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**“THE INFLUENCE OF
ENTREPRENEURSHIP INDICATORS ON
CAREER OUTCOMES AND CAREER
ADAPTABILITY OF ACADEMIC
CONTINUING EDUCATION STUDENTS”**

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ABSTRACT

Ana Evelyn De Ita Varela: The influence of entrepreneurship indicators on career outcomes and career adaptability of academic continuing education students

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Entrepreneurship has been embraced as a term that encompasses the behaviors, attitudes, and expertise needed for succeeding in the present labor market. In this sense, entrepreneurship has acquired importance and value all around Europe, and frameworks like the EntreComp support its introduction to the education system. This thesis focuses on describing the influence of entrepreneurship personal indicators on the career outcomes and career adaptability of students in the University for Continuing Education Krems in Austria. Furthermore, the study focuses on continuing education students, a group that is not usually targeted and that can bring insights into lifelong learning education. The present study uses five different scales to analyze students' personal value of entrepreneurship, perceived entrepreneurship competences, entrepreneurship intention, perceived employability, and career adaptability. The study is a cross-sectional survey, and spearman correlation and ordinal logistic regression are used as the analysis methods. The results show that only one of the entrepreneurship indicators (entrepreneurship personal value and entrepreneurship competences) has a significant positive influence on the career variables. Entrepreneurship competences has a higher influence on the perception of the students doing well and adapting to the changing labor market, but it does not encourage them to become entrepreneurs. In contrast, the personal value of entrepreneurship relates strongly to the entrepreneurial intention, but not to the perceived employability, and career adaptability of the students. Moreover, the student's perception on their entrepreneurship competences showed that they have a lower confidence in their specific knowledge, like digital know-how, legal know-how and financial know-how. These areas can bring important benefits to the students and their introduction in all fields of study should be considered. The results provide valuable information for curricula planning and for the creation of new policies that consider a wider diversity of students, in this case, academic continuing education students.

Keywords: entrepreneurial competencies, career outcomes, career adaptability, lifelong learning

The originality of this thesis has been checked using the Turnitin OriginalityCheck service.

The influence of entrepreneurship indicators on career outcomes and career adaptability of academic continuing education students

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submitted by

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Statutory Declaration

I, Ana Evelyn De Ita Varela, hereby declare,

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Abstract

Entrepreneurship has been embraced as a term that encompasses the behaviors, attitudes, and expertise needed for succeeding in the present labor market. In this sense, entrepreneurship has acquired importance and value all around Europe, and frameworks like the EntreComp support its introduction to the education system. This thesis focuses on describing the influence of entrepreneurship personal indicators on the career outcomes and career adaptability of students in the University for Continuing Education Krems in Austria. Furthermore, the study focuses on continuing education students, a group that is not usually targeted and that can bring insights into lifelong learning education. The present study uses five different scales to analyze students' personal value of entrepreneurship, perceived entrepreneurship competences, entrepreneurship intention, perceived employability, and career adaptability. The study is a cross-sectional survey, and spearman correlation and ordinal logistic regression are used as the analysis methods. The results show that only one of the entrepreneurship indicators (entrepreneurship personal value and entrepreneurship competences) has a significant positive influence on the career variables. Entrepreneurship competences has a higher influence on the perception of the students doing well and adapting to the changing labor market, but it does not encourage them to become entrepreneurs. In contrast, the personal value of entrepreneurship relates strongly to the entrepreneurial intention, but not to the perceived employability, and career adaptability of the students. Moreover, the student's perception on their entrepreneurship competences showed that they have a lower confidence in their specific knowledge, like digital know-how, legal know-how and financial know-how. These areas can bring important benefits to the students and their introduction in all fields of study should be considered. The results provide valuable information for curricula planning and for the creation of new policies that consider a wider diversity of students, in this case, academic continuing education students.

KEYWORDS TOPIC: *entrepreneurial competencies, career outcomes, career adaptability, lifelong learning*

KEYWORDS METHOD: *ordinal logistic regression, cross sectional survey*

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Abbreviations

CA – Career Adaptability

EC – Entrepreneurship Competences

EI – Entrepreneurship Intention

EP – Employability Perception

EU – European Union

HEIs – Higher Education Institutions

LLL – Lifelong learning

OLR – Ordinal Logistic Regression

PV – Personal Value of Entrepreneurship

UWK – University of Continuing Education Krems

1. Introduction

The current labor market demands a broader set of skills and the continuous adaption of the workers. There is a need to learn new abilities and tools at the same rate as the technological innovations occurs and the environment transforms. In this thesis, the focus is on entrepreneurship as a concept that encompasses the attitudes and knowledge required to survive and adapt in the world. The research aims to identify entrepreneurship as an important element for the development of academic continuing education students and their professional careers. In the following section a brief summary of how entrepreneurship is perceived in higher education and its relationship to the labor market would be briefly described. Further discussion on the terms and topics would be presented in the literature review. The objective of this chapter is to present an introduction to the main concepts of the study, introduce the theoretical background, followed by the research problem and the research purpose. Finally, the research question and hypothesis will be described together with the study significance. Later chapters will deepen on the methodology and results.

The European Union (EU) has embraced entrepreneurship as one of the eight key competence for lifelong learning and has pushed for the adoption of entrepreneurship at all levels of the education system (Armuña et al., 2020). In higher education, entrepreneurship has become a descriptor of many positive qualities and skills required in recent years. The term “entrepreneurial university” is recognized as a driver for innovation and technology transfer. It is an ideal practice for many higher education institutions (HEIs) around the world, including Austria (Sperrer et al., 2016). However, entrepreneurship goes beyond the associated action of creating new businesses and products. It can now be related to a series of competences that make individuals self-manage their careers, adapt to the changing environment, and improve their expertise (Cavaliere et al., 2022). This opens the opportunity to include the term “entrepreneurship” into the curricula as more than just an encouragement for business development, rather it can be part of the overall learning processes (Venesaar et al., 2021).

The relationship between entrepreneurship and career outcomes has been discussed before by several authors (Atitsogbe et al., 2019; Cavaliere et al., 2020; Knörr et al., 2012; Mittal & Raghuvaran, 2021; Zhu et al., 2022). In most cases, the purpose is identifying the elements that motivate an individual to become an entrepreneur or the entrepreneurial intention. This is led by the conception that entrepreneurship is a vital element to solve current challenges in the employment market of different countries. Entrepreneurship can become a solution for unemployment, both for younger and older workers (Zhu et al., 2022). The paper of Zhu also states that it can also be a response to the complex labor market that pushes for short-term employment and continuous up-skilling. Furthermore, it has long been seen as a main contributor to economic growth and innovation (Killingberg et al., 2021). Overall, now more than ever, entrepreneurship presents as an opportunity to improve the conditions in which individuals must operate in the current world. Whether it is an alternative to labor market conditions, or whether it is a path to personal growth that benefits society, the reality is that entrepreneurship is a concept that has captured the attention of the world.

There is also an extended part of the literature that focuses on relating the effects of entrepreneurship on employability, especially in a higher education setting (Álvarez-González et al., 2017; Atitsogbe et al., 2019; Biney, 2021). The relation explained in the article of Atitsogbe et al. (2019) shows that individuals that have an entrepreneur mindset tend to also have high self-perceived employability. The author at the same time expresses that “there is no explicit theoretical framework that elucidates the possible links between these two career variables” (Atitsogbe et al., 2019, pg.3). Nonetheless, the paper argues that people with high self-perceived employability that deals with extreme economic conditions or an environment with high unemployment, can turn to create their own employment and thus have higher entrepreneurial intentions. While several studies have found a vast number of factors that can affect the perceived employability of students, entrepreneurship is one of the factors that has acquired a lot of interest in the last few years.

Entrepreneurship competence is a concept that has recently been developed to foment positive skills related to entrepreneurs. However, there is no common agreement or definitive way in which entrepreneurship competences are conceived (Lopez-Nuñez et al., 2021). Many frameworks related to entrepreneurship competences aim to describe what the skills of an entrepreneur are and not so much how these skills can be developed (Venesaar et al., 2021). Nonetheless, there have been recent initiatives to better explain the complexity of entrepreneurship competence. The EntreComp framework was developed for assisting education systems in the EU to introduce entrepreneurial skills or “soft skills” as part of the lifelong learning process (Lopez-Nuñez et al., 2022). Soft skills refer to non-technical skills needed for the current labor market and global environment (Armuña et al., 2020). The study in this thesis uses a scale based on the EntreComp framework to have a broader scope of what entrepreneurship competence are, and later relate it to how it can be developed through higher education. More about the theoretical framework used for the study model will be presented in the following section.

1.1. Theoretical background

The theoretical framework for this thesis is comprised of the career construction theory. While the previous mentioned EntreComp framework is the basis for one of the scales used in the study, the hypothesis and data analysis will be guided by the career construction theory developed by Mark L. Savickas. In the book of Brown & Lent (2004), career construction theory works as a contextualist perspective where adaptation and self-construction are the main pillars of foundation. Self-construction occurs differently at different stages in life; however, the construction always happens through social processes and interpersonal relationships (Savickas, 2012). Savickas continues explaining that in current times the self is constructed as a project, it is not a linear or progressive endeavor. In the same way, constructing a career resembles the task of making a self. A career emerges from thought, reflection, and direction on the vocational behavior. Today workers must be flexible to be employable, and they achieve this through lifelong learning and adaption. “Rather than make plans, individuals must prepare themselves for possibilities” (Brown & Lent, 2004, pg. 149).

In addition, career construction theory views interest as the connection between personal needs and relevant goals (Savickas, 2012). Savickas explains that the interest arises from evaluating the usefulness of the object or action, and then the person decides if it will further their self-construction and adaptation. According to the career construction theory, the value given to the interests a person has throughout their life is of high importance for their career development (Fasbender et al., 2019). Personal constructivism also states that learners construct their knowledge, or they develop their skills through experience rather than only being given to them as information. The construction of the world through experience and cognitive process does not only involve the process of how we know, but it also targets the process of how we develop meaning. In this sense, the constructivist perspective in the career field is concerned with finding and giving value and meaning to the actions, activities, and decisions made (Young and Collin, 2004). For this reason, the study in this thesis includes a novel scale based on Eva Knekta et al. (2020) instrument to measure students' interest in the subject of biology. In this thesis, the scale was adapted to measure the self-perceived personal value of entrepreneurship on academic continuing education students.

The study model for this thesis required to consider the second pillar of the career construction theory. At its core, career construction theory explains how people build their careers through both personal constructivism and social constructionism (Savickas, 2012). One of the concepts that has been deeply discussed in career construction theory is the adaptation to the environment, an environment that just like the individual, keeps on changing (Fasbender et al., 2019). Career construction theory presents careers as vocational choices that keep on evolving, growing, and adapting. The labor market is in constant adjustments due to externalities like the economic and financial situation, and even influences like the pandemic COVID19. This changing landscape has made coping resources and other abilities related to adaptation important elements for career progression (Hartung and Cadaret, 2017). Thus, career adaptability is an indispensable attribute for the worker of today. Savickas (2012) highlights five behaviors as the adaptive functions: orientation, exploration, establishment, management, and disengagement. These activities form a cycle for adaptive performance that an individual practices to fit into the changing context. For adaptation to occur, first there needs to be flexibility and willingness to change or accommodate. The required accommodations prompt feelings of distress, from which a person must bring self-regulatory resources to bear the situation, what the theory calls adaptabilities. These resources are defined by four global dimensions: concern, curiosity, control, and confidence (Brown & Lent, 2004). According to Savickas (2012), career adaptability denotes the way people use their concern and curiosity, have control over their actions, show confidence in executing their ideas and therefore, manage their own careers. The scale used in this thesis was based on the four global dimensions, where each item also includes the interaction an individual can have with the adaptive behaviors. This way, concern requires from orientation, which is achieved through the pursue of information to find opportunities. Curiosity requires from exploration, which later leads to the establishment of goals or ideas. Control involves management, or the execution of actions while considering the external context. Finally, confidence brings all the behaviors together, as

individuals need confidence to act on their interests, embrace the challenges and overcome the obstacles (Brown & Lent, 2004).

In the end, career construction theory is one of the most well-established career theories from the past two decades (Yu et al., 2019). It provides the background from which the study model for this thesis is built upon. It is also a resource for analyzing and interpreting results. The focus of this study is to encompass all the variables and concepts discussed in the introduction and theoretical background into a novel model to describe the relationship between entrepreneurship indicators (entrepreneurship personal value & entrepreneurship competence), career outcomes (entrepreneurial intention & perceived employability) and career adaptability of academic continuing education students. In the following sections the statement of the problem, context of the study, the study purpose, research questions, hypothesis, and the significance of the study will be described.

1.2. Statement of the problem

Most of the literature related to entrepreneurship and entrepreneurial competence focuses on defining the origins and circumstances in which an entrepreneur develops and succeeds. This does not fully capture the influence entrepreneurship has on the professional development of the students, which is why this study is focused on describing the influence that entrepreneurship indicators have on career outcomes and career adaptability in academic continuing education students. The study proposes a new survey design to find the relation between entrepreneurship indicators and career outcomes and career adaptability. The analysis method of using ordinal logistic regression has not previously been used for the selected Likert scales in the study. Following the constructivist perspective and the career construction theory, the variable of entrepreneurship personal value is added to the study. This is a variable that has not been found in any other previous study related to the topic. Furthermore, the scale for measuring entrepreneurship competence and career adaptability is newly developed and validated, thus few studies have been published using them.

There is very little research that focuses on academic continuing education or students that return to higher education after having experience in the labor market, and whose ages are older than the common population. Therefore, an important contribution of the study is the incorporation of the lifelong learning perspective. Entrepreneurship competence has been pushed by several international organisms as a key element for lifelong learning (LLL) (Armuña et al., 2020). Furthermore, lifelong learning has become the vision for the future of education, as reflected by the United Nations 2030 Agenda for Sustainable Development (UNESCO, 2016). It is not only necessary to promote LLL, but the aim is also to transform HEIs into LLL institutions. For many leaders and policymakers, LLL is a core principle of sustainable development, it allows to reach a broader population and provides the skills necessary to respond to social and economic challenges. For the HEIs to transform into LLL institutions, they need to shift from targeting young students to welcoming a more diverse population of learners who are (re)entering higher education at different ages and stages of their personal and professional lives (UNESCO, 2022).

