established career path (Dlouhy & Biemann, 2018; Radu-Lefebvre et al., 2021). This internal stabilization takes time to mature (Schein, 1996), as the alignment of competencies, values, and motives evolves through sustained involvement in entrepreneurial activities, allows stability to emerge organically (Sugiyama et al., 2024) into career anchor dyads.

Consequently, a career transition may involve a similar competencies-problem fit in a different organizational or professional context, but the fundamental transition costs are influenced by how these changes affect one's self-concept (Sugiyama et al., 2024). Study 2 demonstrate that such transitions are rare; most VCP graduates remain within their established competence-problem fit not merely due to developed competencies but because they find meaningful alignment with their self-concept. This supports the extended definition of competencies as integrated with self-concept (as Schein et al. (2023) implies), where self-concept provides the framework for the application of entrepreneurial competencies.

My contribution to research on entrepreneurial careers on an individual level is twofold:

- A) Entrepreneurial competencies are boundaryless, as they are transferable across various contexts; and
- B) they act as a stabilization mechanism in themselves, and more so when aligned with motives and values to support strategic decision for self-directedness in regards to entrepreneurial activity.

My final interpretation of *what characterizes an entrepreneurial career*, and thus my answer for research question 1, is that it involves *the utilization of entrepreneurial competencies, which become integrated into one's self-concept, independent of organizational context, and guide the sequence of work experiences over time.*

## **5.2 Archetypes of entrepreneurial careers**

What distinct entrepreneurial career archetypes are found in Venture Creation Program graduates? The short answer to this question is that there are six career archetypes found, and four that I categorize as entrepreneurial career archetypes.

These archetypes provide a further elaboration and substantiation of types of entrepreneurs that have been previously discussed in literature, such as serial entrepreneurs, portfolio entrepreneurs, etc. (e.g., Ucbasaran et al., 2008; Westhead et al., 2005). In this thesis, I elevate the findings from the appended papers and the individual-level of analysis, to the population-level of analysis, finding that the suggested entrepreneurial career archetypes provide a meaningful and nuanced outcome of VCPs in and beyond startups, in line with Gartner's (1982) argument in the introduction.

To answer the second research question, I mainly utilized the rich data from Study 2. Building on the argumentation for research question 1 in chapter 5.1, with the main insight that self-concept and competencies are stabilizing careers, my interpretative approach to substantiate entrepreneurial career archetypes focused on the entrepreneurial career anchor dyads from Paper 3 and the career mobility in organizational and professional contexts as elaborated on in Paper 4, see Figure 3 for coding approach.

From the coding approach I did in Figure 3, I identified six distinct archetypes of careers stemming from VCP graduates, as shown in Table 6. The archetypes I construct here build on the idea that entrepreneurial competencies and the motives and values for engaging in entrepreneurial activities manifest in one's career anchors. From Paper 4, individuals career mobility in organizational- and professional contexts results in four types of contextual anchoring: stable career, profession-dynamic career, organization-dynamic career, and transient career.

This leads to the identification of six distinct archetypes within the studied VCP graduate population, elevating the analysis from the individual level to a group level, as seen in the appended papers. Although the dimensions used to construct these archetypes originate from Study 2, the explorative Study 1 provided important insights into how to frame the "entrepreneurial" in the explanatory Study 2. However, it is crucial to note that not all VCP graduates have entrepreneurial careers. Some have found other paths in their careers and do not identify with a self-concept of being entrepreneurial, nor do they feel the need to develop or utilize entrepreneurial competencies. Of the six identified archetypes, I characterize four as archetypes of entrepreneurial careers.

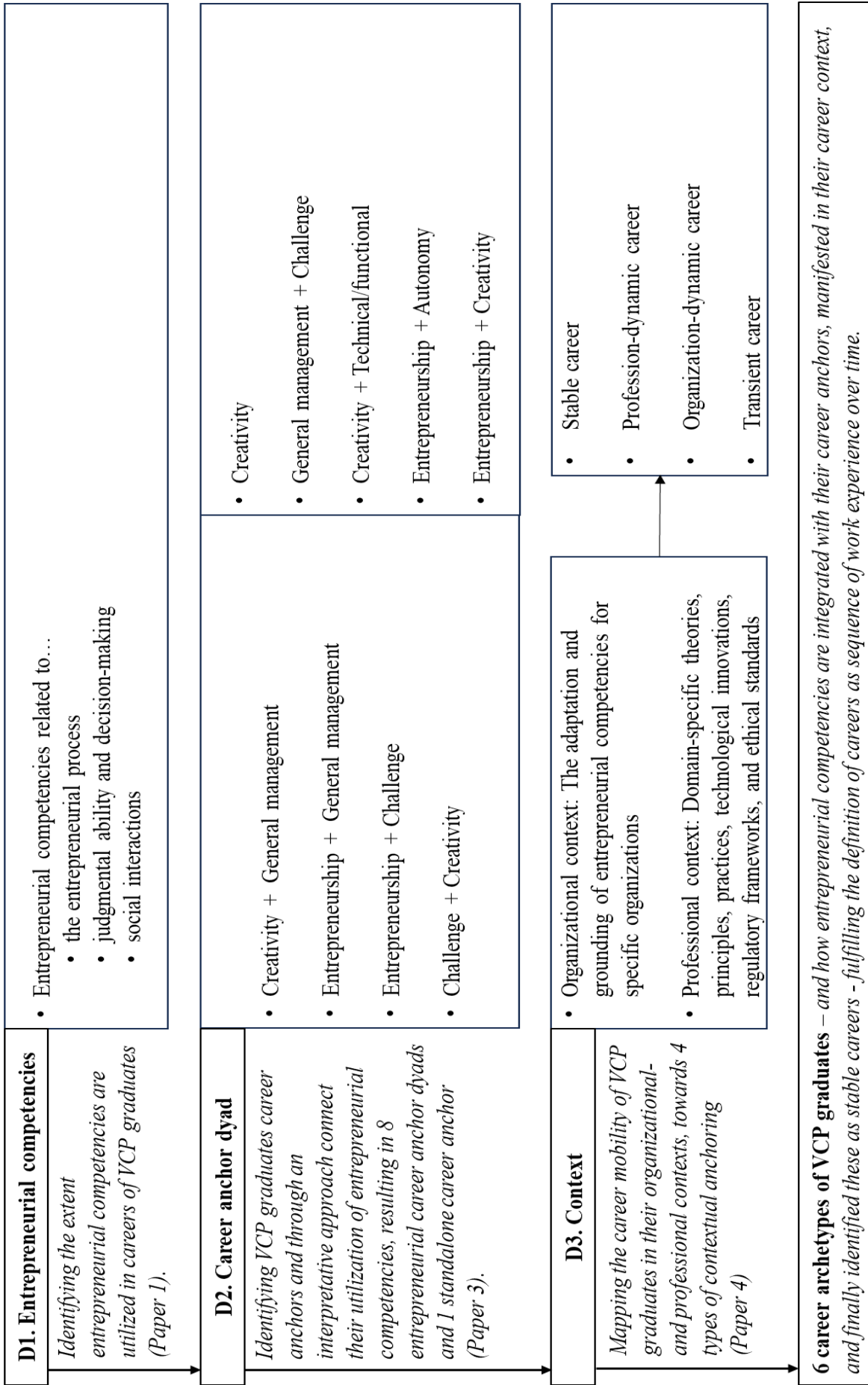


Figure 3. The three-dimensional interpretative approach for identifying and substantiating entrepreneurial career archetypes.