Academic continuing education students are one of the best examples of lifelong learning in practice, which is why this study centers on analyzing data from the University of Continuing Education in Krems (UWK). As a result, this study addresses several gaps in the fields of entrepreneurship, career development, and lifelong learning. The research in these areas is important because they bring relevant and novel information essential for higher education policymaking and curricula development.

1.3. Context of the study

The sample for the study in this thesis corresponds to students from the University of Continuing Education Krems (UWK) in Austria. The students are part of different programs from different fields of study. The UWK is unique in its characteristics, mission, and strategy from other universities in Austria and the European Union. It is a public university that focuses on enhancing the qualifications of working professionals, supports the lifelong learning goals of the European Union, and centers its research and teaching to overcome societal challenges (UWK, 2023). Currently, there are around 8,000 students enrolled in the university, and there are 10 fields of study. Some interesting facts about the population in the university is that there are 26% of foreign students, their average age is 39 years old and 26% of the students had more than 15 years of professional experience before beginning their studies. (UWK Facts & Figures, 2023). This shows us that the university is not unique in its composition, its students also possess a singular profile that is different from other students in other universities. They are academic continuing education students, and as the descriptor suggests, it is a population that has returned to formal education after having diverse experiences in the labor market to continue their learning. This also causes the university to design its programs around the needs of adult learners and the requirements of working people. All this information is relevant as it describes the context in which this study was made. It is also important to consider the background of the students and keep in mind the way their education has been structured to support lifelong learning.

1.4. Purpose of the study

The purpose of this work is to show and analyze the relationship between entrepreneurship and career outcomes and adaptability. Entrepreneurship is also analyzed through the lenses of constructivism and constructionism making use of the career construction theory. The aim is to describe the influence entrepreneurship interest and competence can have on the career opportunities of continuing education students. At the same time, the study serves to understand the way entrepreneurship has been adopted in higher education by students and how this concept affects their self-perception of their abilities to succeed in the current world. It is also a reflection of how higher education institutions can utilize entrepreneurship as a framework to develop soft skills necessary for student success in the knowledge economy. The main objectives of this study are:

- Describe the relationship between the entrepreneurship indicators (entrepreneurship personal value and entrepreneurship competence).

- Establish the influence the entrepreneurship indicators have on the career outcomes and career adaptability perception of the students.
- Analyze the way the unique profile of academic continuing education students has on the variables.
- Give an overview of how entrepreneurship education influences academic continuing education students in the UWK in Austria
- Open discussion of how curricula and policymaking could be improved with entrepreneurship education.

1.5. Research Questions and Hypothesis

The main research questions for this study are:

- How do entrepreneurship indicators like entrepreneurial competence and entrepreneurship personal value influence career outcomes (entrepreneurial intention and perceived employability), and career adaptability? And
- Is there a correlation between entrepreneurship personal value and entrepreneurship competence?

To address these questions, the hypothesis has been divided into 4 different sets.

Entrepreneurship Indicators (Entrepreneurship personal value and entrepreneurial competence)

Hypothesis. 0 or Null Hypothesis: All the coefficients in the model are equal to zero. There is no statistically significant relationship between the independent and dependent variables.

Hypothesis. 1. There is a correlation between entrepreneurship personal value and entrepreneurial competence

Hypothesis. 1.A. The student characteristics influence the entrepreneurship indicators

Entrepreneurial Intention

Hypothesis. 0. All the coefficients in the model are equal to zero. There is no statistically significant relationship between the independent and dependent variables

Hypothesis. 2. Students' entrepreneurship personal value and entrepreneurship competence have an influence on the entrepreneurship intention of the students

Hypothesis 2.A. A relationship between entrepreneurial competence and entrepreneurial intention exists

Hypothesis 2.B. A relationship between the entrepreneurial personal value and entrepreneurial intention exists

Hypothesis 2.C. The student characteristics influence the entrepreneurial intention

Perceived Employability

Hypothesis. 0. All the coefficients in the model are equal to zero. There is no statistically significant relationship between the independent and dependent variables

Hypothesis. 3. Students' entrepreneurship personal value and entrepreneurship competence have an influence on the perceived employability of the students

Hypothesis 3.A. A relationship between entrepreneurial competence and perceived employability exists

Hypothesis. 3.B. A relationship between entrepreneurial personal value and perceived employability exists

Hypothesis 3.C. The student characteristics influence the perceived employability

Career Adaptability

Hypothesis. 0. All the coefficients in the model are equal to zero. There is no statistically significant relationship between the independent and dependent variables

Hypothesis. 4. Students' entrepreneurship personal value and entrepreneurship competence have an influence on the career adaptability of the students

Hypothesis 4.A. A relationship between entrepreneurial competence and career adaptability exists.

Hypothesis. 4.B. A relationship between entrepreneurial personal value and career adaptability exists

Hypothesis 4.C. The student characteristics influences the career adaptability.

1.6. Significance of the study

This study will contribute to the body of knowledge in the entrepreneurship field and the career development field. It will also benefit scholars, policymakers, and higher education administrators. The results of this study will advance the understanding of the role of entrepreneurship in developing skills necessary for the current challenges in the world. It will show the relationship between the entrepreneurship personal value and entrepreneurship competence variable, as well as the influence it has on entrepreneurial intention, self-perceived employability, and career adaptability while controlling for the profile of the students (age, gender, previous work experience, and responsibilities).

For the scholarly research, the study will shed light on how entrepreneurship and career variables relate to each other and how they impact the student perception of their career opportunities. The study will focus on academic continuing education students which is a population not targeted enough in current research. With this, the study will add to the literature on lifelong learning and higher education. Higher education administrators can benefit from the research model as it will allow them to observe the impact of entrepreneurship on career variables. It will provide valuable information for curricula planning, for the development of new studies, and a better understanding on the diversity of students, in this case, academic continuing education students. The objective of transforming HEIs into lifelong

learning institutions can be supported by this research and give a perspective on which are the characteristics of the students and how to better help their career opportunities.

Finally, the results of the study can help in the development of policies directed toward higher education, lifelong learning, and labor market outcomes. The research also provides evidence of the importance of policies that encourage the introduction of entrepreneurship in education as more than just a business creation concept. Furthermore, it will expand the perspective on the ambitions and needs of continuing education students which can lead to better-fitted policies that support them. In general, the study can help policymakers at the state, national and European Union level by establishing the impact of the current policies that incentivizes entrepreneurship education and the creation of lifelong learning institutions at the tertiary level.

2. Literature Review

2.1. Introduction

The following chapter will be presenting a literature review of the topics relevant to this thesis. The main element throughout the study proposed in this thesis is entrepreneurship. Most of the articles reviewed contain entrepreneurship as part of their content. Consequently, all the parts in this section will describe how the concept of entrepreneurship interacts with the other topics according to the literature. The articles selected are also focused on higher education, and in many instances, they represent the context of the studies. Finally, the aim of this chapter is to present the current relevant information and studies regarding entrepreneurship, employability and career adaptability in higher education.

2.2. Entrepreneurship in Higher Education

The field of entrepreneurship education in higher education is very recent, but it is growing rather quickly. The concept has always been introduced through business and economic education (Carpenter & Wilson, 2022). Nonetheless, in the last years there has been lots of potential found in the concept. Entrepreneurship is considered a driver in innovation and economic growth (Armuña et al., 2020). In this context, entrepreneurship education should be promoted along the entire education lifecycle, from primary to higher education and beyond (World Economic Forum, 2009). Originally, entrepreneurship was defined as the process of identifying and exploiting business opportunities to introduce new products or services into the market (Shane & Venkataraman, 2000). However, entrepreneurship nowadays has evolved to be considered a way of thinking and behaving. In this way, entrepreneurship education can be considered a pedagogical program that supports the development of attitudes and skillsets related to entrepreneurship (Carpenter & Wilson, 2022). Given the potential of entrepreneurship, there has been a boom in investment to promote it. Higher education has been considered the ideal space to engage in entrepreneurship, it is a place for innovation as well as the place to commercialize it. From this, the model of the entrepreneurial university has been created and spread around the world (Sperrer, Muller & Soos, 2016). The adoption of all these ideas and concepts in higher education has brought several questions. Carpenter & Wilson (2022) mentioned questions regarding to the best type of entrepreneurship education. Which is the best way, delivered by whom, and under which circumstance that will benefit the students the most? And not only that, but is entrepreneurship education really promoting and creating more entrepreneurship?

In order to evaluate the quality of entrepreneurship literature in higher education, Carpenter & Wilson (2022) made a systematic review where they wanted to identify both the progress that has been made in the area, as well as the gaps remaining for future research to address. The authors found after reviewing 35 articles which fitted their quality evaluation that entrepreneurship education showed important effects and impact in three main categories: pedagogy, learning outcomes, and venture & economic outcomes. In the pedagogy area, the articles indicated a higher impact on students when the entrepreneurship courses had a practice-oriented teaching. The articles also showed that entrepreneurship education, voluntary or

obligatory, increases the development of skills related to entrepreneurship like business opportunity identification, and risk propensity. However, they do it at different levels. According to the studies, the voluntary courses had a higher positive impact. Nonetheless, this could lead to a self-select bias. Many times, students could self-select courses about entrepreneurship education, which means that entrepreneurship education is not reaching all the students, only the ones previously interested on it. Another limitation that the authors describe is the weaknesses of the methods used in these studies. In many cases, the methodology doesn't allow for many of the articles and researchers to measure the long-term economic and social outcomes of entrepreneurship education. There is also a need to understand how entrepreneurship education can impact the life and learning of students outside from entrepreneurship intention. It is important to highlight that all the articles used in this systematic review ultimately focused on measuring entrepreneurship intention, or the willingness to become an entrepreneur.

The next sections will encompass articles that focus specifically in two main topics from the entrepreneurship education literature. Entrepreneurship competences and entrepreneurship intention are frequently mentioned and discuss in higher education. As explained before, entrepreneurship has evolved from the action of creating a business to include skills and attitudes. On the other hand, most studies have been focused on measuring entrepreneurship intention as that is the main objective for many HEIs. Noteworthy, the articles selected for this literature review are closely related to the study model used in this thesis.

2.3. Entrepreneurship Competences

Entrepreneurship competences and entrepreneurship intention have a shared development in research. Most studies that explore factors that influence entrepreneurship intention emphasize attitudes and traits (Tiago et al., 2014). However, while the development of skills is considered an outcome of entrepreneurship education, most studies focus on measuring the intentions of initiating a business, and not so much the learning outcome in relation to the competences. As Armuña et al. (2020) mention, the relationship between competences and entrepreneurship intention has gained much less attention. This could be due mainly to not having a singular way to identify the key entrepreneurship competences, nor there is an agreement of the abilities that should be taught in entrepreneurship education (Armuña et al., 2020). Several models and frameworks have been developed to try to explain and describe what are the entrepreneurship competences. The OvEnt report, a funded EU study on the existing concepts, policies and initiatives on entrepreneurship competences identified and compared different theoretical approaches and frameworks on the topic (Komarkova et al., 2015). The report also highlights the work done by Cheetham and Chivers (1998), that introduces a classification of professional competences. Following that, Le Deist and Winterton (2005) take the model and integrate the behavioral and functional approach. Finally, Mitchelmore and Rowley (2013) developed a comprehensive framework of competences of entrepreneurs where six main categories were evaluated: personal background, socio-economic factors, management skills, personal profiles, behavioral characteristics and modes of interaction. They listed all the relevant factors that they found made a successful entrepreneur. Despite the vast research, the debate continues and there

is no general acceptance of a set of characteristics that define the skill set of an entrepreneur (Komarkova et al., 2015).

Additionally, recent literature is also concerned with not only describing the skills of a successful entrepreneur but providing a guide of the competences that should be taught in entrepreneurship education. For example, Venesaar et al. (2021) proposed a model where they suggest that entrepreneurship competence is an emerging phenomenon where sub-competencies determine the development of the main competence. This is, there are several abilities, traits or behaviors dependent on the environment that led to developing the main competences. The maturing of the main competence will therefore be required for the practical implementation of many other abilities providing the right environment. This model was developed within the framework of the Estonian entrepreneurship education program supported by the Estonian Ministry of Education and Research.

Finally, a last approach to entrepreneurship competences developed in recent years is the EntreComp Framework. The EntreComp Framework has been developed to address the challenges of having a comprehensive taxonomy of entrepreneurship competences and to establish how these competences can be trained around Europe (Lopez-Nuñez et al., 2022). The framework was launched by the Joint Research Centre of the European Commission on behalf of the Directorate General for Employment, Social Affairs, and Inclusion. The framework aims to establish a bridge between the worlds of education and work, and to be a guide to foster entrepreneurial learning. EntreComp has been used to reform the curricula of education institutions, to develop courses, to create practical entrepreneurial experiences, and to develop tools to self-assess their entrepreneurial proficiency (Bacigulpo et al., 2016). The framework proposes 15 competencies that all together comprise the capacity to turn ideas into action (Lopez-Nuñez, 2022). These 15 competencies have inspired the EntreComp questionnaire, a tool first developed by Armuña et al. (2020), and afterwards modified by Lopez-Nuñez et al. (2022) to increase the validity and reliability. This tool is the one used in the study for this thesis.

2.4. Entrepreneurship Intention

There has been a substantial interest in entrepreneurship intention since the beginning of research in entrepreneurship education. After all, until recent years, the sole aim of providing entrepreneurship education was to create and support entrepreneurs or people that open a business (Carpenter & Wilson, 2022). Therefore, there has always been a growing interest in measuring the intentions of people that experience entrepreneurship education. In specific, entrepreneurship intention refers to the level of interest and willingness an individual has in launching a business (Atitsogbe et al., 2019). In higher education this concept has been highly used to measure the quality of programs related to entrepreneurship (Zhu et al., 2022). Zhu also states that measuring the intention is essential as intention is a mental state that can highly predict human behavior, and in the case of entrepreneurial intention, is a state of mind that directs an individual's attention and experience toward planned entrepreneurial behavior.

Existing research has shown that entrepreneurship education has a correlation and positive effect with entrepreneurship intention (Adekiya et al., 2016; Atitsogbe et al., 2019; Kuttim et al., 2014). However, some other sources showed mixed results (Lorz et al., 2011). In

the literature review made by Lorz et al., they mention that the methodologies used for most studies did not consider a previous perception or control groups when measuring the entrepreneurship intention of students after having entrepreneurship education courses. Still, in many of the articles, relationships and correlations with many other variables have been found. Most recently the studies on entrepreneurship intention have been expanded to include more factors, environmental elements and ideologies that could perhaps influence this variable. In the article of Zhu et al. (2022), the authors are not only interested in measuring entrepreneurship intention, but they consider the motivation for becoming a sustainable entrepreneur. Sustainable entrepreneurial intention differs from the general entrepreneurship intention in the sense that it includes the commitment to establishing a new business venture that will create economic, social and environmental value in the future. The study found that factors like gender, school education, and family experience has a positive and significant correlation to sustainable entrepreneurship intention. This is similar to the study made by Linan & Chen (2009), where individual factors like gender and level of education had an effect on the development of entrepreneurship intention. This means that even when considering a slightly different end goal that considers the context and principles of the individual, there are factors that continue to influence the entrepreneurship intention other than just courses of entrepreneurship education being the main motivator.

Linan & Chen (2009) also cite other cultural and social particularities like the beliefs associated to entrepreneurship and the individualism-collectivism mentality as factors that affect the intention. The article of Shah et al. (2022), explain that for concepts like attitude towards entrepreneurship and self-efficacy, entrepreneurship education is a moderator that strengthens the relationship with entrepreneurship intention. However, for subjective norms like beliefs, cultural and social influence (opinions from close relatives and friends), entrepreneurship education is a weak moderator. This opens the view of considering not only the objective aspect of knowledge gain and skills development to foster entrepreneurship, but also include the subjective values. In the literature review made by Hueso et al. (2020), the personal values are described as cognitive, deliberate, and evaluative determinants of goals that can explain human actions. The authors reviewed 22 studies that included personal values divided as individualistic ideals like achievement and stimulation, and collective principles like security and tradition, and found that many of them participate in the formation of entrepreneurial intention. Still, the authors mention the lack of studies that focus on the values and interests of entrepreneurs.

Finally, there is a variable or concept that can be found in many studies related to entrepreneurship intention in higher education. Employment in all its derivatives is an element that is continuously related and studied with entrepreneurship. Specifically, regarding entrepreneurship intention, the employment environment, the career opportunities, and the overall employability perception has been deemed a significant factor of motivation to become an entrepreneur in many articles (Atitsogbe et al., 2019; Hatos et al., 2022; Knörr et al., 2012; Yin, 2022). The next section will explain more thoroughly the relationship between entrepreneurship and employability according to the current academic literature.

2.5. Entrepreneurship and Employability

The importance of employability has been heightened in recent years because of the shifting landscape in the labor market (Qenani et al., 2014). For higher education, graduate employment rate is often used to assess the quality of the HEIs (Cheng et al., 2021). In the same article, the authors explain that the interest in employability originates from the massification of higher education. Having more students increases the responsibilities of higher education around the world. The role of HEIs have evolved from ensuring that students are knowledgeable in an academic discipline to ensuring that they are prepared for the labor market. In some instances, the full responsibility for employability have been transferred to the HEIs only, and the government and other stakeholders have diminished their involvement in the topic (Cheng et al., 2021). Some authors like Dawn Bennet (2018), state that higher education does not exist to purely enable an economic mission of providing employability for the graduates. The whole concept of employability needs to be redefined and aligned with the broader purposes of higher education. Instead of focusing on how to prepare students for employment, the author proposes the following question to guide higher education and employability: “How might we prepare higher education students to navigate an increasingly complex world and labor market in which they will need to think for a living?” (Bennett, 2018, pg.1). This inquiry is similar to the one found for entrepreneurship, and the perspective from which the entrepreneurship competences are conceived. The need to provide tools and knowledge for the students to navigate the complex world and labor market (Armuña et al., 2020). However, the relationship between entrepreneurship and employability goes beyond that.

Multiple articles have entrepreneurship and employability as variables in their study models. Both concepts are measured by researchers for different reasons. Some argue that entrepreneurship could be a solution for growing youth unemployment or even older population employment difficulties (Holomquist & Sundin, 2021; Mittal & Raghuvaran, 2021; Yin, 2022). In the article of Lipin Yin, he establishes a theoretical model that explores the impact of employment pressure on entrepreneurship motivation. He found out that an entrepreneurial environment provided by employment pressures, like economic crisis or difficulties of finding a job, have a positive effect on the development of entrepreneurial values and motivation. This means people think more of becoming an entrepreneur when employment becomes scarce or difficult. Still, in the same study, he didn't find a significant relation between employment pressure and entrepreneurship opportunity, or the actual execution of new business ideas. In another study, Cavaliere et al. (2020) observed the relationship between entrepreneurial alertness and self-perceived employability. Self-perceived employability is important because it provides the individual with feelings of security and confidence that create motivations and behaviors that lead to better job performance, resilience to adversity, more successful careers, and a better life (Qenani et al., 2014). In this way, authors have related entrepreneurship propensity to having a higher perceived employability (Atitsogbe et al., 2019; Cavaliere et al., 2020; Qenani et al., 2014). The article of Cavaliere et al. (2020) establishes that entrepreneurial thinking and acting is necessary to not only manage a career, but to have a successful career overall. Entrepreneurial alertness is defined by the authors as having the ability to perceive new

opportunities and being proactive by taking advantage of them. The results of the study showed that entrepreneurial alertness have both a direct and indirect effect on self-perceived employability of the students surveyed. To add to this, the article of Atitsogbe et al. (2019) also showed that students with a high employability perception, do also exhibit a higher entrepreneurship intention. This is a relationship that goes both ways. Having an entrepreneurship mindset can lead to finding better employment opportunities and feeling secure about their employability perception can make an individual consider entrepreneurship more thoroughly. This coincides with the previous study mentioned by Lipin Yin.

In the end, the relation between entrepreneurship and employability is something that continues to be discussed and researched about. Some authors emphasize that employability is built from the skills and knowledge acquired (Abrantes et al., 2021), while others discuss that there are many other factors involved in its development (Qenani et al., 2014). In the article of Qenani et al., they describe that aside from cognitive skills, there are individual factors like personality traits, age, race, and gender that can shape the perceived employability. There are also external factors like the state of the labor market and the economic situation that influences the way employability is perceived. In the case of entrepreneurship, it offers another perspective to understand the way individuals construct their employment and how it can affect their perceived employability. Entrepreneurship and employability are concepts that share certain aspects, but they also seem to support each other's development, and that is why it has become very important for higher education to study and foster them.

2.6. Entrepreneurship & Career Adaptability

There are few works that relate entrepreneurship with career adaptability. A recent article found with these two terms was done by Atitsogbe et al. (2019). In this study, the authors examined the relationship between personal resources, career adaptability and self-efficacy, and two career outcomes, employability and entrepreneurial intentions. In relation with entrepreneurship intention, there was no link or relation found with career adaptability. The authors proposed that this could be due to people being discourage by external factors to pursue entrepreneurship and their perception on their adaptive abilities and job skillset does not motivate individuals enough. Another study where there was a positive relation between career adaptability and entrepreneurship intention was the one made by Tolentino et al., (2014). This time, the authors cite the adaptive resources as self-regulatory competences that support entrepreneurship intention. It is important to mention that the participants in the latter study had already showed their appeal for business venture as a viable career option prior to the study. In the end, both articles mention the need to have further studies that relate both career construction theory and career adaptabilities with entrepreneurship. Moreover, there was no literature found about career adaptability and other concepts related to entrepreneurship like entrepreneurship competences.

Career construction theory and entrepreneurship have limited literature resources that relates both concepts. However, there is quite a significant literature about entrepreneurship and social constructionism, the ground theory from which career construction theory is based on. Social constructionism follows a positivism perspective where knowledge is sustained by social

processes, this is, knowledge is constructed through acknowledging how social factors shape interpretations and how the social world is constructed by social and relational practices (Young & Collin, 2003). It also establishes, just like constructivism, that individuals construct their own world through experiences, but in the case of social constructionism, these are also guided by social practices, like interactions and negotiations, and not only cognitive processes like reflection. In this way, career construction theory uses both personal constructivism and social constructionism to describe and explain how people build their careers (Fasbender et al., 2019). The phenomenon of entrepreneurship, according to the social constructionism perspective, is developed through complex social interactions. Instead of considering the entrepreneurial subjects as single individuals, entrepreneurship becomes networks and teams (Lindgren & Pachendorff, 2009). Monica Lindgren and Johan Pachendorff continue to explain in their article that given the longitudinal aspect of social interactions, there is a need to include more qualitative studies and to enhance the perspective of entrepreneurship to include more than economical perspectives and acknowledge more definitions and methods than the established research practices. The conclusion, once again, is that there is a need to broaden the research field in entrepreneurship and include new perspectives like the social constructionism or the career construction theory and career adaptabilities.

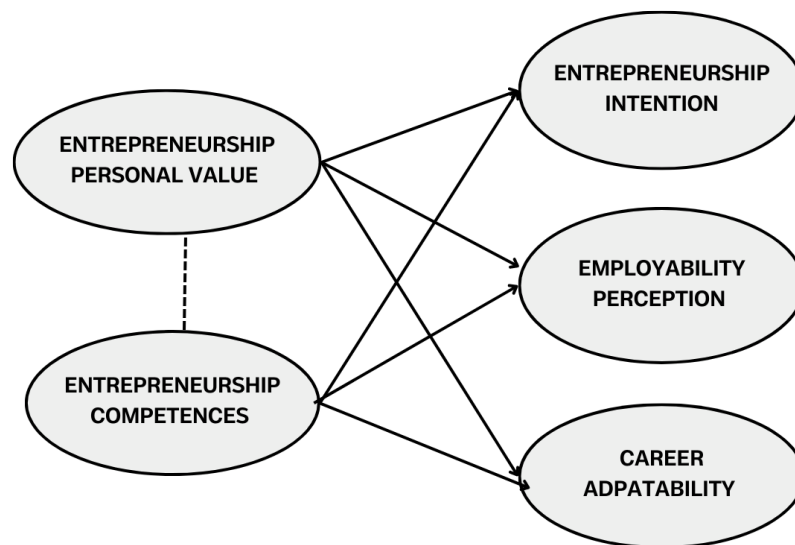
3. Methodology

The methodology for this research is a quantitative case study. Creswell (2007) explains case study research as a study of an issue or event explored through one or more cases within a bounded system. For this reason, the research problem will be evaluated through the perspective of one university in Austria, a university with the specific characteristic of being a continuing education institution. The tool used for measuring the different variables in the study will be a survey. The type of research is a cross sectional-survey. In a cross-sectional study, the researcher analyzes data across a sample population at a specific point in time (Singh, 2018). The survey design was made employing five different validated scales and ten questions to define the student characteristics and profile. The analysis of the data collected will be done using the correlation of spearman and the ordinal logistic regression. In the following chapter, the research design, the variables, and the data collection will be presented. Afterwards, a description of the sample population will be described.

3.1. Research Design

The study uses a survey composed by five different scales. The objective is to study the influence of entrepreneurship personal value and entrepreneurial competence in the career outcomes and career adaptability of academic continuing education students. This is a novel structure for a survey as well as a new model for analyzing the different variables. In figure 1, the relationship of influence in the study model can be observed. The outcome variables for entrepreneurship intention, perceived employability and career adaptability were measured on an ordered, categorical and 7-point Likert-scale. A similar situation occurs with both independent variables, entrepreneurship personal value and entrepreneurship competence.

Figure 1
Study Model



A few clarifications for the survey design and analysis are needed. The decision of implementing a 7-point Likert scale was due to the better performance of this scales when measuring perceptions and attitudes (Joshi et al., 2015). The 7-point Likert scale provides more options and maintains the neutral point like the 5 point Likert scale. In the article of Josh et al., it is explained that when measuring a cluster of attitudes, or a group of items that measures a distinct element of the issue, the 7-point scale gives varieties of options that increase the probability of getting the reality or true perception of the people.

3.2. Variables in the analysis

In this section the sets of variables (dependent and independent) will be defined for the ordinal regression model used to evaluate hypothesis 2 to 4. The inclusion of the variables to the study is supported by previous literature, and follows the design observed in figure 1. The aim is to identify the influence of the independent variables on the dependent variables. The variables selected for the study are supported by previous scholarly finding on factors that affect entrepreneurship development in a student.

Dependent Variables

Career outcomes. For career outcomes the study is including the variables of perceived employability, and the entrepreneurship intention. These two concepts represent the two paths of type of employment an individual can possess. The scale used are looking for the student perception on their capacity to obtain either path, it is not a measurement of their actual performance.

- **Perceived Employability:** Rothwell et al. (2008, p. 2) defined self-perceived employability as “the perceived ability to obtain sustainable employment appropriate to one’s qualification level.” The scale used in this study was focused on self-belief, skills, and opportunity perception, taken from two cells regarding self-belief in employability perception from Rothwell et al. (2008), and two items adapted from Wittekind et al. (2010). The externalities like university, field of study and labor market situation were not included from the scale of Rothwell et al. (2008). Some examples of the items used are: “I am sure I could find work easily if I start looking” and “I feel I could get any job as long as my skills and experience are reasonably relevant”.
- **Entrepreneurship Intention:** Taken from (Linan, 2009). The scale measures the entrepreneurial motivation or the self-perceived determination to create a business or firm. Some of the items in the scale are: “I am ready to do anything to be an entrepreneur” and “My professional goal is to be an entrepreneur”.