*Table 6. Description of entrepreneurial career archetypes identified in VCP graduates.*

Archetype	(1) Career anchor dyad, and (2) type of contextual anchoring
<b>Firm-builder</b>	<ol style="list-style-type: none"> <li>1. Career anchor dyads containing the Entrepreneurship anchor. Being a founder is a central part of self-concept.</li> <li>2. Stable career: Located in the startup environment and to some extent also in SMEs if the growth of one's firm has reached that level. Have a set preference of professional context.</li> </ol>
<b>Intrapreneur</b>	<ol style="list-style-type: none"> <li>1. The main career anchor dyad containing Creativity and General management. Or Creativity paired with Technical/functional anchor, reflecting either organizational work preference or innovation work preference.</li> <li>2. Stable career or to some extent professional-dynamic careers: Located in corporate or SME environment. Cyclic or careful vertical evolution of roles within that organizational context. Prioritizing maintaining creative space and high level of self-directiveness. Potential movement between professional contexts. It is conditioned by having high creativity in one's roles.</li> </ol>
<b>Surrogate</b>	<ol style="list-style-type: none"> <li>1. The surrogate has Challenge as its main anchor, in dyadic configuration with either Entrepreneurship, Creativity or General management.</li> <li>2. Stable career or to some extent professional-dynamic careers: Located in the startup environment with a cyclic role evolution resulting from joining growing firms at specific phases and after the phase is completed, they searches for new projects to join. Mobility in professional contexts was relatively stable, though some sought their Challenge from transitioning into new professional contexts.</li> </ol>
<b>Nomad</b>	<ol style="list-style-type: none"> <li>1. The most salient anchor dyad is Creativity paired with Challenge or General management. Emphasis on having new creative and innovation challenges.</li> <li>2. Transient careers: Belonging to a specific environment was not valued when reflecting on self-concept. Compared with the other archetypes, they are more open to changing professional context.</li> </ol>
<b>Independent consultant</b>	<ol style="list-style-type: none"> <li>1. Career anchor dyads of General management or Technical/functional in combination with Creativity.</li> <li>2. Stable careers: Corporate or SME environments. Stability in professional context.</li> </ol>
<b>Conventional employee</b>	<ol style="list-style-type: none"> <li>1. General management or Technical/functional as sole anchor.</li> <li>2. Stable careers: Corporate or SME environments. Stability in professional context.</li> </ol>

A common denominator for the four entrepreneurial career archetypes is that they are extensively value-driven compared to the non-entrepreneurial career archetypes identified. Self-directiveness varies on a relative scale, with firm-builders valuing it the most, followed in relative order by surrogates, nomads, and intrapreneurs. These archetypes also exhibit relatively small mobility between organizational and professional contexts, indicating that they are stable careers. Therefore, the level of self-directiveness and working in alignment with one's values are more prevalent characteristics of an entrepreneurial career than having transient or highly dynamic careers (as described by Burton et al., 2016).

This does not mean that VCP graduates have low career mobility; instead, it manifests within archetype boundaries, with transitions between archetypes being rarer. For example, an intrapreneur might change and evolve roles frequently within their organizational context of larger corporations. Even though this work sequence from an external perspective might be seen as a high career mobility, it is conducted within their preferred organizational context. If the same intrapreneur would transition into a startup as their organization, that entails a major shift in one's self-concept\* competencies integration as I elaborated on in chapter 5.1.

An interesting aspect here is that many entrepreneurship and career researchers might argue is that the other entrepreneurial career archetypes that are not firm-builders, are in a transitional state and will found a firm of their own. However, the findings of this thesis tell a different story, one where the identified archetypes are sustained entrepreneurial careers, and it is likely that we will observe intrapreneurs, surrogates, and nomads maintaining their careers until retirement with little or no shift toward firm-building. With this insight in mind, I view the archetypes and their delineation as outcomes of entrepreneurship education as an important theoretical and practical contribution to both the career and entrepreneurship research fields.

A key insight challenges the traditional notion that entrepreneurial individuals all strive for a definitive form of 'success' as the ultimate goal in their careers (Baker & Welter, 2024; Burton et al., 2016, 2019; Dyer, 1995; Hegde & Tumlinson, 2021). If career success is defined solely by clear outcomes like founding a firm, it becomes an achievement measured by a specific, tangible goal, either realized or not. However, a broader and more nuanced view of career success, particularly from the lens of protean career theory and Schein's (1996) discussion of the internal career, emphasizes self-direction and alignment with one's internal values. In this perspective, career success is less about external accomplishments and more about making strategic, self-directed choices that align with an internal 'compass'. It's about taking the jobs

or opportunities one truly desires, pursuing challenges that foster personal growth, and maintaining balance between professional and personal fulfillment. Conversely, career failure in this context would involve 'making do', being forced into situations out of necessity, or lacking that crucial alignment and balance, essentially losing control over one's career direction. Therefore, the entrepreneurial career may not be as focused on traditional markers of success or failure but rather on staying true to personal values, embracing challenges, and continually evolving in alignment with one's internal compass.

First, I present the archetypes which are categorized as non-entrepreneurial. These two archetypes are important to present as they provide comparative arguments that help clarify why the other archetypes are considered entrepreneurial.

The *conventional employee* archetype is primarily centered around managerial responsibilities, focusing on managing and optimizing existing resources and projects. This archetype adheres to organizational norms and follows designated pathways for career progression. The conventional employee emphasizes stability and alignment with established organizational structures, making it a useful point of comparison when examining other corporate archetypes. It is important to note that individuals identified as conventional employees still value their competencies and experiences from their time in the VCP and appreciate having formal entrepreneurship education. However, their career narratives are more ambiguous about being entrepreneurial compared to their peers in entrepreneurial career archetypes. Therefore, the conventional employee career coming from a VCP might stand out as 'entrepreneurial' when compared to a control group, indicating that the utilization of entrepreneurial competencies is on a relative scale and not a binary qualifier.

The *independent conventional consultant* is formally self-employed but uses this status to offer consultancy services to other organizations. The independent conventional consultant presents a dissonant archetype, which in entrepreneurship and career research often gets conflated with entrepreneurial careers. This archetype highlights the value of a competencies-perspective on entrepreneurial careers, as it detaches the individual from the firm and distinguishes the firm-builder from the independent consultant. This distinction and reflection are rare in existing literature and indicate a lack of precision in both entrepreneurship and career research (Schein, 1995). This issue is especially prevalent when quantitative methods do not specifically inquire about what entrepreneurs do but rather assume that when investigating firms founded, they are run by entrepreneurs. These insights became apparent after Study 2, and reflecting back on



Study 1, the individuals coded as self-employed were not separated into those who were firm-builders and those who used a firm as an organizational tool. This is a methodological insight that future studies should consider.

### **5.2.1 Firm-builder**

The *firm-builder* archetype is deeply rooted in the self-concept of being a founder, with a profound alignment with the principles of entrepreneurship. So why do I not call it the firm-founding archetype? From Paper 4 the analysis of organizational- and professional contexts of firm-builders exhibits a strong connection to their startup environment and often do not perceive a transition to more corporate environments as advantageous. Firm-builders find their purpose and direction in this embeddedness and are committed to continuing their entrepreneurial work as it is. This commitment sometimes evolves into a journey toward building a small to medium-sized enterprise (SME), where the growth of their startup becomes an integral part of their self-concept, thereby giving rise to what might be termed 'legacy firm-builders'. Therefore, I chose to call this archetype firm-builder, as some have only founded one firm, and thus the connotation of building seems more inclusive for the VCP graduates who share the same career anchor dyads, just not the same motive of how long an engagement in a firm is desired.

The findings in Paper 3, informs a more nuanced view of career anchors, in which firm-builders are not solely motivated by their aspiration for self-employment. This is reflected in the career anchor dyads where the Entrepreneurship anchor is a cornerstone and the other anchor in the dyad shape their motives for embarking on the journey of creating new firms. These motives can be diverse, ranging from a desire for autonomy, characterized by a longing for freedom and an aversion to being overly focused on metrics and financial gains, to a need for creative control, where firm-builders strive to maintain their creative and developmental space without being bogged down by administrative tasks.