Career adaptability. The career adaptability scale is based on the career construction theory that cites adaption as a main contributor to human development. Career adaptability is a psychosocial construct that denotes an individual's resources for coping with tasks, transitions, traumas in their occupational roles that, to some degree, alter their social integration (Savickas, 1997). The scale used in the study is the short version of the full scale

developed by Savickas and Porfeli (2012). The short-form scale was developed by Maggiori, C., Rossier, J., & Savickas, M. L. (2017). The scale asks to rate how strongly the participant feels towards having developed the abilities related to career adaptability. Some examples are: “Looking for opportunities to grow as a person” and “Investigating options before making a choice”.

Independent Variables (Covariate)

Entrepreneurship Personal Value: The scale used on the study was based on Hidi and Renninger’s Survey (2006) and designed by Knekta et al. (2020). Only the “Perceived personal value” aspect or section was considered and adapted to centered on entrepreneurship. The purpose of this scale is to show the interest and value given to learn the concept or subject of entrepreneurship. The original scale measured the same, but for the subject of biology. Some examples of the items are: “I really see value in learning entrepreneurship skills” and “I am certain that studying about entrepreneurship has a positive influence on my personality”.

Entrepreneurship Competence: The scale is based on the EntreComp Framework and designed by Armuña et al. (2020) and revised by Nuñez-Lopez et al. (2022) turning it into a 20 items scale. “The EntreComp model proposes 15 competences that, all together comprise the capacity to turn ideas into action” (Lopez-Nuñez, 2022). The framework was built over an extended review of literature on entrepreneurship and using as reference several case studies and multi-stakeholder consultation (Armuña et al., 2020). The scale is divided in four different sections: ideas & opportunities, personal resources, specific knowledge, and into action. The first section reflects the capacity to identify opportunities and the capacity to take advantage of them. Some examples of the items are: “Development of creative and purposeful ideas”, and “Recognize the potential that an idea has for creating value”. The second one, personal resources, refers to the use of material and non-material attributes to follow-up on an opportunity, eg. “Making the most of limited resources” and “Leadership skills”. Specific knowledge concerns the skills relevant to entrepreneurship like “financial know-how” and “legal know-how”. Finally, the last section centers on the ability to initiate value-creating activities, this is “taking initiative”, “learning through experience”, and others.

The model also includes further variables that according to sources found in the literature review, they can also have an influence on the career outcomes and career adaptability of a student.

Control Variables

Age: The age of a person has been recognized as a variable that affects a person views on entrepreneurship and career development. According to the article by Holmquist and Sundin (2021), the number of old people aiming to become an entrepreneur is lower as they encounter more hindrances like lack of resources, lower financial resources (problems getting

loans), risk aversion and shorter time horizons. At the same time there are social constructs of age limits in the labor market, from the retirement age to the promotion stagnation and organizational structures being negative towards old employees (De Lange et al., 2021). From the systematic review done by De Lange et al., the results show a negative relationship for age and labor market-based measures like employment opportunities in all the articles that cite them. This is a clear indication that both entrepreneurial intention and career outcomes are affected by age, and therefore, it is a variable that should be included in the model.

Years of work experience: Experience is a concept linked to positive development. In entrepreneurship, experience increases the possibility of the project to succeed. In the labor market, experience is perceived as added value in skills (Biney, 2021). In the case of work experience, the main effects observed by many researchers has been on the employability (Andresen et al., 2022; Jackson & Wilton, 2017; Helyer & Lee, 2014). In all these studies the authors found a positive relationship between work experience and employability, career success and financial improvement. Nonetheless, all these studies focused on recent graduates or young adults in the labor market. There is a lack of information on the effects of work experience on an older demographic.

Gender: Gender has been a highly studied variable in career development and entrepreneurship. Women usually exhibit lower rates of entrepreneurship intention than men according to the following studies (Guerrero et al. 2016; Novak et al. 2012; Santos et al. 2016), particularly in highly knowledge-intensive business sectors (Dilli and Westerhuis 2018). However, there are also studies that have find minimal or no difference between the entrepreneurship knowledge, skill, and experience, like the one done by Armuña et al. (2020). Related to employability, there were gender differences found to the self-perception of employability in the studies made by Bennet et al. (2022), and Qenani et al. (2014). As for career adaptability, there have been several associations regarding gender and career optimism and growth (Soylu et al., 2021). Career adaptability has also found important effects for the gender in relation to the societal and parental support (Zhang et al., 2021). Overall, gender is a significant factor studied for career outcomes and career adaptability. Like with the other variables, there is also a lack of information for academic continuing education students.

Responsibilities: The responsibility factor corresponds to the question: Do you have someone to take care of? The options given were: “you have to take care of kids, a partner, a family member or a person that requires special needs”. The final option was “no, I don’t have anyone to take care of”. This way the variable of responsibility measures the dichotomy of having a responsibility for one or more people, or not. This variable was included in the model as the literature regarding older students, or older people in general, cite an aversion to risk and a higher commitment to family (Holmquist and Sundin, 2021). The effects of responsibility is closer related to entrepreneurship, but through this model the aim is to observe whether there is also an effect on the dependent variables of employability perception and career adaptability.

3.3. Data Collection

Survey data was collected from a questionnaire of 61 items which was distributed to a random sample of students covering all the field of studies in the University for Continuing Education in Krems. The 61 items were classified on the 5 predetermined scales that have been previously mentioned and 10 items were used to identify specific characteristics of the students, like their age and gender. It is not possible to assume normal distribution of the data, and thus non-parametric tests and ordinal regression is the best option for the analysis. More on the statistical techniques used to measure the influence of the independent variables on the outcome variables will be discussed in the next chapter. To obtain the responses, an email request was sent to all the program coordinators in the university whose information was available on the web page of the university. The survey was distributed in beginning of the summer semester 2023 personally, and through an online link or QR code for easy access.

Additionally, when building the survey, a pilot was made, and a test on reliability was made with the Cronbach's alpha. The scales were already validated but due to slightly changing some of the items, the reliability was verified. In the following table 1, the results can be observed. According to Fraenkel & Wallen (2000), the reliability should at least be .70 or higher. All the results were reliable.

Table 1

Reliability scores of the scales

LIKERT SCALE	CRONBACH'S ALPHA
ENTREPRENEURSHIP PERSONAL VALUE	0.91
ENTREPRENEURSHIP COMPETENCE	0.82
ENTREPRENEURSHIP INTENTION	0.94
EMPLOYABILITY PERCEPTION	0.89
CAREER ADAPTABILITY	0.86

3.4. Description of the Sample

The description of the sample is the following. From the 123 responses, 43.9% are male, 54.5% are female, and 1.6% answered as other. In age, the 87.8% of the students were below 49 years

of age, 12.2% are over 50, and the average age was 39 years old. For years of experience, 45.5% of the respondents stated they had 20 or more years of work experience and only 26.8% had 9 or less years of experience. The average for this same variable was 18 years. In the responsibility variable, 65% of the students indicated that they have someone to care for and 35% have no one to take care of. In the following tables the summary of the demographic frequencies of the four variables included can be observed. In table 7, the descriptive statistics of the continuous variables of age and years of experience can also be found.

Table 2

Demographic characteristics of the survey participants (n=123)

Age	N	%
20-29 years	26	21.1%
30-29 years	36	29.3%
40-49 years	46	37.4%
50-59 years	11	8.9%
60+ years	4	3.3%
Years Of Experience	N	%
1-9	33	26.8%
10-19	34	27.6%
20-29	34	27.6%
30-39	20	16.3%
40+	2	1.6%
Gender	N	%
Male	54	43.9%
Female	67	54.5%
Other	2	1.6%
Responsibility	N	%

YES	80	65%
NO	43	35%

Table 3

Descriptive statistics of Age and Years of Experience (n=123)

	Minimum	Maximum	Mean	Std. Deviation
Age	24	68	39.46	9.83
Years of Experience	3	45	18.16	10.19

4. Results

4.1. Aim of the chapter

This chapter will present the results and findings of the analysis. The information will be focused on accepting or rejecting the hypothesis previously discussed. The results will be described in five different sections, each responding to a particular variable or set of variables. Before presenting the results, some indications on the analysis procedure will be made in order to better explain the results obtained. The first section will be the general finding where the goal is to illustrate some of the relevant data found in the analysis but that not necessarily corresponds to evaluating the hypothesis. Nonetheless, the information in this section is important for the further discussion in the next chapter of this thesis. Afterwards, the next sections will detail the results of the statistical techniques used, in this case, Spearman correlation and ordinal logistic regression. The full tables from the generalized linear models of the OLR output of the SPSS software will be included in the annex section at the end of the document. The aim of this chapter is to only convey the resulting numbers from the data analysis, as well as a direct interpretation of those numbers. Additional information or interpretations considering the context of the study will be part of the next chapter.

4.2. Analysis Indications

There are several ways in which Likert scale data can be analyzed and interpreted. Moreover, there is no agreement in which is the best way to treat the data. Whether it is conceived as categorical, interval or continuous data is part of the decision of the researcher, and also important to make it fit the model better. For this thesis, the survey was already divided into five different scales whose objective was to measure a single variable for each of the scales. That is, the scale measures the cumulative responses of one single attitude, so to weight it, we must use the average or mean of all the items belonging to that scale. The dependent variables must be then converted into intervals to be used as an ordinal dependent variable, or a variable with categories with a corresponding verbal description. The verbal description can be the level of agreement, level of frequency, level of importance or likelihood. The three dependent variables for the model in this thesis are: entrepreneurship intention (EI), employability perception (EP) and career adaptability (CA). The intervals or categories for these variables measure the level of intention for EI, the level of perceived employment for EP, and the level of perceived capacity for CA. This thesis follows the intervals proposed by Jonald L. Pimentel (2019) to achieve an even distribution between the categories of the seven-point likert scale. The following table shows the intervals used in Pimentel paper, therefore, the description for the table is just an example and it is different from the categories used in the dependent variables of this thesis.

Table 4

Seven-point Likert scale intervals

Likert Scale	Interval	Difference	Description
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1	1.0 – 1.85	0.85	Vary bad
2	1.86 – 2.71	0.85	Rather bad
3	2.72 – 3.57	0.85	Bad
4	3.58 – 4.43	0.85	Neither good/bad
5	4.44 – 5.29	0.85	Good
6	5.30 – 6.15	0.85	Rather good
7	6.16 – 7.00	0.84	Very good

After defining the intervals, the need to collapse some of the intervals or categories appeared during the process of the analysis. Van Dusen (2020) states that categories of a Likert scale should be retained unless there is a good reason for them to be collapsed. One justification for them to be collapsed is when one or more categories are not being selected, therefore, they are not giving any new or important information to the model. A second reason given in his paper is when the categories are being interpreted the same way, therefore, they are giving the same information. Both situations were present in the variables for this thesis. Only the EP variable was left with the seven categories in the model as there was little change when taking out one category that wasn't chosen, the number 1 or no employability at all. For the variable of EI, the first 4 categories, which measured the negative attitude or the indifferent or no intention of becoming an entrepreneur, were collapsed into only one category as they all give the same information. In the case of career adaptability, the first 3 categories which measured the negative attitude, or the low career adaptability, were not chosen. Therefore, the scale ended up with only 4 categories. The three dependent variables with the collapsed categories look as follows in table 3, 4 and 5.

Table 5

Entrepreneurship Intention Categories

**CATEGORIES INTERVAL ACCORDING DESCRIPTION
TO 7 POINT LIKERT
SCALE**

1	1-4	No intention
2	5	Low Intention

3	6	Medium Intention
4	7	High Intention

Table 6

Perceived Employability Categories

CATEGORIES	INTERVAL ACCORDING TO 7 POINT LIKERT SCALE	DESCRIPTION
1	1	No Employability
2	2	Rather bad employability
3	3	Bad Employability
4	4	Neutral
5	5	Low Employability
6	6	Medium Employability
7	7	High Employability

Table 7

Career Adaptabilities Categories

CATEGORIES	INTERVAL ACCORDING TO 7 POINT LIKERT SCALE	DESCRIPTION
1	1-4	Bad Adaptability

2	5	Low Adaptability
3	6	Medium Adaptability
4	7	High Adaptability

Some final indications regarding the analysis are the following. The total number of complete responses was 126, and from this number, 123 were used for the analysis. There were three responses that were excluded because the participants responded in the same way for all items, or they followed a clear pattern disregarding the content of the questions. Both the Spearman correlation and the ordinal logistic regression was done using the 123 full responses.

4.3. Method Analysis: Spearman Correlation and Ordinal Logistic Regression

When the data is not normally distributed, or non-parametric, Spearman's Correlation Coefficient Rho is often used to measure the strength of association between two variables (Hauke & Kossowski, 2011). The functional representation of Spearman's correlation is given by:

$$RS = \rho (R(X),R(Y)) = cov (R(X), R(Y))/\sigma(R(X) \sigma(R(Y))$$

Where the two variables (X,Y) are converted into ranks and ρ is the usual Pearson correlation that measures the variance over the standard deviation of the variables. According to the article of Bolboaca and Jantschi, while the Spearman correlation is good to reject the null hypothesis of no relationship, it should not be overinterpreted as a significant measure (Bolboaca & Jantschi, 2006). In the case of the Hypothesis 1 and other sub hypothesis, the objective is to know whether there exists a relationship between the two variables, in which case the Spearman correlation is a good option to respond to the question.

The other statistical technique used to analyze the data in this thesis is the ordinal regression. In this study the ordinal regression was used to model the relationship between the ordinal outcome variables and the independent variables. Goodman (1979) developed a model to assess symmetrical problems where the association of variables was ordinal. Since Goodman, regression models that fit ordinal data have been included in the broader category of Generalized Linear Models (McCullagh and Nelder, 1989). There are two main models that analyze ordinal data depending on whether they respond to a binary dependent variable or a categorical dependent variable with more than two categories, these are *Log-linear* and *Logit* (Lall, 2004). For this thesis the ordinal logistic regression for ordinal data with more than two categories was analyzed using the SPSS software. The link function used was Logit: $f(x)=\log(x/(1-x))$. A second analysis using the generalized linear model option in SPSS with the cumulative probabilities or cumulative logit was also included in the analysis.