Furthermore, firm-builders are often driven by the aspiration to manage, lead, and collaborate closely with a dedicated team, aiming to synergize individual strengths and competencies. For some, the allure lies in the inherent challenges and the meaningfulness derived from navigating these challenges, likened to embarking on a journey through uncharted territories and growing personally from the experience.

While the firm-builder archetype is not novel in the research of entrepreneurial careers, it plays a crucial role in enhancing our understanding of this type of applied entrepreneurial

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competencies. This archetype, particularly through its variations as either serial or portfolio entrepreneurs, is well-established in both academic and practical discussions of firm initiation and development. The concepts of serial and portfolio entrepreneurship, as discussed by scholars such as Ucbasaran et al. (2008) and Katz (1995a), suggest that the pursuit of autonomy and entrepreneurship as career anchors might lead individuals to engage in multiple entrepreneurial firms over time.

The contributions of Study 2, however, challenges the stark distinction traditionally made between serial and portfolio entrepreneurs. It was found that firm-builders involved in creating a portfolio of firms often maintain active roles in their startups, albeit in evolving capacities. This observation contests the notion proposed by Katz (1995a) that engaging in a portfolio of entrepreneurial activities might necessitate sacrificing autonomy for the sake of entrepreneurial drive. Instead, the findings propose that the concept of serial entrepreneurship might be more accurately seen as a subset of portfolio entrepreneurship, characterized by a more fluid engagement with past firms rather than a complete detachment.

The firm-builder archetype, with its deep-seated founder self-concept and diverse motives for creating new firms, embodies the essence of entrepreneurial drive and innovation. The nuanced understanding of this archetype enriches the understanding of what characterizes an entrepreneurial career and the dynamic nature of firm-building.

### **5.2.2 Intrapreneur**

The *intrapreneur* stands out as with their self-concept as being entrepreneurial, distinguishing themselves relative their conventional employed peers in their corporate context, by their drive to initiate and guide new entrepreneurial activities using creativity as a catalyst for innovation. Their career anchor dyads, as outlined in Table 6, are a combination of Creativity and General management. But it can also be creativity paired with Technical/functional anchor, reflecting either organizational work preference or innovation work preference.

Intrapreneurs' entrepreneurial self-concept is central for fueling their desire for self-directiveness and freedom from the constraints of conventional corporate structures that they believe hinder their potential to create value and solve complex problems, which was a prominent theme in Paper 3. Intrapreneurs take on roles requiring a novel approach to navigate ambiguous situations and capitalize on new opportunities, making them key players in driving and transforming the modern business environment.

They strategically choose projects that allow them to establish and nurture trust-based relationships with their employers, which leads to a creative space in which they have a high level of self-directiveness and can utilize their entrepreneurial competencies to run internal projects as internal ventures. This strategic approach allows them to thrive in environments that demand innovation and adaptability, while simultaneously having traditional securities offered by consistent income and benefits. This not only informs their day-to-day activities but also shapes their long-term career path, which for the observer might be interpreted as fostering aspirations towards full-fledged entrepreneurship in self-employment.

However, intrapreneurs navigate the delicate balance between these aspirations and the realities of work-life balance and familial responsibilities, which can introduce substantial transitional challenges (a peripheral theme in Study 2). A novel insight from Paper 3 towards this archetype is that intrapreneurs have found a space for them to act entrepreneurially and do not see a need to transition into self-employment, which some see as the desirable end-goal for an entrepreneurial career (Burton et al., 2016; Hegde & Tumlinson, 2021). It can be close at hand to say that intrapreneurs have settled for “good enough”, but combined with the insights from Paper 2, a career in corporate environment can also entail an interest and motive for entrepreneurial challenges. Intrapreneurs are not outliers, nor have settled for “good enough”, but rather have found a path that traditional entrepreneurship or career research cannot conceptually frame without leaning on inaccurate biases.

I see it as likely that innovation, management, organization, career, and many other research fields need to build stronger connections to entrepreneurship research for more substantiated knowledge of intrapreneurs as they are often discussed in these fields as e.g. change managers. But intrapreneurs are still considered peripheral to the main objectives in the forementioned research fields and for more substantiated knowledge there needs to be bridges built and “peripheral” phenomenon to be studied.

### **5.2.3 Surrogate**

The *surrogate* archetype represents a unique career path that is characterized by individuals who temporarily assume the role of an entrepreneur within various firms. These surrogates are invaluable for their ability to infuse a team with essential entrepreneurial competencies, particularly during critical growth phases or pivotal moments requiring significant change. Their expertise, garnered from a wealth of experience in specific entrepreneurial processes, predisposes them to a cyclical career pattern, consistently drawn to similar challenges that align

with their deep-seated competencies. Central to the surrogate's self-concept are two main career anchors: Challenge and either General Management or Entrepreneurship. When paired with General Management, the focus is primarily on overcoming organizational challenges, whereas the Entrepreneurship anchor signifies an interest in navigating the intricacies of specific entrepreneurial activities, such as spearheading new growth initiatives. Despite often being integral to early-stage firms, surrogates typically adopt a more passive stance towards ownership, driven instead by the allure of the challenges they are enlisted to tackle.

Surrogates equate autonomy with independence, a perspective that often necessitates a balance between flexibility and stability. This balance is reflected in their preference for engagement flexibility, contrasting with firm-builders who emphasize the importance of choice in their involvement. Surrogates' adaptability, informed by their external viewpoints, enables them to seamlessly integrate into various firms, bringing fresh perspectives and innovative solutions.

Both surrogates and firm-builders share a willingness to embrace personal risk in uncertain environments, a trait that is particularly prominent among surrogates. These individuals not only incorporate external ideas into their firms but also demonstrate a readiness to invest personal stakes into their entrepreneurial endeavors. This propensity for risk-taking, combined with their specialized skill set and adaptability, positions surrogates as pivotal figures, capable of driving significant transformation and growth within the firms they engage with.

Surrogates predominantly thrive in startup environments and, to a lesser extent, in small to medium-sized enterprises (SMEs) on the smaller end of the (relative) scale. Their career mobility appears limited, suggesting a deliberate choice of organizational- and professional contexts that resonate with their self-concept. This selective approach to career mobility is exemplified by surrogates who are often sought after by emerging companies in need of structured growth strategies, as highlighted by one surrogate's reflection on having a career pattern of being recruited by multiple nascent medtech firms to instill organizational structure and strategies for growth.

In entrepreneurship education research, the conceptualization of the "surrogate" archetype has previously been discussed as a type of educational design (see Lundqvist, 2014). This educational design is employed at the Chalmers VCP and entails that teams of student entrepreneurs take on existing (though nascent) innovation projects often derived from researchers with limited experience of entrepreneurship (Lundqvist & Williams-Middleton., 2024; Lundqvist, 2014). Though in a career setting this novel archetype underscores its

distinction from more traditional employment roles through the theoretical framings applied in Study 2. The identification and substantiation of the surrogate archetype informs the power and descriptive qualities in career anchor theory and entrepreneurial context framing over the normative enterprising view on entrepreneurship.

#### **5.2.4 Nomad**

The *nomad* archetype, as identified by interpreting career anchor dyads through organizational- and professional context, exemplifies a unique blend of high mobility and adaptability, both physically and socially. Nomads' career path is characterized by frequent transitions across various contexts and roles. The prevalent career anchor dyads are a combination of Challenge and Creativity, with some individuals also displaying a strong orientation towards General Management. These career anchors highlight the nomad's intrinsic motive for driving them towards roles that present new challenges and opportunities for creative problem-solving.