The ordinal regression model may be written as follows:

$$\text{logit}(P(Y \leq j)) = \beta_0 + \beta_1 x_1 + \dots + \beta_p x_p$$

where $j=1, \dots, J-1$ and p are predictors. In the next section a full description of the variables used in the model will be described.

4.4. Descriptive Statistics

The descriptive results of the study are the following. The dependent variables of entrepreneurship intention, employability perception and career adaptability will be shown in the following tables through frequency results. It is interesting to notice that 52.8% of the students indicated that they do not have any intention on becoming entrepreneurs. Also, 77.2% of the students expressed a medium or high perception of employability, and 89.5% of the students declared to have a medium or high level of career adaptability.

Table 8

Frequencies of Entrepreneurship Intention

	N	%
No intention	65	52.8%
Low Intention	17	13.8%
Medium Intention	15	12.2%
High Intention	26	21.1%

Table 9

Frequencies of Employability Perception

	N	%
Rather bad employability	1	0.8%
Bad employability	2	1.6%
Neutral	8	6.5%

Low employability	17	13.8%
Medium employability	54	43.9%
High employability	41	33.3%

Table 10
Frequencies of Career Adaptability

	N	%
Bad Adaptability	2	1.6%
Low Adaptability	11	8.9%
Medium Adaptability	59	48.0%
High Adaptability	51	41.5%

Finally, for the entrepreneurship indicators we find the following frequencies. Almost 50% indicated a rather good level of entrepreneurship competence, and 43.1% have a high level of personal value of entrepreneurship. The tendency is for a positive perception of these variables.

Table 11
Frequencies of Personal Value of Entrepreneurship

	N	%
Bad PV	5	4.1%
Neutral	15	12.2%
Low PV	22	17.9%

Medium PV	28	22.8%
High PV	53	43.1%

Table 12
Frequencies of Entrepreneurship Competence

	N	%
Bad EC	14	11.4%
Low EC	35	28.5%
Medium EC	61	49.6%
High EC	13	10.6%

Other interesting numbers are the results by each of the four categories in the EC scale. The scale is based on the EntreComp Framework which aims to impart entrepreneurship at all educational levels. The framework helps in the introduction of entrepreneurship through the development of competence. The four categories are: Ideas and Opportunities, Personal Resources, Specific Knowledge and Into Action. The lowest mean was for the Specific Knowledge (SK) category and the highest average number was for the *Into Action* category. Specific Knowledge measures the perception of the skills acquired in the areas of digital technology, law, finance, and economics. The Into Action category measures the perception of the level of skills a person must put into action for the plans they have envision, this includes problem solving skills, learning from mistakes, communication, and others. Further analysis of these categories will be described in the discussion chapter of this thesis. The following table (Table 13) shows the descriptive statistics (minimum, maximum, mean and standard deviation) of the four categories.

Table 13
Descriptive Statistics of the 4 categories of the EC scale

	Minimum	Maximum	Mean	Std. Deviation
Ideas & Opportunities	2.00	7.00	5.22	1.02
Personal Resources	3.33	7.00	5.62	.78

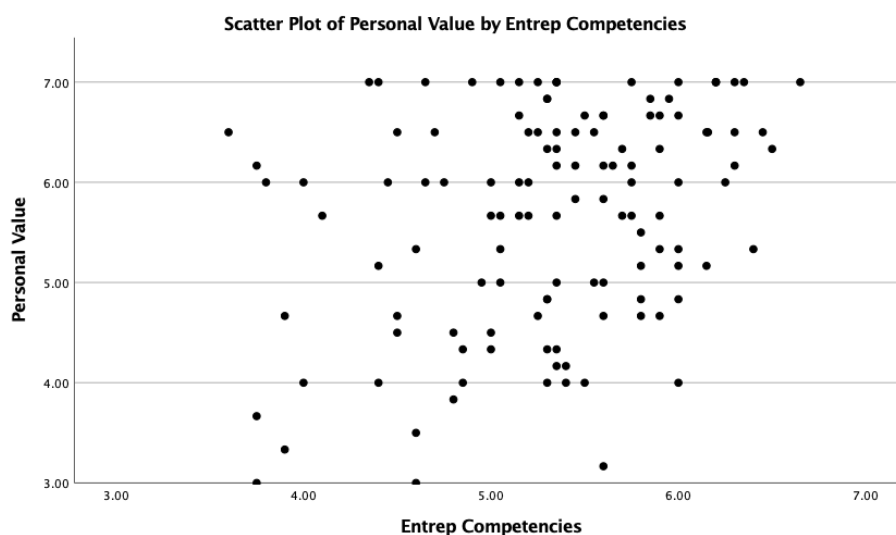
Specific Knowledge	1.60	6.40	4.42	.97
Into Action	4.25	7.00	6.08	.75

4.5. Entrepreneurship Indicators

The first hypothesis of the study examines whether a relationship between the two entrepreneurship indicators exists. The two entrepreneurship indicators are: the personal value of entrepreneurship (PV) and the entrepreneurship competence (EC). For this purpose, it was decided that Spearman correlation would be the best option to establish the relationship. The Spearman correlation can take a value from +1 to -1 where a positive +1 means a perfect association, a value of 0 means that there is no association between ranks, and a value of -1 means a perfect negative association. The value of the Spearman correlation coefficient rho for the continuous variables are 0.287 and the correlation is significant at the 0.05 level. This means that the null hypothesis has been rejected and there is a positive relationship, with a strength of 0.287, where the entrepreneurship competence increases as the personal value of entrepreneurship increases and vice versa. The value indicates a higher relationship the closer it is to 1 and a lower one the closer it is to 0, in this case the relationship can be considered not too strong or on the lower level. This result can also be observed in the following figure with the variables plotted in a scatter plot diagram. A tendency can be observed, but the data is quite dispersed.

Figure 2

Personal Value of Entrepreneurship-by-Entrepreneurship Competence



4.5.1 Students Characteristics

To discover whether there are some influences from the students' characteristics in these variables, a Mann-Whitney U test was conducted. This is due to the data being ordinal and non-parametric. The test compares the median of PV and EC for male and females, and for students

that had someone to care for or not (Responsibility). After doing the tests, the only significant result was for PV. The test revealed significant difference in the personal value of entrepreneurship perception between males (Median = 6, n= 54) and females (Median= 6, n= 67), $U=1403$, $z=-2.168$, $p=.030$, $r=.19$. The value for r was obtained through the following equation: $r = Z/\sqrt{N}$, which for this case is equal to $r = 2.168/\sqrt{121}$. According to Cohen (1998) criteria .1=small effect, .3= medium effect, and .5 = Large effect. This result corresponds to a small effect.

Table 14

Mann-Whitney U Test Ranks

Ranks				
	Gender	N	Mean Rank	Sum of Ranks
PV_Med	Male	54	68.52	3700.00
	female	67	54.94	3681.00

Table 15

Mann-Whitney U Test Statistics

Test Statistics	
	Personal Value
Mann-Whitney U	1403.000
Wilcoxon W	3681.000
Z	-2.168
Asymp. Sig. (2-tailed)	.030

a Grouping Variable: Gender

For the continuous variables of age and years of experience, a Spearman correlation matrix was made. There was an obvious correlation between age and years of experience, however, the only significant value related to the entrepreneurship indicators at the 0.01 level was entrepreneurship competence and years of experience. The value of the Spearman correlation coefficient rho was 0.264. There is a positive relationship between years of experience and entrepreneurship competence. This means that higher years of experience give the students a higher entrepreneurship competence perception at a low strength of 0.264. In the following table the results can be observed.

Table 16

Spearman Correlation Matrix between the Entrepreneurship Indicators, Age and Years of Experience (N=123)

SPEARMAN RHO	PV	EC	AGE	YEX
PV	1.000	.287**	.083	.113
EC	.287**	1.000	.153	.264**
AGE	.083	.153	1.000	.924**
YEX	.113	.264**	.924**	1.000

***Correlation is significant at the .01 level (2-tailed)*

4.6. Entrepreneurship Intention

The second hypothesis in the thesis states that the students' personal value of entrepreneurship (PV) and entrepreneurship competence (EC) have an influence on the entrepreneurship intention (EI) of the students. An ordinal logistic regression (OLR) was used to examine the hypothesis and the model used was previously mentioned in the previous chapter and a graphical representation can be observed in Figure 1. The output given by SPSS shows that the model fitting information fits the final model over the null model with a likelihood ratio chi-square test of [$\chi^2(7)=32.425, p<.001$]. The goodness of fit table contains the Deviance and Pearson chi-square tests with a p over .05. Pearson chi-square test [$\chi^2(359)=373.447, p=.289$] and the deviance test [$\chi^2(359)=261.710, p=1.000$] were both non-significant. A non-significant test results indicate that the model fits the data well. The OLR assumes the existence of proportional odds, we can observe this through the test of parallel lines. The test of parallel lines result was $p = .174$, which indicates non-significance, and the assumption is satisfied. In the parameter estimates, we have the regression coefficients and the significance tests for each of the independent variables in the model. In order to also observe the Odds Ratio, or the odds of a case falling at a next higher level, the Generalized linear models' output is presented for the parameter estimates. Just like with the previous output in SPSS, the goodness of fit shows the same Pearson chi-square and Deviance result. The Omnibus test shows the same likelihood ratio chi-square test from the previous output. In table 17 the parameter estimates, and their significance (p) can be observed.

Table 17

Parameter Estimates of OLR for EI

Parameter Estimates

	β	Std. Error	Wald Chi-Square	Sig. (p-value)	Exp(β)	95% CI	
						Lower	Upper
Responsibility=1	-.771	.388	3.949	.047*	.426	.216	.989
Responsibility=2	0 [^]	-	-	-	-	-	-
Gender=1	-1.54	1.55	.986	.321	.214	.010	4.48
Gender=2	-1.71	1.55	1.22	.269	.180	.009	3.75
Gender=3	0 [^]	-	-	-	-	-	-
Personal Value	.924	.209	19.4	<.001*	2.519	1.67	3.79
E Competence	-.121	.291	.173	.677	.886	.501	1.56
Age	.077	.050	2.32	.128	1.08	.978	1.19
YEX	-.09	.051	3.42	.064	.910	.823	1.00

0[^] set to zero because this parameter is redundant

*Significant parameter $p < .05$

For the first factor which corresponds to the Responsibility variable, were 1 indicates a positive response to having someone to care for and 2 indicates they do not have anyone to care for, the result is significant ($p = .047$) for 1. Having a responsibility or someone to take care of is a significant negative predictor of entrepreneurship intention. For every one unit increase on responsibility, there is a predicted decrease of $-.771$ in the log odds of a student being in a higher level of EI. This indicates that a student that indicates they have someone to take care of are less likely to indicate a high interest in becoming an entrepreneur.

The second point that should be indicated is the odds ratio. The Exp(B) column contains odds ratios reflecting the multiplicative change in the odds of being in a higher category on the dependent variable for every one unit increase on the independent variable. An odds ratio > 1 suggests an increasing probability of being in a higher level on the dependent variable as values on an independent variable increases, whereas a ratio < 1 suggests a decreasing probability with increasing values on an independent variable. An odds ratio = 1 suggests no predicted change in the likelihood of being in a higher category as values on an independent variable increase. In this case, for the responsibility factor, the odd ratio indicates that the odds of being in a higher category of entrepreneurship intention decreases by a factor of $.462$ for every one unit increase on responsibility.

The variables of gender, age, the years of experience and the entrepreneurship competence were not significant predictors in the model. The other significant predictor was the variable of personal value of entrepreneurship. PV was a significant positive predictor of entrepreneurship intention with a $p < .001$. The log odds of being in a higher level on EI was $.924$ points higher on average for those who indicated a higher PV. The odd ratio shows that the odds of being in a higher category of EI increases by 2.519 for every unit increase on PV.

With these results the null hypothesis is rejected and the hypothesis 2 must be partially accepted as only PV showed significant influence on the dependent variable EI. It was also

found that responsibility or whether a student has someone to take care for like a partner, kids or other, will have a negative influence on EI.

4.7. Employability Perception

The same statistical technique, an ordinal logistic regression using SPSS, is used for this dependent variable of employability perception (EP). The output given by SPSS shows that the model fitting information fits the final model over the null model with a likelihood ratio chi-square test of [$\chi^2(7)=26.281, p<.001$]. The goodness of fit table contains the Deviance and Pearson chi-square tests with a p over .05. Pearson chi-square test [$\chi^2(603)=478.668, p=1.000$] and the deviance test [$\chi^2(603)=289.820, p=1.000$] were both non-significant. A non-significant test results indicate that the model fits the data well. The test of parallel lines result was $p = .725$, which indicates non-significance, and the assumption is satisfied. The Generalized linear models' output is presented in the table 18.

Table 18

Parameter Estimates of OLR for EP

Parameter Estimates							
	β	Std. Error	Wald Chi-Square	Sig. (p-value)	Exp(β)	95% CI	
						Lower	Upper
Responsibility=1	.412	.381	1.167	.280	1.509	.715	3.18
Responsibility=2	0 [^]	-	-	-	-	-	-
Gender=1	1.669	1.341	1.550	.213	5.308	.383	75.51
Gender=2	1.356	1.334	1.034	.309	3.882	.284	53.03
Gender=3	0 [^]	-	-	-	-	-	-
Personal Value	.329	.173	3.584	.058	1.390	.988	1.953
E Competence	.691	.280	6.076	.014*	1.996	1.152	3.459
Age	-.09	.047	3.601	.058	.914	.833	1.003
YEX	.030	.046	.401	.527	1.030	.940	1.129

0[^] set to zero because this parameter is redundant

*Significant parameter $p<.05$

The table presents the log odds (β), the odds ratio or $\text{Exp}(\beta)$, and the significance (p) for each independent variable. The only variable that is significant according to the model is the entrepreneurship competence. EC is a positive predictor of EP having $p=.014$. The log odds ratio was .691 for every one unit increase in the students' EC. The odds ratio indicates that the odds of being in a higher category of EP increases by a factor of 1.996 for every one unit increase of EC. This means that a student that indicates they have a high score in EC, is also likely to indicate a high score in EP.