Nomads are distinguished by their transient career behavior, which defies established expectations and makes predicting their next professional move particularly challenging. Initially, they might appear as outliers when contrasted with more stable and defined archetypes. However, a closer examination reveals that their career transience is not merely incidental but a fundamental aspect of their professional self-concept (see Paper 3 for elaboration). This sustained transience, paradoxically, becomes their defining characteristic over time, underscoring a deep-seated alignment with their career anchors. Nomads articulate a sense of restlessness and a lack of necessity for belonging to a specific sector or domain, driven by an incessant desire for self-challenge and exploration, as one nomad expressed in Study 2: "I'm quite restless and do not feel like I need to belong in any certain silo. The urge to change comes in waves, and I cannot really tell what the common denominator for my jobs has been, apart from challenging myself."

Traditionally, the nomad archetype has been acknowledged within the context of firm founding in entrepreneurship research. However, the findings from Study 2, expand this perspective by adopting a processual and life-span approach to understanding entrepreneurial careers. This broader view challenges the conventional wisdom that firm formation is the pinnacle or most desirable objective for entrepreneurial individuals. Insights from the appended papers are that nomads may not hold firm formation in as high regard as traditionally assumed. Instead, they derive satisfaction and a sense of achievement from engaging in a variety of roles and environments that fully utilize their entrepreneurial competencies and align with their self-

concept. In essence, nomads thrive on the diversity and richness of experiences that their career paths afford them, leveraging their unique blend of skills, motives, and personal aspirations. This approach to their careers allows them to navigate and contribute to different sectors and domains effectively. The nomad archetype, therefore, embodies a dynamic and fluid entrepreneurial career.

### **5.3 Practical contributions**

This thesis contributes significantly to understanding how entrepreneurial competencies characterizes entrepreneurial careers and extend beyond the narrow scope of firm founding. The following chapter outline the practical implications of the thesis findings for educators, policymakers, and other practitioners.

One of the key insights from the research is the need to broaden the definition of success in entrepreneurial careers. Traditionally, success has been tied to firm formation, a narrow metric that overlooks the broader potential of entrepreneurial competencies in various organizational contexts (Burton et al., 2016, 2019; Jones et al., 2017; Kozlinska et al., 2023). This perspective has been shaped by views that a successful startup is the ultimate goal for an entrepreneurial individual (Baker & Welter, 2024; Kuckertz et al., 2023). However my research, that focus on the entrepreneurial individual decoupled from the organizational form, shows that entrepreneurial competencies, developed first through VCPs and then utilized in subsequent careers, are widely applicable across a range of roles and industries, not just in founding firms. The findings reveal that success for VCP graduates is not necessarily linked to firm formation or having a firm exit, but to the alignment of entrepreneurial competencies with personal motives and values. This challenges the conventional focus on financial milestones and encourages a more holistic view of career success, where individuals find fulfillment through the application of their entrepreneurial competencies in various roles and industries (Baker & Welter, 2024).

The empirical evidence suggests that graduates from VCPs apply these competencies in diverse contexts, including intrapreneurial roles and hybrid employment. Thus, this thesis argues for a shift in focus: the real value of entrepreneurship education lies in the broad array of competencies it instills, which can be utilized across a spectrum of professional settings (in line with Jones et al., 2017; Killingberg et al., 2020, 2023; Kozlinska et al., 2023). By expanding the evaluation of entrepreneurship education beyond the number of startups created, this

research contributes to a more inclusive understanding of what it means to have an entrepreneurial career.

VCPs serve as a critical platform for the development of entrepreneurial competencies, facilitating the transition from education to early career choices. The thesis demonstrates that VCPs not only prepare students for firm formation but also for the broader application of entrepreneurial competencies across diverse organizational contexts (Lackéus & Williams-Middleton, 2015). The research also highlights the democratizing effect of VCPs, which offer the opportunity to develop entrepreneurial competencies to individuals from non-entrepreneurial backgrounds. As shown in Paper 2, the type of VCP influences career choices after graduation, guiding individuals toward contexts where their competencies can thrive. This inclusivity broadens access to entrepreneurial careers, ensuring that entrepreneurship education is not limited to those with pre-existing entrepreneurial networks or family backgrounds.

Another practical implication of this thesis is the wider application of entrepreneurial competencies beyond founding firms. The research shows that entrepreneurial competencies are invaluable not only for entrepreneurial activities in founding and growing a firm. But also, in new entrepreneurial activities within established organizations. This insight I view as a potential to also couple together entrepreneurial competencies to competencies in innovation, since intrapreneurs are often involved in both processes in their organizations. The extended implication of this is that companies can benefit from fostering entrepreneurial competencies within their organizations and encouraging employees to leverage entrepreneurial thinking to lead new projects, solve complex problems, and innovate within the corporate structure.

The findings of this thesis call for policy reforms that support a broader approach to entrepreneurship education. Policymakers should promote activities and educations that focus not only on the technical aspects of firm formation but also on the development of broad entrepreneurial competencies (Bacigalupo et al., 2016). Policies should encourage experiential learning programs that allow students to apply their competencies in real-world settings, and in that developing entrepreneurial competencies that are relevant across multiple industries and sectors. Furthermore, collaboration between academia, industry, and government is essential to align entrepreneurship education with the evolving demands of the labor market. By recognizing the societal value of entrepreneurial competencies, policies can promote innovation not only in new firms but also within established organizations and public sectors (Neck & Greene, 2011; Winborg & Hägg, 2023).

The research also highlights the importance of competencies-problem fit in career transitions. VCP graduates who have made career transitions often realign their existing competencies to fit new organizational contexts rather than acquiring entirely new skill sets. This finding has practical implications for career counseling and organizational development. It suggests that individuals may not need to "start from scratch" when transitioning between roles or industries. Instead, they can leverage their existing competencies and align them with new contexts, reducing the transition costs typically associated with career changes (DeFillippi & Arthur, 1994).

Though as also discussed in this thesis, VCP graduates are evaluating their career mobility as staying within their career archetype. Policies that are designed for major career transitions, such as extensive initiatives to promote creating your own firm to individuals who does not have that particular set of career anchors might be counterproductive. Instead, there might be reasons to think about initiatives to promote intra-organizational entrepreneurship to a wider extent. This would in particular be valuable to women who would like to utilize their entrepreneurial competencies more extensively, and who from this thesis and other research studies show a lower career mobility than men, especially in changing organizational context (Sullivan & Baruch, 2009; Sullivan & Arthur, 2006).

In all, this thesis redefines the practical contributions of a competencies-perspective on careers, demonstrating the broader application of entrepreneurial competencies across a variety of organizational- and professional contexts. It advocates for a shift away from traditional metrics, like numbers of firms founded, and towards a more inclusive understanding of what characterizes an entrepreneurial career. By focusing on the development of competencies that can be applied across industries, this thesis offers actionable insights for educators, policymakers, and organizations. It emphasizes the importance of experiential learning in entrepreneurship education and thus also the need for more universities to organize these types of educations, especially VCPs.

Through these insights, the research contributes to the understanding of what characterizes a more innovative and adaptable workforce, better equipped to navigate the complexities of the modern professional landscape.



## 5.4 Limitations

This thesis, along with its appended papers, investigates the ambiguous concept of entrepreneurial careers and makes significant strides increasing the understanding of entrepreneurial careers from a competencies-perspective. The overarching interpretation after doing the two research studies, subsequently packaged towards four academic papers, and also writing this thesis, is that there is still a long way to go for framing and more importantly understanding the ‘entrepreneurial’ in entrepreneurial careers. Acknowledging these limitations, there is a need for a deeper exploration into the intricate web of factors that shape entrepreneurial career paths and for future studies to provide a more comprehensive understanding.

One of the core limitations that I recognized in this research is the conceptual ambiguity surrounding both 'entrepreneurial' and 'career', and their overlap in entrepreneurial careers. I make endeavors to clarify these terms, yet their multifaceted and dynamic nature might constrain the precision and broader applicability of the findings, potentially leading to diverse interpretations across various contexts. Partly this comes from the fact that the research design yielded rich qualitative insights, while introducing a degree of subjectivity, especially in the interpretation of VCP graduates' career anchors and entrepreneurial competencies. This subjective lens could affect the universality of the research findings, limiting their applicability.