The variables of gender, age, the years of experience and personal value of entrepreneurship were not significant predictors in the model. However, it is interesting to notice that both Age and PV approached acceptance levels of statistical significance ($p=.058$). When compared the results with a Spearman Correlation Matrix, we find that there is a positive relationship between PV and EP (correlation coefficient $\rho=.255$, $p=.004$), and a negative relationship between Age and EP (correlation coefficient $\rho=-.228$, $p=.011$). This is similar to what can be observed in the result of the log odds (β) for the OLR. The regression coefficient indicates that for every unit increase of PV, there is a predicted increase of .329 in the log odds of being in a higher level of EP. In addition, for every unit increase in Age, there is a predicted decrease of -.090 in the log odds of being in a higher level of EP while controlling for the remaining predictors. Nonetheless, while there seems to be a correlation, there is no clear evidence that the independent variables of Age and PV are influencing the variable EP. The hypothesis 3 states that both PV and EC influence EP, however, only EC was statistically significant. Therefore, the hypothesis is partially accepted, and the null hypothesis is rejected.

Table 19

Spearman Correlation Matrix between EP, PV, and Age (N=123)

SPEARMAN RHO	EMPLOYABILITY PERCEPTION (EP)	PERSONAL VALUE OF ENTREPRENEURSHIP (PV)	AGE
EP	1.000	.255**	-.228*
PV	.255**	1.000	.083
AGE	-.228*	.083	1.000

** Correlation is significant at the .01 level (2-tailed)

* Correlation is significant at the .05 level (2-tailed)

4.8. Career Adaptability

The OLR results for the CA are as follows. The goodness of fit table contains the Deviance and Pearson chi-square tests with a p over .05. Pearson chi-square test [$\chi^2(359)=255.257$, $p=1.000$] and the deviance test [$\chi^2(359)=209.591$, $p=1.000$] were both non-significant. A non-significant test results indicate that the model fits the data well. The test of parallel lines result was $p = .294$, which indicates non-significance, and the assumption is satisfied. The Generalized linear models' output is presented in the table 20. The full table can be found in the annex area of this thesis.

Table 20

Parameter Estimates of OLR for CA

Parameter Estimates							
	β	Std. Error	Wald Chi-Square	Sig. (p-value)	Exp(β)	95% CI	
						Lower	Upper
Responsibility=1	-.02	.399	.004	.951	.976	.446	2.136
Responsibility=2	0 [^]	-	-	-	-	-	-
Gender=1	.875	1.866	.220	.639	2.399	.062	93.06
Gender=2	.890	1.861	.229	.633	2.436	.063	93.61
Gender=3	0 [^]	-	-	-	-	-	-
Personal Value	.135	.163	.537	.464	1.144	.798	1.641
E Competence	1.625	.351	21.33	<.001*	5.081	2.549	10.126
Age	.027	.051	.270	.603	1.027	.928	1.137
YEX	-.01	.050	.001	.981	.999	.905	1.103

0[^] set to zero because this parameter is redundant

*Significant parameter $p < .05$

The only variable that is significant according to the OLR output is the entrepreneurship competence. EC is a positive predictor of CA having $p = .014$. The log odds ratio was .691 for every one unit increase in the students' EC. The odds ratio indicates that the odds of being in a higher category of CA increases by a factor of 5.081 for every one unit increase of EC. The rest of the variables, responsibility, age, gender, years of experience, and PV are not statistically significant. With these results the null hypothesis is rejected and the hypothesis 4 must be partially accepted as only EC showed significant influence on the dependent variable CA.

5. Discussion, Recommendations, and Conclusion

5.1. Aim of the chapter

This study aimed to evaluate the influence that entrepreneurship indicators have on the self-perceived capacity of academic continuing education students regarding their career outcomes and their career adaptability. The entrepreneurship indicators encompass two concepts that have been highly discussed in higher education in the last few years. One is the development of skills necessary for the current world, and the other is the interest and commitment to innovate through the lenses of entrepreneurship. While scholars have previously focused on the way entrepreneurs are created with the support of higher education institutions, nowadays, entrepreneurship is considered a broader topic. In this chapter, the discussion of the results will be focused on the effects entrepreneurship has on the students, both in their perception of their current and future opportunities in their professional careers, as well as, in the development of soft skills. Other elements like the students' characteristics and their influence on both the dependent and independent variables will also be discussed. Overall, the intention is to give a clear perspective on how entrepreneurship topics in higher education can influence the way students construct their professional careers. It is also a way to understand the benefits of entrepreneurship education in higher education and to work on the points that are still lacking.

It is important in the analysis of the results to also consider the context and singular situation of the sample of students that were participants in this study. Academic continuing education students are not a population that is targeted very often in academic literature. There is a clear need for more research in this area, which is why this thesis aims to contribute to the topic. In this section, the discussion will also be directed towards understanding the needs and challenges academic continuing education students experience. Their perspective will be different from any other higher education student, and thus, the effects of entrepreneurship education could present new perspectives on its benefits and the areas that need more attention.

The study found that an influence exists between some of the entrepreneurship indicators and the dependent variables. After the introductory part where the case study will be explained, the discussion will be separated into 4 main areas. The first one will be focused on the entrepreneurship indicators, their correlation with each other, and the relationship they have with students' characteristics. The two entrepreneurship indicators are: the personal value of entrepreneurship and the entrepreneurship competence. The next three sections of the chapter will correspond to each of the dependent variables: entrepreneurship intention, employability perception, and career adaptability. In the end, a section for recommendations and another for conclusions will be presented.

5.2. Entrepreneurship Indicators

5.3.1 Personal Value of Entrepreneurship

The formulation of the first hypothesis was guided by the previous literature on entrepreneurship and based on the career construction theory. Self-construction is a central aspect of the career construction theory, and it is driven by the way people make themselves into who they are and how that later leads to career construction (Savickas, 2017). In this sense, the interests, passions, or curiosity of the person has an immediate effect on their self-construction. The value given to certain topics, areas, or subjects would therefore influence the skills developed and further down the line, it will affect the career development of a person. Or at least, this is a statement that could be deduced from the theory. However, few studies concerning entrepreneurship view the concept through a social constructionism or personal constructivism perspective. There is no study found that uses a scale that measures the interest of individuals in entrepreneurship and observes the effects this has on different career variables. This way, a part of the scale used in Knekta et al. (2020) was adapted to measure the personal value of entrepreneurship (PV) of the participants. The main idea was to analyze the way entrepreneurship, as a subject or concept, is perceived by academic continuing education students through a survey and using quantitative methods.

When observing this variable in relation to the students' profiles, the only relevant result found was related to gender. Male participants showed a higher PV than female participants, although the difference was not big, and the effect is considered small according to the statistical test used. These results could be linked to others where female participants have shown a lower intention of becoming entrepreneurs (Guerrero et al., 2016) or studies where entrepreneurship education programs have a negative effect on female university students (Westhead and Solesvik, 2004). Nonetheless, the intention of becoming an entrepreneur is different from being interested in the topic of entrepreneurship. Other articles cite no relevancy of gender in both entrepreneurship intention and entrepreneurial competence (Armuña et al., 2020). The study done by Armuña also mentions the role of education and the development of skills and competence in generating interest in entrepreneurship. However, the study was focused on measuring the influence entrepreneurship competence has on entrepreneurship intention, and not the relationship between the interest of entrepreneurship as a subject on the development of entrepreneurship competence. Thus, this is one of the main contributions of this thesis. The inclusion of PV as an influence variable regarding career outcomes and career adaptability is a novel part of the study.

In education, the commitment and performance of a student in learning have been linked to the interest they showed in the subject (Hidi and Renninger, 2006; Knekta et al., 2020). It is expected that students that show more motivation and interest will have better results. There are also expectations that those students will develop more skills related to that specific subject. This was the thinking behind the first hypothesis in the thesis. The results showed that there is a correlation between PV and entrepreneurship competences (EC). Nevertheless, the correlation was low in strength, and while significant, it cannot indicate any clear influence. This result could be intriguing as it doesn't follow the expectations cited previously. While there is a correlation, it is not a strong one and that could be due to the way

entrepreneurship is understood by the students. For the EntreComp Framework, entrepreneurship is a concept that brings positive attitudes and promotes the development of skills necessary for the current labor market (Armuña, 2020). However, entrepreneurship has been mostly used to describe the action of opening a new business. In many instances on the curricula of the courses, entrepreneurship is still presented as the main support to create new products and open firms. Further research could be directed towards studying the way students describe and understand entrepreneurship with qualitative methods to get a detailed perspective. It is also important to study the way students relate entrepreneurship to the development of skills and competences, and this is the focus of the following part. In the next section, the results and discussion related to entrepreneurship competences will be presented.

5.3.2 Entrepreneurship Competences

Competences are described as a set of skills and knowledge that a person obtains through education or experience (Armuña et al., 2020; Cheng et al., 2003). Also, according to Savickas (2017), and the career construction theory, individuals compose a self and a career by reflecting on experiences, and this leads to the construction of favored attributes and significant events. Using these two statements, the idea we can build is that competences are developed through experience and reflection on the knowledge given. It is something that can be built upon and not something that is just obtained through a simple transaction process. Education aims to give the knowledge needed for students to reflect and construct their skills, but this process will inevitably be different for different people. The EntreComp Framework aims to be a guide to the skills that can be developed through entrepreneurship. EC has become relevant in the last few years because they are linked to the creation of new businesses that bring added value to the economy and society (Armuña, 2020). Most of the time they are also linked to management skills, however, they are broader (Lopez-Nuñez, 2022). According to the article of Lopez-Nuñez et al. (2022), there are abilities related to entrepreneurship that can be trained to create learning outcomes, just like how EntreComp proposes. The framework is divided into 15 competencies that address the different abilities needed in the process of turning ideas into actions. Nonetheless, in the scale proposed by Lopez-Nuñez et al. (2022) and Armuña et al. (2020), these competencies are divided into four different blocks. A detailed description of each block can be found in the third chapter of this thesis. In this section, the focus is on the results from each of these blocks and how they relate to the targeted population: academic continuing education students.

The four blocks are: ideas & opportunities, personal resources, specific knowledge and into action. All of them describe important competence needed in the entrepreneurship process. The descriptive statistics of each block show us interesting data about the students. The first two sections had similar values, with an average score of 5.22 for ideas & opportunities, and 5.62 for personal resources. While these scores can be considered high, it also shows that there is still space for improvement. Ideas and opportunities, as the title indicates, center on evaluating the self-perception of how capable the students feel to create and take advantage of new ideas and opportunities. The minimum value in this block was lower than the personal resources one and overall had the second lowest minimum score of the four

blocks. This could indicate certain doubt or hesitation in these skills. Also, personal resources competences concentrate a lot more on abilities that can be more easily measured and perceived by individuals. They are also skills that are more commonly mentioned in formal education, like leadership and communication skills. Understandably, this block is the second highest, the first being the competences classified as “Into Action”. These skills are related to the planning and execution of actions. These could be considered very straightforward competences, and therefore, more easily employed by students. Some examples are problem-solving skills, making decisions, and learning from mistakes. However, even if the highest scores correspond to a block that measures very practical abilities, it is interesting to notice that the lowest scores come from the specific knowledge block.

While the specific knowledge block mentions subjects or areas of knowledge, we could also argue that they correspond to very practical skills. These are digital, financial, legal, and industrial skills. The average score of 4.42 is lower than the other blocks average scores for more than one point, and the minimum value was 1, which means some participants considered they had no knowledge about these subjects. At the same time, this was the only block that didn’t reach a score of 7 as the maximum value, which means none of the participants felt they had good knowledge of all these areas. This also corresponds to the answer they gave in the previous block about having multidisciplinary skills, which was also the lowest value for the personal resources’ competences. This shows that there is still a lot of improvement to be made when it comes to giving a broader perspective on knowledge using topics from different subjects. While some people could argue that specific knowledge in some of these areas, like legal or economic know-how, is not necessary for all careers, the reality is that they are skills that can bring benefits in everyday life and create more opportunities that otherwise wouldn’t be considered. In the case of digital knowledge, technology and other digital platform resources are becoming essential in the labor market. Moreover, having this kind of specific knowledge increases the probability of success for someone that wants to be an entrepreneur. For example, lack of financial knowledge is one of the top 5 reasons new businesses do not find success (Tran et al., 2023). Startups are hindered by legal mistakes that could be easily avoidable. Furthermore, a good legal structure can give them a boost to increase their success (Harroch et al., 2020). And this does not only happen with entrepreneurs, having personal finance knowledge increases the overall confidence to deal with any money-related situation and it leads to greater wealth (Lusardi, 2019). As well, digital skills have been deemed necessary for the labor market and are part of the 21st-century skills (Van Laar, 2019). In conclusion, the students showed a lack of knowledge in the areas specified in the scale as specific knowledge, which involves digital skills, economic and financial know-how, legal understanding, and industry knowledge regarding the production of products and services. All these areas can bring important benefits to the students, and therefore the university could pay more attention to introducing more topics from these areas in their courses no matter the field of study.

The second observation regarding EC was in relation to the students' profile and characteristics. The only variable that showed significance was the years of work experience. This meant that a student with more years of experience was more likely to also have higher

scores of self-perceived EC. However, the correlation coefficient rho was .264, which meant the strength was low. As always, correlations can never be an indication of causation, and therefore, the influence of having more years of work experience in EC cannot be assured. Nonetheless, it does show a tendency that could be explained by developing more soft skills through having more practice in the job world. Many jobs required some of the practical competences mentioned in the survey like communication skills, problem-solving skills, and networking skills. Therefore, it is expected that there will be a correlation. Still, the correlation was of low level, which perhaps causes even more intrigue. This could be an indication that there needs to be more support for skills development and continuing education in the work environment. The companies and the labor market in general could benefit a lot from integrating resources needed to mature many of the skills related to entrepreneurship. Entrepreneurship at a basic level is the motivation to create and execute new ideas, products, and services. Entrepreneurship can also steer the vision toward innovation, a sought-after action that is crucial for the continuing success of any organization (Yin, 2022). This opens the possibilities to research the way jobs help develop EC, and to further deepen the current study. It can also give more insights into the competences needed to increase employability and career adaptability.