Moreover, the interdisciplinary integration called for in literature has been praised and referenced, but rarely implemented. I aim through this thesis to build connections between entrepreneurship and career studies. However, fully bridging these gaps remains an ongoing endeavor, necessitating further research to substantiate the knowledge surrounding entrepreneurial careers beyond the firm formation norm.

Furthermore, I acknowledge the challenge in operationalizing entrepreneurial competencies across diverse professional settings. While it advances the understanding of these competencies beyond firm formation, translating them from educational contexts to real-world applications remains a complex task, because of the plethora of factors forming careers (Arthur & Rousseau, 1996; Dyer, 1995; Sugiyama et al., 2024). This complexity underscores the necessity to contextualize the measurement of entrepreneurial competencies, taking into account the varied demands of distinct occupational roles and how these competencies evolve over the course of one's career.

Another important consideration is to recognize that the way entrepreneurial competencies have been described and utilized in previous studies is primarily through the lens of the firm formation norm (Kyndt & Baert, 2015; Mitchelmore & Rowley, 2010). Competencies are identified as knowledge, skills and attributes needed for working with entrepreneurial efficiency as they are depicted in firm founding and firm growth (van Gelderen, 2020). This was also the approach my co-authors and I took when designing the research, using building on the items in Table 2. It becomes a conceptual projection of one contextually derived type of entrepreneurial competencies onto other contexts. This raises the question: how accurate is this projection? Future research should explore what characterizes intrapreneurial, surrogate, and nomad competencies compared to firm-builder competencies.

The research also highlights the often-confined nature of career mobility within archetypes of entrepreneurial careers, influenced by individuals' career anchors and their preferred organizational- and professional context. This observation points to a limitation in understanding the broader applicability and transferability of entrepreneurial competencies across different industries and organizational forms. Future studies should investigate these and my suggestion for lenses are gender, social and cultural influences, industry sectors, and educational backgrounds (pre-VCP), to uncover more of the mechanisms that contribute to the development of self-concepts and preference for entrepreneurial work. While this thesis contributes valuable insights into the field of entrepreneurial careers, it also lays down a roadmap for future research. By addressing these limitations and exploring the suggested avenues, subsequent studies can enhance our understanding of entrepreneurial careers.

## 6. CONCLUSION

In this thesis I argue for a new perspective on what it means to have an entrepreneurial career by examining it through the lens of entrepreneurial competencies. It reveals the multifaceted nature of these careers, showing how they are shaped by the interplay between competencies and self-concept, leading to stable and sustained careers spanning years and decades. By decoupling the entrepreneurial individual from the firm, I provide a more nuanced understanding of how entrepreneurial competencies influence career paths over time.

This approach challenges the dominant narrative that reduces entrepreneurial careers to the single variable of firm founding. Such a narrow view fails to capture the wide range of entrepreneurial competencies and overlooks the ways in which these create value across various organizational and professional contexts. The fact that only a quarter of VCP graduates choose self-employment reinforces the need to broaden our focus to how entrepreneurial competencies are applied in a variety of careers.

Additionally, this thesis provides a significant empirical contribution to career theory by unpacking the intricate relationship between entrepreneurial competencies and professional self-concept. The findings show that entrepreneurial careers are shaped by how these competencies become integrated into one's self-concept, influencing an individual's career path. This integration provides stability in guiding professional actions while also allowing for adaptability and change, regardless of whether it involves founding a firm. This broader understanding offers new possibilities for studying and conceptualizing entrepreneurial careers, informed by the diverse ways individuals apply their entrepreneurial competencies across various organizational contexts.

Moreover, I identify and substantiate entrepreneurial career archetypes within the VCP graduate population, which illustrates the diverse ways entrepreneurial individuals sustain and apply their competencies across various contexts. This insight underscores the broader impact of VCPs, not merely as startup incubators but as platforms for developing entrepreneurial individuals who create value in a wide range of professional settings.

In essence, this thesis calls for a shift in how we characterize entrepreneurial careers. Rather than focusing solely on firm founding, we should recognize the diverse applications of entrepreneurial competencies that shape careers.



## REFERENCES

- Alexander, P. A., & Judy, J. E. (1988). The Interaction of Domain-Specific and Strategic Knowledge in Academic Performance. *Review of Educational Research*, 58(4), 375–404. <https://doi.org/https://doi.org/10.3102/00346543058004375>
- Alexander, P. A., Schallert, D. L., & Hare, V. C. (1991). Coming to Terms: How Researchers in Learning and Literacy Talk About Knowledge. *Review of Educational Research*, 61(3), 315–343. <https://doi.org/https://doi.org/10.3102/00346543061003315>
- Alvesson, M., & Sandberg, J. (2014). Habitat and Habitus: Boxed-in versus Box-Breaking Research. *Organization Studies*, 35(7), 967–987. <https://doi.org/10.1177/0170840614530916>
- Arifin, M. A. (2021). Competence, Competency, and Competencies: A Misunderstanding in Theory and Practice for Future Reference. *International Journal of Academic Research in Business and Social Sciences*, 11(9). <https://doi.org/10.6007/ijarbss/v11-i9/11064>
- Arthur, M. B. (2014). The boundaryless career at 20: Where do we stand, and where can we go? *Career Development International*, 19(6), 627–640. <https://doi.org/10.1108/CDI-05-2014-0068>
- Arthur, M. B., Hall, D. T., & Lawrence, B. S. (1989). *Handbook of career theory*. Cambridge University Press.
- Arthur, M. B., & Rousseau, D. M. (1996). A career lexicon for the 21st century. *Academy of Management Perspectives*, 10(4), 28–38. <https://doi.org/10.5465/ame.1996.3145317>
- Arthur, M. B., & Rousseau, D. M. (2001). *The boundaryless career: A new employment principle for a new organizational era*. Oxford University Press, USA.
- Bacigalupo, M., Kampylis, P., Punie, Y., & van den Brande, G. (2016). *EntreComp: The entrepreneurship competence framework*. Luxembourg: Publication Office of the European Union, 10, 593884.
- Baker, T., & Welter, F. (2024). Silicon Valley entrepreneurship – Revisiting a popular dream. *Journal of Business Venturing Insights*, 21. <https://doi.org/10.1016/j.jbvi.2024.e00466>
- Baron, R. A., & Markman, G. D. (2003). Beyond social capital: the role of entrepreneurs' social competence in their financial success. *Journal of Business Venturing*, 18(1), 41–60. [https://doi.org/https://doi.org/10.1016/S0883-9026\(00\)00069-0](https://doi.org/https://doi.org/10.1016/S0883-9026(00)00069-0)
- Burton, M. D., Sørensen, J. B., & Dobrev, S. D. (2016). A Careers Perspective on Entrepreneurship. *Entrepreneurship Theory and Practice*, 40(2), 237–247. <https://doi.org/10.1111/etap.12230>
- Burton, M. D., Fairlie, R. W., & Siegel, D. (2019). Introduction to a Special Issue on Entrepreneurship and Employment: Connecting Labor Market Institutions, Corporate Demography, and Human Resource Management Practices. *ILR Review*, 72(5), 1050–1064. <https://doi.org/10.1177/0019793919866409>

- Briscoe, J. P., & Hall, D. T. (2006). The interplay of boundaryless and protean careers: Combinations and implications. *Journal of Vocational Behavior*, 69(1), 4–18. <https://doi.org/10.1016/j.jvb.2005.09.002>
- Cao, J., & Hamori, M. (2022). Adapting careers to the COVID crisis: The impact of the pandemic on employees' career orientations. *Journal of Vocational Behavior*, 139, 103789. <https://doi.org/10.1016/j.jvb.2022.103789>
- Chan, K. Y., Ho, M. ho R., Chernyshenko, O. S., Bedford, O., Uy, M. A., Gomulya, D., Sam, Y. L., & Phan, W. M. J. (2012). Entrepreneurship, professionalism, leadership: A framework and measure for understanding boundaryless careers. *Journal of Vocational Behavior*, 81(1), 73–88. <https://doi.org/10.1016/j.jvb.2012.05.001>
- Chan, K. Y., Uy, M. A., Ho, M. ho R., Sam, Y. L., Chernyshenko, O. S., & Yu, K. Y. T. (2015). Comparing two career adaptability measures for career construction theory: Relations with boundaryless mindset and protean career attitudes. *Journal of Vocational Behavior*, 87, 22–31. <https://doi.org/10.1016/j.jvb.2014.11.006>
- Creswell, J., Clark, V., Gutmann, M., & Hanson, W. (2003). Advance Mixed methods Research Designs. In *Handbook of mixed methods in social and behavioral research* (pp. 209–240).
- Danziger, N., Rachman-Moore, D., & Valency, R. (2008). The construct validity of Schein's career anchors orientation inventory. *Career Development International*, 13(1), 7–19. <https://doi.org/10.1108/13620430810849506>
- de Vos, A., van der Heijden, B. I. J. M., & Akkermans, J. (2020). Sustainable careers: Towards a conceptual model. *Journal of Vocational Behavior*, 117, 103196. <https://doi.org/10.1016/j.jvb.2018.06.011>
- DeFillippi, R. J., & Arthur, M. B. (1994). The Boundaryless Career: A Competency-Based Perspective. *Journal of Organizational Behavior*, 15(4), 307–324. <https://doi.org/https://doi.org/10.1002/job.4030150403>
- Dlouhy, K., & Biemann, T. (2018). Path dependence in occupational careers: Understanding occupational mobility development throughout individuals' careers. *Journal of Vocational Behavior*, 104, 86–97. <https://doi.org/10.1016/j.jvb.2017.10.009>
- Donnellon, A., Ollila, S., & Williams-Middleton, K. (2014). Constructing entrepreneurial identity in entrepreneurship education. *International Journal of Management Education*, 12(3), 490–499. <https://doi.org/10.1016/j.ijme.2014.05.004>
- Dyer, W. G. (1995). Toward a Theory of Entrepreneurial Careers. *Entrepreneurship Theory and Practice*, 19(2), 7–21. <https://doi.org/10.1177/104225879501900202>
- Eesley, C. E., & Lee, Y. S. (2021). Do university entrepreneurship programs promote entrepreneurship? *Strategic Management Journal*, 42(4), 833–861. <https://doi.org/10.1002/smj.3246>
- Feldman, D. C., & Bolino, M. C. (1996). Careers within careers: Reconceptualizing the nature of career anchors and their consequences. *Human Resource Management Review*, 6(2), 89–112. [https://doi.org/10.1016/S1053-4822\(96\)90014-5](https://doi.org/10.1016/S1053-4822(96)90014-5)
-

- Fetters, M. D., Curry, L. A., & Creswell, J. W. (2013). Achieving integration in mixed methods designs - Principles and practices. *Health Services Research*, 48(6pt2), 2134–2156. <https://doi.org/10.1111/1475-6773.12117>
- Galloway, L., Kapasi, I., & Whittam, G. (2015). Exploring ‘Successful’ Outcomes of Entrepreneurship Education: A Follow-up Study. *Industry and Higher Education*, 29(6), 505–515. <https://doi.org/10.5367/ihe.2015.0281>
- Gartner, W. B. (1982). An Empirical Model of the Business Startup, and Eight Entrepreneurial Archetypes. <https://elibrary.ru/item.asp?id=7375756>
- Gerber, M., Wittekind, A., Grote, G., & Staffelbach, B. (2009). Exploring types of career orientation: A latent class analysis approach. *Journal of Vocational Behavior*, 75(3), 303–318. <https://doi.org/10.1016/j.jvb.2009.04.003>
- Gubler, M., Arnold, J., & Coombs, C. (2014). Organizational boundaries and beyond: A new look at the components of a boundaryless career orientation. *Career Development International*, 19(6), 641–667. <https://doi.org/10.1108/CDI-11-2013-0143>
- Hager, P., & Gonczi, A. (1996). What is competence? *Medical Teacher*, 18(1), 15–18. <https://doi.org/10.3109/01421599609040255>
- Hall, D. T. (1996). Protean careers of the 21st century. *Academy of Management Perspectives*, 10(4), 8–16. <https://doi.org/http://dx.doi.org/10.5465/ame.1996.3145315>
- Haneberg, D. H., & Aadland, T. (2020). Learning from venture creation in higher education. *Industry and Higher Education*, 34(3), 121–137. <https://doi.org/10.1177/0950422219884020>
- Haase, H., & Lautenschläger, A. (2011). The “Teachability Dilemma” of entrepreneurship. *International Entrepreneurship and Management Journal*, 7(2), 145–162. <https://doi.org/10.1007/s11365-010-0150-3>
- Hegde, D., & Tumlinson, J. (2021). Information frictions and entrepreneurship. *Strategic Management Journal*, 42(3), 491–528. <https://doi.org/10.1002/smj.3242>
- Henry, C., & Lewis, K. (2018). A review of entrepreneurship education research: Exploring the contribution of the Education + Training special issues. *Education and Training*, 60(3), 263–286. <https://doi.org/10.1108/ET-12-2017-0189>
- Hirschi, A., & Koen, J. (2021). Contemporary career orientations and career self-management: A review and integration. *Journal of Vocational Behavior*, 126, 103505. <https://doi.org/10.1016/j.jvb.2020.103505>
- Hytti, U. (2010). Contextualizing entrepreneurship in the boundaryless career. *Gender in Management*, 25(1), 64–81. <https://doi.org/10.1108/17542411011019931>
- Hägg, G. (2017). Experiential entrepreneurship education: Reflective thinking as a counterbalance to action for developing entrepreneurial knowledge [MediaTryck Lund]. <https://lup.lub.lu.se/record/16e94e4d-f523-4b5e-8557-2263b77be867>
- Hägg, G., & Kurczewska, A. (2019). Who Is the Student Entrepreneur? Understanding the Emergent Adult through the Pedagogy and Andragogy Interplay. *Journal of Small Business Management*, 57(S1), 130–147. <https://doi.org/10.1111/jsbm.12496>