5.3. Entrepreneurship Intention

The method used to analyze the influence of the independent variables on the entrepreneurship intention (EI) of students was an ordinal logistic regression. In this case, entrepreneurship intention refers specifically to the action or desire of creating a business. It does not consider a broader understanding of entrepreneurship as the EC variable does. The expectation, as expressed in the second hypothesis of this study, was that both the personal value of entrepreneurship and entrepreneurship competences would have a visible influence on the EI of academic continuing education students. This was based on previous literature, where entrepreneurship competences have been measured in relation to its influence on EI. In the article of Armuña et al. (2020), they found a positive relationship between EI and the EC using the same scale based on the EntreComp that is used in this thesis. The same happened in the study made by Lopez-Nuñez et al. (2022). Nonetheless, the results of this thesis showed that only the PV variable had a significant effect on EI. The odds ratio shows that the odds of being in a higher category of EI increases by 2.519 for every unit increase in PV.

One of the most interesting results from the study was that the relationship between the EC and the EI was not strong enough to be significant in the ordinal logistic regression model. This could open several questions about the way EC fosters and motivates the creation of entrepreneurs. Most of the literature on entrepreneurship in higher education has been focused on finding ways of promoting entrepreneurship through the student body. In most cases, the development of skills related to entrepreneurship has been deemed indispensable to achieve this. However, there is a big difference in the way entrepreneurship is conceived through the EntreComp framework and what the EI scale is measuring. Another important distinction is the student population in the UWK. Academic continuing education students are older in age than normal students, have had more work experience, and thus, have different

perspectives and priorities. While the variable of Age didn't show significance in the model, the variable of responsibility had a significant influence on EI. There was a negative relationship found between having the responsibility of someone to take care of and having a high EI. For every one-unit increase in responsibility, there is a predicted decrease of $-.771$ in the log odds of a student being in a higher level of EI. This means that caring for a partner, kids, or any other person or relative decreases the probability of the student becoming an entrepreneur. This could also be related to the unwillingness to take risks, which had been cited by several authors as one of the main determinants of older people not wanting to open their own businesses (Homquist & Sundin, 2021; Fernandez-Lopez et al., 2022). In conclusion, there could be other variables or factors that have a higher influence on EI than EC. Furthermore, EC had a positive correlation with the years of work experience. This could also mean that having previous work experience would allow students to better link EC to positive skills necessary to the labor market, which ultimately is the purpose of the EntreComp framework. There are several studies that could be done to further assess the relationship between EC and EI. According to the results of the current study, it was found that interest in entrepreneurship is more important to incentivize EI rather than the development of EC. Regardless, in the next sections, we will be able to observe the way entrepreneurship competences influence the variables of employability perception (EP) and career adaptability (CA).

5.4. Employability Perception

Employability is a concept that has been thoroughly studied in higher education. It is an outcome that the higher education sector searches for, and although it is not the only objective, it is an important aspect of any higher education institution. Self-perceived employability was described by Rothwell et al. (2008) as "the perceived ability to obtain sustainable employment appropriate to one's qualification level". In many studies, the employability outcome is measured through the employability perception (EP) of the students. This is due to being the most accessible way to predict performance and is also a way to observe how different variables affect the perceived ability of the students to obtain employment. Notwithstanding the vast resources on this topic, there were no studies found that relate EP to specific skills like the entrepreneurial competences. It is also important to mention that no previous study has used entrepreneurship personal value as a variable before, therefore, the influence on EP has not been measured before. In this way, the third hypothesis was focused on discovering the influence that the entrepreneurship indicators PV and EC have on EP.

The results were that only EC or entrepreneurship competences showed significance in the ordinal logistic regression model. The odds ratio indicates that the odds of being in a higher category of EP increases by a factor of 1.996 for every one-unit increase in EC. The hypothesis was then partially accepted. The relationship between the variables was expected as the relationship between skills and employability has been previously found and studied. In the article by Anette Wittekind et al. (2009), two variables were related to skills. The current level of job-related skills and skills development were significant predictors of perceived employability. Moreover, in the paper made by Álvarez-González et al. (2017), they found an integrated model that positioned self-confidence as the main mediator factor of perceived

employability, and the personal factors that influence this variable were both generic and academic skills. It is understandable that EC would be a significant factor that influences EP, after all, the scale used that is based on the EntreComp framework envisions entrepreneurship competences as soft skills that can support the development of any individual despite their entrepreneurial intention. Nonetheless, the other part of the result should not be forgotten.

The third hypothesis was partially accepted because PV and EP showed no significant relationship. This is an intriguing result as in previous literature there was always a correlation found between EI and EP. And as on the previous section of this chapter was already discussed, there is also a significant relationship between PV and EI. However, this is not found for PV and EP. The reason could be due to several other factors. Even though there were no significant factors according to the students' characteristics, we also must take into account that the students of the UWK are mostly working students. This means that most of them already have employment, and therefore, their employability perception would be skewed or quite different from recent graduates that have just recently entered the labor market. Their EP results would tend to be higher than in other studies, and that is what we can see in the frequencies of this variable. 77.2% of the participants indicated the two highest numbers on the Likert scale. Nevertheless, even if the logistic regression model didn't show any influence of PV on EP, when checking for Spearman correlation, it was found that there was a low strength correlation between the variables. This shows there is a tendency of the relationship between the variables that have been previously cited. The only other correlation found was in regard with the Age. Once again, the strength of the correlation was low but this time it was a negative relationship. This is also understandable as most studies have indicated a negative relationship between aging and employability. In the systematic review made by De Lange et al. (2021), it is established that there are several obstacles and consequences of "aging at work". And it is not only the loss in performance and physical resources, but it also presents an increased negative perception of work that leads to a diminishing employability over time. However, the results showed a low strength correlation and a non-significant factor for the logistic regression model, which is positive for the UWK population, especially considering that 49.6% or almost half of the participants were 40 years or older. The numbers were not expected, which could make us wonder what the variables are, personal or external, that made the UWK population have positive outlooks on EP. Future research could focus on studying more about the experiences of older academic continuing education students in the UWK and the factors that made up their employability perception.

5.5. Career Adaptability

The career adaptability (CA) variable was measured using the short version of the career adaptability scale. The conception of this term comes entirely from the career construction theory. According to Savickas (2012), career construction theory possesses two key meta-competencies for the career development of an individual: vocational identity and career adaptability. The concept of career adaptability refers to the readiness to cope with the unpredictable adjustments prompted by changes in work and working conditions (Savickas, 1997). In previous research, there have been several interrelations found between this concept

and other factors and variables. There are characteristics like gender that have been found to affect the way CA is perceived (Soylu et al., 2021; Zhang et al., 2020). In the paper of Fasbender et al. (2019), the age was also found to be a factor that affected CA. Ultimately, the article of Atitsogbe et al. (2019) relates career adaptability to entrepreneurship intention and perceived employability. In this last study, there was a significant relationship found between employability and CA. The result follows the career construction theory that considers CA as an important element of the overall career development and decision-making of an individual. Nonetheless, for this thesis, the objective was to find the influence of entrepreneurship indicators like PV and EC on the CA of the academic continuing education students. The results were that the hypothesis was partially accepted as only EC had a significant influence on CA according to the logistic regression model. The odds ratio indicates that the odds of being in a higher category of CA increases by a factor of 5.081 for every one-unit increase of EC. This was the strongest relationship found between all the variables in the study.

The reason the relationship between CA and EC is quite strong is because there are some concepts and skills that overlap in the items of each scale. For example, communication and problem-solving skills are present in both scales. Although the main framework used for both scales is different, the reality is that both are based on soft skills that are necessary to find new opportunities and deal with challenges. Entrepreneurship according to EntreComp and career adaptability share the idea that change is part of the current labor market context and that using the resources available and being alerted to find new ones is essential to overcoming the challenges and to adapt to the situation. The way these two concepts overlap could be a great point of reference to promote the development and understanding of entrepreneurship competences to the students, and a way to construct future curricula.

The second part of the results for this hypothesis were quite unexpected. As previously stated, there had been several factors found in previous literature that affected CA. However, not only did PV had no significant influence, but also none of the demographic factors like age and gender were significant. Even when considering the context of the participants and their overall profile as working students with several years of work experience, it is surprising that it showed no significant influence on their perception of CA. Then again, we must consider that the responses were quite high on this topic, and perhaps it doesn't show the full perception of the students. A future study could use a qualitative method to better discern the factors that influence CA on academic continuing education students.

5.6. Limitations & Recommendations

The following section discusses the limitations of the study as they relate to the dataset, as well as to the generalizability of the study findings. Afterwards, some recommendations for the use of this study and future research will be provided. Previous recommendations have also been made throughout the chapter, but in this section, a summary will be presented. In the end, the implications for practice will be described leading to the final part of this chapter, the conclusion.

One of the main limitations of this study is the fact that the data obtained through Likert scales measure the perception of the participants, and this number cannot be considered the

full truth. For diverse reasons, participants may not show their real perception through a survey. Moreover, Likert scales produce ordinal data which means some of the responses of the participants could fall between two categories of the scale points. In the end, the results are very straightforward in the sense that they represent an opinion but do not give more information about the origin, experiences, or new ideas related to this opinion. Another important consideration is that the dependent variables used in this study can be influenced by a multitude of personal and external factors that are not captured by the dataset. The study model did not intend to be an integrated model where all the factors that could influence the variables will be measured. In this case, the study model served its purpose of identifying the influence of the variables and factors selected on the dependent variables, but a variety of other factors that may play a role in explaining the students' perception were unaccounted for due to the limitations of the dataset. Regarding the data collection, the number of participants was enough for analyzing the hypothesis proposed, nonetheless, a higher number of participants would have allowed a deeper analysis. In the end, the results cannot be generalized to all academic continuing education students. This is a case study of the UWK University in Austria. Furthermore, the findings of this study cannot be generalized to all students in UWK due to the dataset limitations, but it can be used as an indication of tendency.

The following paragraph provides a list of recommendations concerning future research. First, as many of the papers on social constructionism and entrepreneurship have indicated before, there is a need for more qualitative studies that focus on students' perception, understanding, and use of entrepreneurship (Young & Collin, 2003; Lindgren & Packendorff, 2007, Pittaway et al., 2017). Social constructionism is the grounded theory from which career construction theory is built upon, and thus, it aims to have a multi-level understanding of career development without reducing the complexity of society, the economy, and the personal experience. Lindgren and Packendorff (2007) mention that for entrepreneurship research, there is a need to change the focus from single entrepreneurial individuals to actors functioning on networks and teams. The social language and interaction are essential to deepen the understanding of entrepreneurship. Concerning the current study, there were several points throughout the process of making this thesis where more information was needed to give a clearer perspective on how certain variables interacted with each other. Some of the results were unexpected in the sense that previous literature had found a clear relationship, but it wasn't present in this study. A closer look into the students' experiences and opinions could perhaps bring a better understanding of the distinctions between academic continuing education students and other students.

The second recommendation for future research is to expand the scope of the study. While focusing on academic continuing education students is necessary, the UWK provided very specific profiles that could not represent the whole population of lifelong learners. Comparisons with other universities with the same profile that supports continuing education would be interesting. Also, comparisons using the same study model in students from conventional universities could also give a more thorough perspective on the needs and challenges of current academic continuing education students.

Finally, the intent of this study was to provide both higher education professionals and policymakers with empirical evidence of the way entrepreneurship education can influence the career development of academic continuing education students. Through the results of the survey, it was visible the main areas lacking in entrepreneurship competences, the interest and intention students with these characteristics have about entrepreneurship, and how entrepreneurship indicators influence employability and career adaptability. This study is meant to provide empirical and actionable data, as well as to contribute to scholarly research in the area of higher education.

5.7. Conclusion

The purpose of this study was to explore the influence entrepreneurship indicators like personal value of entrepreneurship and entrepreneurship competence have on career outcomes and career adaptability of academic continuing education students. Other factors like gender, age, years of work experience and level of responsibility were included in the study. Career construction theory served as the theoretical framework. The theory proposes that self-construction and adaption are fundamental for the career development. In this way, entrepreneurship is a complex concept that can encompass important elements of both self-construction and adaption, and that would therefore affect the career outcomes and career adaptability of an individual. This is the hypothesis from which this thesis is built upon. The study used a data set collected from a questionnaire given to 123 students from the University of Continuing Education Krems. The method employed was Spearman correlations and ordinal logistic regression to analyze the data. The results provide empirical and actionable information for higher education administrators, researchers and policy makers.

The study found that there is a significant correlation between entrepreneurship competences and personal value of entrepreneurship, however of low strength. The variable EI was influenced by both PV and the responsibility, the former in a positive way and the latter in a negative tendency. This means that students that indicated a high PV were likely to also showed a high EI, and on the contrary, students that indicated they had someone to take care of (Responsibility) were less likely to have a high EI. A positive relationship was also found between EC and EP. This is similar to CA, where only EC was significant according to the OLR model. In the end, PV did not show influence in most of the variables, which indicates that the interest in entrepreneurship does not influence strongly the development of entrepreneurship skills and the career perception of the students, the main influence is on the intention of creating a business. In the case of EC, it influenced greatly CA, probably because the scales measure similar skills and attitudes related to the identification and execution of new ideas and opportunities. It also showed a positive influence of the employability perception. This indicates that entrepreneurship competences have a higher influence on the perception of the student doing well in the labor market but does not incentives them to become entrepreneurs. Moreover, the student's perception on EC showed that they have a lower confidence in their specific knowledge, like digital know-how, legal know-how and financial know-how. These areas can bring important benefits to the students, thus, the introduction of these topics in all fields of study should be considered by the university.

Future research is needed to assess the relationship between these variables from a multi-level perspective including qualitative studies and a broader scope. This research can help higher education administrators, policy makers and scholars to understand how entrepreneurship affects students' career perceptions. It also contributes to recognizing the challenges for academic continuing education students regarding entrepreneurship and career development.

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7. Annexes

Questionnaire



Dear UWK student,

The following survey aims to give an overview on the effects of entrepreneurship education in continuing education students' career development. This study will provide relevant information regarding the value of entrepreneurship education and the development of entrepreneurial competences to the UWK community. We appreciate your time and honesty answering each question.

The survey will take 10 minutes to complete. All your answers are anonymous and the information will be treated confidentially in compliance with the European Union data protection regulations. The results will only be reported and publishes in an aggregated form. Thus, drawing conclusions about individuals will not be possible.

If you experience any technical issues or have any questions about this survey, please e-mail: ana.de-ita@edu.donau-uni.ac.at

Thank you for participating.

Best regards,

Evelyn De Ita

Master in Research and Innovation in Higher Education (MARIHE)

Section A: About the student

A1. Age:

--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--

A2. Gender:		male	<input type="checkbox"/>
		female	<input type="checkbox"/>
		other	<input type="checkbox"/>
A3. Have you had previous work experience?		Yes	<input type="checkbox"/>
		No	<input type="checkbox"/>
A4. How many years have you worked?		<input type="text"/>	
A5. What is your field of study?		Search documents and filenames for text	
		Building & Environment	<input type="checkbox"/>
		Digitalization & Sensors	<input type="checkbox"/>
		Economics & Business Management	<input type="checkbox"/>
		Education	<input type="checkbox"/>
		Health & Medicine	<input type="checkbox"/>
		Law & Administration	<input type="checkbox"/>
		Media & Communication	<input type="checkbox"/>
		Migration & International Affairs	<input type="checkbox"/>
		Psychotherapy & Social Services	<input type="checkbox"/>
A6. What is the name of your program?		<input type="text"/>	
A7. What is your current semester?		Semester 1	<input type="checkbox"/>
		Semester 2	<input type="checkbox"/>
		Semester 3	<input type="checkbox"/>
		Semester 4	<input type="checkbox"/>
		More	<input type="checkbox"/>
A8. What is the purpose of your studies?		Career Advancement in same field	<input type="checkbox"/>
		Career Change	<input type="checkbox"/>

Self-Employment
 Other

Other

--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--

A9. What is the field of your previous work experience?

--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--

A10. Do you have someone to care for?

Yes, I have a partner

Yes, I have children

Yes, elderly person

Yes, person with disability

Yes, other

No

Section B: Personal Value

B1. Select the option that fits best:

	Strongly disagree	Moderately disagree	Slightly disagree	Neutral	Slightly agree	Moderately agree	Strongly agree
It is of great personal importance to me to become knowledgeable in entrepreneurship	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
I really see value in learning entrepreneurship skills	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Learning about entrepreneurship has always been important to me	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
I am certain that studying about entrepreneurship has a positive influence on my personality	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
I am confident that learning about entrepreneurship skills directly corresponds to my personal ambitions	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
I value the knowledge I have about entrepreneurship	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

Section C: Competences

EntreComp Framework Competences

C1. What is your level of aptitude?

	(1) No aptitude at all	2	3	(4) Neutral	5	6	(7) Very high aptitude
Identifying opportunities to create value and challenges that need to be met	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Development of creative and purposeful ideas	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Visualization of future scenarios to guide effort and action	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Recognize the potential that an idea has for creating value	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Asses the consequences and impact of ideas, opportunities and actions	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

C2. What is your level of aptitude?

	(1) No aptitude at all	2	3	(4) Neutral	5	6	(7) Very high aptitude
Determination to turn into action my ideas, and being resilient under pressure, adversity and temporary failure	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Making the most of limited resources	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Leadership skills	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Communication skills	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Multidisciplinary skills (skills from different disciplines)	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Making decisions dealing with uncertainty, ambiguity and risk	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

C3. What is your level of aptitude?

	(1) No aptitude at all	2	3	(4) Neutral	5	6	(7) Very high aptitude
Digital know how	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Legal know how	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Financial and economic know how	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Development of products and services	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Networking skills and making contacts	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

C4. What is your level of aptitude?

	(1) No aptitude at all	2	3	(4) Neutral	5	6	(7) Very high aptitude
Team working	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Problem solving skills	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Learn by doing	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Learn from mistakes	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

Section D: Entrepreneurial Intention

D1. Select the option that fits best:

	Strongly disagree	Moderately disagree	Slightly disagree	Neutral	Slightly agree	Moderately agree	Strongly agree
I am ready to do anything to be an entrepreneur	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
My professional goal is to be an entrepreneur	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
I will make every effort to start and run my own business	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
I am determined to create a business venture in the future	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
I have very seriously thought of starting a firm	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
I have got the firm intention to start a firm some day	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

Section E: Employability

E1. Select the option that fits the best:

	Strongly disagree	Moderately disagree	Slightly disagree	Neutral	Slightly agree	Moderately agree	Strongly agree
I can easily find out about opportunities in my chosen field	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
The skills and abilities that I possess are what employers are looking for	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
I am generally confident of success in job interviews	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
I feel I could get any job so long as my skills and experience are reasonably relevant	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
I am sure I could find work easily if I start looking	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
In case I were to be dismissed of a job, I will immediately find other job of equal value	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

Section F: Adaptability

F1. Please rate how strongly you have developed each of the following abilities:

	(1) Not strong at all	2	3	(4) Neutral	5	6	(7) Very strongly
Thinking about what my future will be like	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Preparing for the future	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Becoming aware of the educational and vocational choices that I must make	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Making decisions by myself	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Taking responsibility for my actions	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Counting on myself	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Looking for opportunities to grow as a person	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Investigating options before making a choice	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Observing different ways of doing things	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Taking care of doing things well	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Learning new skills	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Working up to my ability	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

Section G: Comments

G1. Do you have any comments about the topic?

Tables

Spearman Correlations of All Variables SPSS Output

Correlations

		Personal Value	Entrep Competencies	Entrepreneurship Intention	Employability Perception	Career Adaptability	Responsibility	Age	Gender	Years of Experience	
Spearman's rho	Personal Value	Correlation Coefficient	1.000	.287**	.408**	.255**	.220*	-.032	.083	-.200*	.113
		Sig. (2-tailed)	.	.001	<.001	.004	.014	.725	.361	.027	.214
		N	123	123	123	123	123	123	123	123	123
Entrep Competencies	Entrep Competencies	Correlation Coefficient	.287**	1.000	-.001	.256**	.489**	-.089	.153	-.085	.264**
		Sig. (2-tailed)	.001	.	.991	.004	<.001	.326	.091	.353	.003
		N	123	123	123	123	123	123	123	123	123
Entrepreneurship Intention	Entrepreneurship Intention	Correlation Coefficient	.408**	-.001	1.000	.127	.175	.172	-.089	-.084	-.132
		Sig. (2-tailed)	<.001	.991	.	.160	.053	.057	.326	.358	.147
		N	123	123	123	123	123	123	123	123	123
Employability Perception	Employability Perception	Correlation Coefficient	.255**	.256**	.127	1.000	.211*	-.046	-.228*	-.147	-.135
		Sig. (2-tailed)	.004	.004	.160	.	.019	.614	.011	.105	.137
		N	123	123	123	123	123	123	123	123	123
Career Adaptability	Career Adaptability	Correlation Coefficient	.220*	.489**	.175	.211*	1.000	-.070	.161	-.095	.213*
		Sig. (2-tailed)	.014	<.001	.053	.019	.	.441	.075	.296	.018
		N	123	123	123	123	123	123	123	123	123
Responsibility	Responsibility	Correlation Coefficient	-.032	-.089	.172	-.046	-.070	1.000	-.256**	.050	-.292**
		Sig. (2-tailed)	.725	.326	.057	.614	.441	.	.004	.587	.001
		N	123	123	123	123	123	123	123	123	123
Age	Age	Correlation Coefficient	.083	.153	-.089	-.228*	.161	-.256**	1.000	-.054	.924**
		Sig. (2-tailed)	.361	.091	.326	.011	.075	.004	.	.555	<.001
		N	123	123	123	123	123	123	123	123	123
Gender	Gender	Correlation Coefficient	-.200*	-.085	-.084	-.147	-.095	.050	-.054	1.000	-.097
		Sig. (2-tailed)	.027	.353	.358	.105	.296	.587	.555	.	.283
		N	123	123	123	123	123	123	123	123	123
Years of Experience	Years of Experience	Correlation Coefficient	.113	.264**	-.132	-.135	.213*	-.292**	.924**	-.097	1.000
		Sig. (2-tailed)	.214	.003	.147	.137	.018	.001	<.001	.283	.
		N	123	123	123	123	123	123	123	123	123

** . Correlation is significant at the 0.01 level (2-tailed).

* . Correlation is significant at the 0.05 level (2-tailed).

EI OLR Generalized Linear Models SPSS Output

Parameter Estimates

Parameter	B	Std. Error	95% Wald Confidence Interval		Hypothesis Test			Exp(B)	95% Wald Confidence Interval for Exp(B)	
			Lower	Upper	Wald Chi-Square	df	Sig.		Lower	Upper
Threshold [Entrepreneurship Intention=4.00]	3.919	2.7113	-1.395	9.233	2.090	1	.148	50.367	.248	10232.207
[Entrepreneurship Intention=5.00]	4.625	2.7176	-.701	9.952	2.897	1	.089	102.023	.496	20986.996
[Entrepreneurship Intention=6.00]	5.389	2.7339	.030	10.747	3.885	1	.049	218.899	1.031	46491.454
[Responsibility=1.00]	-.771	.3881	-1.532	-.011	3.949	1	.047	.462	.216	.989
[Responsibility=2.00]	0 ^a	.	.	.	.	.	.	1	.	.
[Gender=1]	-1.541	1.5518	-4.582	1.501	.986	1	.321	.214	.010	4.486
[Gender=2]	-1.714	1.5501	-4.752	1.324	1.223	1	.269	.180	.009	3.758
[Gender=3]	0 ^a	.	.	.	.	.	.	1	.	.
Personal Value	.924	.2096	.513	1.335	19.428	1	<.001	2.519	1.670	3.798
Entrep Competencies	-.121	.2912	-.692	.450	.173	1	.677	.886	.501	1.568
Age	.077	.0506	-.022	.176	2.321	1	.128	1.080	.978	1.193
Years of Experience	-.095	.0511	-.195	.006	3.426	1	.064	.910	.823	1.006
(Scale)	1 ^b									

Dependent Variable: Entrepreneurship Intention

Model: (Threshold), Responsibility, Gender, Personal Value, Entrep Competencies, Age, Years of Experience

a. Set to zero because this parameter is redundant.

b. Fixed at the displayed value.

EP OLR Generalized Linear Models SPSS Output

		Parameter Estimates									
		B	Std. Error	95% Wald Confidence Interval		Hypothesis Test			Exp(B)	95% Wald Confidence Interval for Exp(B)	
Parameter				Lower	Upper	Wald Chi-Square	df	Sig.		Lower	Upper
Threshold	[Employability Perception=2.00]	-.901	2.5607	-5.920	4.118	.124	1	.725	.406	.003	61.442
	[Employability Perception=3.00]	.240	2.4278	-4.518	4.999	.010	1	.921	1.271	.011	148.210
	[Employability Perception=4.00]	1.671	2.3828	-2.999	6.341	.492	1	.483	5.317	.050	567.427
	[Employability Perception=5.00]	2.843	2.3809	-1.824	7.509	1.426	1	.232	17.167	.161	1825.201
	[Employability Perception=6.00]	5.088	2.4192	.347	9.830	4.423	1	.035	162.077	1.414	18575.628
[Responsibility=1.00]	.412	.3810	-.335	1.158	1.167	1	.280	1.509	.715	3.185	
[Responsibility=2.00]	0 ^a	.	.	.	.	.	.	1	.	.
[Gender=1]	1.669	1.3410	-.959	4.297	1.550	1	.213	5.308	.383	73.515	
[Gender=2]	1.356	1.3341	-1.258	3.971	1.034	1	.309	3.882	.284	53.039	
[Gender=3]	0 ^a	.	.	.	.	.	.	1	.	.
Personal Value	.329	.1738	-.012	.670	3.584	1	.058	1.390	.988	1.953	
Entrep Competencies	.691	.2804	.142	1.241	6.076	1	.014	1.996	1.152	3.459	
Age	-.090	.0474	-.183	.003	3.601	1	.058	.914	.833	1.003	
Years of Experience	.030	.0467	-.062	.121	.401	1	.527	1.030	.940	1.129	
(Scale)	1 ^b										

Dependent Variable: Employability Perception
Model: (Threshold), Responsibility, Gender, Personal Value, Entrep Competencies, Age, Years of Experience

- a. Set to zero because this parameter is redundant.
b. Fixed at the displayed value.

CA OLR Generalized Linear Models SPSS Output

		Parameter Estimates									
		B	Std. Error	95% Wald Confidence Interval		Hypothesis Test			Sig.		
Parameter				Lower	Upper	Wald Chi-Square	df	Sig.			
Threshold	[Career Adaptability=4.00]	6.507	3.0874	.455	12.558	4.441	1	.035			
	[Career Adaptability=5.00]	8.680	3.0473	2.708	14.653	8.114	1	.004			
	[Career Adaptability=6.00]	11.809	3.1529	5.629	17.988	14.028	1	<.001			
[Responsibility=1.00]	-.025	.3997	-.808	.759	.004	1	.951				
[Responsibility=2.00]	0 ^a	.	.	.	.	.	.
[Gender=1]	.875	1.8664	-2.783	4.533	.220	1	.639				
[Gender=2]	.890	1.8617	-2.759	4.539	.229	1	.633				
[Gender=3]	0 ^a	.	.	.	.	.	.
Personal Value	.135	.1839	-.226	.495	.537	1	.464				
Entrep Competencies	1.625	.3519	.936	2.315	21.335	1	<.001				
Age	.027	.0516	-.074	.128	.270	1	.603				
Years of Experience	-.001	.0505	-.100	.098	.001	1	.981				
(Scale)	1 ^b										

Dependent Variable: Career Adaptability
Model: (Threshold), Responsibility, Gender, Personal Value, Entrep Competencies, Age, Years of Experience

- a. Set to zero because this parameter is redundant.
b. Fixed at the displayed value.