- Hägg, G., & Gabrielsson, J. (2020). A systematic literature review of the evolution of pedagogy in entrepreneurial education research. *International Journal of Entrepreneurial Behaviour and Research*, 26(5), 829–861. <https://doi.org/10.1108/IJEBr-04-2018-0272>
- Johannisson, B. (1991). University training for entrepreneurship: Swedish approaches. *Entrepreneurship and Regional Development*, 3(1), 67–82. <https://doi.org/10.1080/08985629100000005>
- Jones, P., Pickernell, D., Fisher, R., & Netana, C. (2017). A tale of two universities: graduates perceived value of entrepreneurship education. *Education and Training*, 59(7–8), 689–705. <https://doi.org/10.1108/ET-06-2017-0079>
- Kao, J. J. (1989). Entrepreneurship, creativity & organization: Text, cases & readings.
- Katz, J. A. (1995a). Guest Editorial: Career Approaches to Entrepreneurship. *Entrepreneurship Theory and Practice*, 19(2), 5–6. <https://doi.org/http://dx.doi.org/10.1177/104225879501900201>
- Katz, J. A. (1995b). Modelling Entrepreneurial Career Progressions: Concepts and Considerations. *Entrepreneurship Theory and Practice*, 19(2), 23–39. <https://doi.org/10.1177/104225879501900203>
- Killingberg, N. M., Kubberød, E., & Blenker, P. (2020). Preparing for a future career through entrepreneurship education: Towards a research agenda. *Industry and Higher Education*, December. <https://doi.org/10.1177/0950422220969635>
- Killingberg, N. M., Kubberød, E., & Pettersen, I. B. (2023). Exploring the Transition to Working Life of Entrepreneurship Education Graduates: A Longitudinal Study. *Entrepreneurship Education and Pedagogy*, 6(2), 331–358. <https://doi.org/10.1177/25151274221108354>
- Kozlinska, I., Rebmann, A., & Mets, T. (2023). Entrepreneurial competencies and employment status of business graduates: the role of experiential entrepreneurship pedagogy. *Journal of Small Business & Entrepreneurship*, 35(5), 724–761. <https://doi.org/10.1080/08276331.2020.1821159>
- Kubberød, E., Fosstenløkken, S. M., & Erstad, P. O. (2018). Peer mentoring in entrepreneurship education: towards a role typology. *Education and Training*, 60(9), 1026–1040. <https://doi.org/10.1108/ET-08-2017-0109>
- Kuckertz, A., Scheu, M., & Davidsson, P. (2023). Chasing mythical creatures – A (not-so-sympathetic) critique of entrepreneurship’s obsession with unicorn startups. *Journal of Business Venturing Insights*, 19. <https://doi.org/10.1016/j.jbvi.2022.e00365>
- Kuratko, D. F. (2005). The Emergence of Entrepreneurship Education: Development, Trends, and Challenges. *Entrepreneurship Theory and Practice*, 29(5), 577–597. <https://doi.org/https://doi.org/10.1111/j.1540-6520.2005.00099.x>
- Kuratko, D. F., & Morris, M. H. (2018). Corporate Entrepreneurship: A Critical Challenge for Educators and Researchers. *Entrepreneurship Education and Pedagogy*, 1(1), 42–60. <https://doi.org/10.1177/2515127417737291>



- Kyndt, E., & Baert, H. (2015). Entrepreneurial competencies: Assessment and predictive value for entrepreneurship. *Journal of Vocational Behavior*, 90, 13–25.  
<https://doi.org/10.1016/j.jvb.2015.07.002>
- Lackéus, M. (2015). Entrepreneurship in education - what, why, when, how. OECD Publishing, Paris.
- Lackéus, M., & Williams-Middleton, K. (2015). Venture creation programs: Bridging entrepreneurship education and technology transfer. *Education and Training*, 57(1), 48–73.  
<https://doi.org/10.1108/ET-02-2013-0013>
- Lackéus, M., Lundqvist, M., & Williams-Middleton, K. (2016). Bridging the traditional-progressive education rift through entrepreneurship. *International Journal of Entrepreneurial Behaviour and Research*, 22(6), 777–803. <https://doi.org/10.1108/IJEBr-03-2016-0072>
- Lange, J., Jawahar, A. S., Marram, E., Yong, W., & Bygrave, W. D. (2014). Does an Entrepreneurship Education Have Lasting Value? A Study of Careers of 3,775 Alumni. *Journal of Business and Entrepreneurship*, 25(2), 1–31.
- Lawrence, B. S., Hall, D. T., & Arthur, M. B. (2015). Sustainable careers then and now. In A. de Vos & B. I. J. M. van der Heijden (Eds.), *Handbook of Research on Sustainable Careers* (pp. 432–450). Edward Elgar Publishing. <https://doi.org/10.4337/9781782547037.00033>
- Lee, S. H., & Wong, P. K. (2004). An exploratory study of technopreneurial intentions: A career anchor perspective. *Journal of Business Venturing*, 19(1), 7–28.  
[https://doi.org/10.1016/S0883-9026\(02\)00112-X](https://doi.org/10.1016/S0883-9026(02)00112-X)
- Lundqvist, M. (2014). The importance of surrogate entrepreneurship for incubated Swedish technology ventures. *Technovation*, 34(2), 93–100.  
<https://doi.org/10.1016/j.technovation.2013.08.005>
- Lundqvist, M., & Williams-Middleton, K. (2024). Making the whole university entrepreneurial – decades of legitimacy-building through Chalmers School of Entrepreneurship. *Technovation*, 132. <https://doi.org/10.1016/j.technovation.2024.102993>
- Marshall, V., & Bonner, D. (2003). Career anchors and the effects of downsizing: Implications for generations and cultures at work. A preliminary investigation. *Journal of European Industrial Training*, 27(6), 281–291. <https://doi.org/10.1108/03090590310479910>
- Marshall, D. R. (2016). From employment to entrepreneurship and back: A legitimate boundaryless view or a bias-embedded mindset? *International Small Business Journal: Researching Entrepreneurship*, 34(5), 683–700. <https://doi.org/10.1177/0266242615581853>
- Mayrhofer, W., & Gunz, H. (2023). From wallflower to life and soul of the party: acknowledging time’s role at center stage in the study of careers. *International Journal of Human Resource Management*, 34(3), 562–604.  
<https://doi.org/10.1080/09585192.2022.2075234>
- Miner, A. S., & Robinson, D. F. (1994). Organizational and Population Level Learning as Engines for Career Transitions. *Journal of Organizational Behavior*, 15(4), 345–364.  
<http://dx.doi.org/10.1002/job.4030150405>
-

- Mitchelmore, S., & Rowley, J. (2010). Entrepreneurial competencies: A literature review and development agenda. *International Journal of Entrepreneurial Behaviour and Research*, 16(2), 92–111. <https://doi.org/10.1108/13552551011026995>
- Morris, M. H., Webb, J. W., Fu, J., & Singhal, S. (2013). A competency-based perspective on entrepreneurship education: Conceptual and empirical insights. *Journal of Small Business Management*, 51(3), 352–369. <https://doi.org/10.1111/jsbm.12023>
- Morris, M. H. (2022). Re-thinking Content: Teaching Students About Entrepreneurship Versus How to Be an Entrepreneur. *Journal of Entrepreneurship*, 31(2), 11–S37. <https://doi.org/10.1177/09713557221107434>
- Mwasalwiba, E. S. (2010). Entrepreneurship education: A review of its objectives, teaching methods, and impact indicators. *Education and Training*, 52(1), 20–47. <https://doi.org/10.1108/00400911011017663>
- Nabi, G., Linan, F., Fayolle, A., Krueger, N., & Walmsley, A. (2017). The Impact of Entrepreneurship Education in Higher Education: A Systematic Review and Research Agenda. *Academy of Management Learning and Education*, 16(2), 277–299. <https://doi.org/https://doi.org/10.5465/amle.2015.0026>
- Neck, H. M., & Greene, P. G. (2011). Entrepreneurship Education: Known Worlds and New Frontiers. *Journal of Small Business Management*, 49(1), 55–70. <https://doi.org/10.1111/j.1540-627X.2010.00314.x>
- Neck, H. M., & Corbett, A. C. (2018). The Scholarship of Teaching and Learning Entrepreneurship. *Entrepreneurship Education and Pedagogy*, 1(1), 8–41. <https://doi.org/10.1177/2515127417737286>
- Obschonka, M., Silbereisen, R. K., Schmitt-Rodermund, E., & Stuetzer, M. (2011). Nascent entrepreneurship and the developing individual: Early entrepreneurial competence in adolescence and venture creation success during the career. *Journal of Vocational Behavior*, 79(1), 121–133. <https://doi.org/10.1016/j.jvb.2010.12.005>
- Obschonka, M., & Silbereisen, R. K. (2012). Entrepreneurship from a Developmental Science Perspective. *International Journal of Developmental Sciences* 6(3–4), 107–115. <https://doi.org/10.3233/DEV-2012-12105>
- Ollila, S., & Williams-Middleton, K. (2011). The venture creation approach: Integrating entrepreneurial education and incubation at the university. *International Journal of Entrepreneurship and Innovation Management*, 13(2), 161–178. <https://doi.org/10.1504/IJEIM.2011.038857>
- Pittaway, L., & Cope, J. (2007). Entrepreneurship education: A systematic review of the evidence. *International Small Business Journal*, 25(5), 479–510. <https://doi.org/10.1177/0266242607080656>
- Pratt, M. G., Rockmann, K. W., & Kaufmann, J. B. (2006). Constructing professional identity: The role of work and identity learning cycles in the customization of identity among medical residents. *Academy of Management Journal*, 49(2), 235–262. <https://doi.org/10.5465/AMJ.2006.20786060>

- Radu-Lefebvre, M., Lefebvre, V., Crosina, E., & Hytti, U. (2021). Entrepreneurial Identity: A Review and Research Agenda. *Entrepreneurship Theory and Practice*, 45(6), 1550–1590. <https://doi.org/10.1177/10422587211013795>
- Rauch, A., & Hulsink, W. (2015). Putting entrepreneurship Education where the intention to Act lies: An investigation into the impact of entrepreneurship education on entrepreneurial behavior. *Academy of Management Learning and Education*, 14(2). <https://doi.org/10.5465/amle.2012.0293>
- Rideout, E. C., & Gray, D. O. (2013). Does entrepreneurship education really work? A review and methodological critique of the empirical literature on the effects of university-based entrepreneurship education. *Journal of Small Business Management*, 51(3), 329–351. <https://doi.org/10.1111/jsbm.12021>
- Rodrigues, R., Guest, D., & Budjanovcanin, A. (2013). From anchors to orientations: Towards a contemporary theory of career preferences. *Journal of Vocational Behavior*, 83(2), 142–152. <https://doi.org/10.1016/j.jvb.2013.04.002>
- Rodrigues, R., Guest, D., & Budjanovcanin, A. (2016). Bounded or boundaryless? An empirical investigation of career boundaries and boundary crossing. *Work, Employment and Society*, 30(4), 669–686. <https://doi.org/10.1177/0950017015570726>
- Rosso, B. D. (2014). Creativity and Constraints: Exploring the Role of Constraints in the Creative Processes of Research and Development Teams. *Organization Studies*, 35(4), 551–585. <https://doi.org/10.1177/0170840613517600>
- Rusko, R., Hietanen, L., Kohtakangas, K., & Järvi, T. (2019). Roles of career anchors and path dependency in the entrepreneurial process: Case Finland. *International Journal of Entrepreneurship and Small Business*, 37(3), 342–363. <https://doi.org/10.1504/IJESB.2019.101104>
- Sarasvathy, S. D. (2001). Causation and effectuation: Toward a theoretical shift from economic inevitability to entrepreneurial contingency. *Academy of Management Review*, 26(2), 243–263. <https://doi.org/10.5465/AMR.2001.4378020>
- Schein, E. H. (1985). Career anchors. University Associates San Diego.
- Schein, E. H. (1995). Commentary: What Is an Entrepreneur? *Entrepreneurship Theory and Practice*, 19(2), 87–88. <https://doi.org/http://dx.doi.org/10.1177/104225879501900206>
- Schein, E. H. (1996). Career anchors revisited: Implications for career development in the 21st century. *Academy of Management Perspectives*, 10(4), 80–88. <https://doi.org/10.5465/ame.1996.3145321>
- Schein, E. H., van Maanen, J., & Schein, P. A. (2023). Career Anchors Reimagined: Finding Direction and Opportunity in the Changing World of Work. John Wiley & Sons.
- Sugiyama, K., Ladge, J. J., & Dokko, G. (2024). Stable anchors and dynamic evolution: A paradox theory of career identity maintenance and change. *Academy of Management Review*, 49(1), 135–154. <https://doi.org/https://doi.org/10.5465/amr.2020.0351>

- Sullivan, S. E., & Arthur, M. B. (2006). The evolution of the boundaryless career concept: Examining physical and psychological mobility. *Journal of Vocational Behavior*, 69(1), 19–29. <https://doi.org/10.1016/j.jvb.2005.09.001>
- Sullivan, S. E., & Baruch, Y. (2009). Advances in career theory and research: A critical review and agenda for future exploration. *Journal of Management*, 35(6), 1542–1571. <https://doi.org/10.1177/0149206309350082>
- Teddle, C., & Tashakkori, A. (2010). Overview of Contemporary Issues in Mixed Methods Research. In *Handbook of Mixed Methods in Social & Behavioral Research* (pp. 1–41). <https://doi.org/10.4135/9781506335193.n1>
- Thomassen, M. L., Williams-Middleton, K., Ramsgaard, M. B., Neergaard, H., & Warren, L. (2020). Conceptualizing context in entrepreneurship education: a literature review. *International Journal of Entrepreneurial Behaviour and Research*, 26(5), 863–886. <https://doi.org/10.1108/IJEBr-04-2018-0258>
- Thorgren, S., & Williams, T. A. (2023). Progress without a venture? Individual benefits of post-disruption entrepreneuring. *Journal of Business Venturing*, 38(3). <https://doi.org/10.1016/j.jbusvent.2023.106292>
- Ucbasaran, D., Alsos, G. A., Westhead, P., & Wright, M. (2008). Habitual entrepreneurs. *Foundations and Trends in Entrepreneurship*, 4(4), 309–450. <https://doi.org/10.1561/03000000014>
- van Gelderen, M. (2023). Developing entrepreneurial competencies through deliberate practice. *Education and Training*, 65(4), 530–547. <https://doi.org/10.1108/ET-10-2021-0396>
- van Gelderen, M. (2020). Entrepreneurs' competencies. In *The psychology of entrepreneurship* (pp. 210–227). Routledge.
- Verbruggen, M., & de Vos, A. (2020). When people don't realize their career desires: Toward a theory of career inaction. *Academy of Management Review*, 45(2), 376–394. <https://doi.org/10.5465/amr.2017.0196>
- Vinkenburg, C. J., & Weber, T. (2012). Managerial career patterns: A review of the empirical evidence. *Journal of Vocational Behavior*, 80(3), 592–607. <https://doi.org/10.1016/j.jvb.2012.02.001>
- Westhead, P., Ucbasaran, D., Wright, M., & Binks, M. (2005). Novice, serial and portfolio entrepreneur behaviour and contributions. *Small Business Economics*, 25(2), 109–132. <https://doi.org/10.1007/s11187-003-6461-9>
- Wiernik, B. M., & Kostal, J. W. (2019). Protean and Boundaryless Career Orientations: A Critical Review and Meta-Analysis. *Journal of Counseling Psychology*, 66(3), 280–307. <https://doi.org/10.1037/0022-0167.53.1.126>
- Williams-Middleton, K. (2013). Becoming entrepreneurial: Gaining legitimacy in the nascent phase. *International Journal of Entrepreneurial Behaviour and Research*, 19(4), 404–424. <https://doi.org/10.1108/IJEBr-04-2012-0049>

Williams-Middleton, K., & Donnellon, A. (2014). Personalizing Entrepreneurial Learning: A Pedagogy for Facilitating the Know Why. *Entrepreneurship Research Journal*, 4(2). <https://doi.org/10.1515/erj-2013-0040>

Williams-Middleton, K., Padilla-Meléndez, A., Lockett, N., Quesada-Pallarès, C., & Jack, S. (2020). The university as an entrepreneurial learning space: The role of socialized learning in developing entrepreneurial competence. *International Journal of Entrepreneurial Behaviour and Research*, 26(5), 887–909. <https://doi.org/10.1108/IJEBr-04-2018-0263>

Williams-Middleton, K., Lackéus, M., & Lundqvist, M. (2021). Entrepreneurs versus entrepreneurial. In *World encyclopedia of entrepreneurship* (pp. 177–183). Edward Elgar Publishing.

Winborg, J., & Hägg, G. (2023). The role of work-integrated learning in preparing students for a corporate entrepreneurial career. *Education and Training*, 65(4), 674–696. <https://doi.org/10.1108/ET-05-2021-0196>

