

**ENTREPRENEURSHIP EDUCATION IN TOURISM:
A STUDY ON THE INSTITUTIONS OF HIGHER
EDUCATION IN FINLAND**

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**Author: Bianka Deininger
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Supervisor: Mari Suoranta**



**JYVÄSKYLÄN YLIOPISTO
UNIVERSITY OF JYVÄSKYLÄ**

ABSTRACT

Author: Bianka Deininger	
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<p>Abstract</p> <p>Entrepreneurship is an important driver in creating new jobs and contributing to a growing economy – and so is the highly versatile and complex tourism industry. Therefore, it is presumed, that entrepreneurial thinking and acting tourism professionals may bring an even greater value to a local economy. Therefore, this thesis strives to illuminate on the origins of entrepreneurial acting individuals in the respective industry.</p> <p>An extensive literature review is carried out to reveal, that teaching for and about entrepreneurship in institutions of higher education is key to developing desired skills and knowledge.</p> <p>Entrepreneurship in the tourism industry has been subject in the literature several times, even within the chosen geographical context of this thesis, Finland. However, researchers so far failed to address it within an educational context.</p> <p>Therefore, this paper describes an exploratory research study aimed at evaluating the effectiveness of integrating an entrepreneurship courses or modules within tourism education programs of higher education institutions in Finland. To do so, the students themselves are surveyed on their entrepreneurial attitudes, their subjective opinions on their own control over their entrepreneurial behaviour as well as the perceived opinion of their personal environment towards entrepreneurship. These three factors are understood to be influenced by entrepreneurial education and will lead towards the intention to act entrepreneurial and eventually carry out entrepreneurial behaviour.</p> <p>The results show an overall satisfactory output, as entrepreneurial attitude as well as the perceived behavioural control can explain partially the entrepreneurial intentions of tourism students in Finland. However, the subjective norm seems to not contribute to a future entrepreneurial behaviour as expected.</p>	
<p>Keywords</p> <p>Entrepreneurship, Entrepreneurship Education, Entrepreneurial Learning, Tourism, Finland, HEI, TPB, Entrepreneurial intention</p>	
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LIST OF ABBREVIATIONS

AMK	=	Ammattikorkeakoulu (fin.: University of Applied Sciences)
ATT	=	Entrepreneurial Attitude
EI	=	Entrepreneurial Intention
EIQ	=	Entrepreneurial Intentions Questionnaire
GEI	=	Global Entrepreneurship Index
GEDI	=	Global Entrepreneurship and Development Institute
HEI	=	Higher Education Institution
PBC	=	Perceived Behavioural Control
SDG	=	Sustainable Development Goals
SME	=	Small and Medium Enterprises
SN	=	Social Norm
TFP	=	Total Factor Productivity
UNWTO	=	World Tourism Organization
WTTC	=	World Travel & Tourism Council

1 INTRODUCTION

Entrepreneurship in the context of the Finnish tourism industry has been subject to many studies, but research so far has failed to address it within an educational context.

This chapter serves as an introduction to the paper, through providing background information. In addition to the author's personal interest, the academic motivation for this study as well as its geographical limitations are displayed.

The research objectives are illustrated as well, before this section closes with outlining the structure of the thesis.

1.1 Background and motivation

Entrepreneurship has already been recognized as an important influence on the worldwide economy. An overview of the growing interest in the field can be found for instance in Gibb (1996) or Stel et al. (2005). The latter emphasizes that entrepreneurship got left out in early research papers on the contribution to economic growth, which seems to be evident since entrepreneurship is not as easy to define and measure as other factors. However, he adds that the recognition of the importance of entrepreneurship rapidly increased since the introduction of the *Global Entrepreneurship Monitor* 20 years ago. In the most recent report, the undeniable positive impact of entrepreneurs is explained by the introduction of innovations, creation of jobs, international operations and the contribution to the emergence and growth of industries (Bosma & Kelley, 2019).

It is evident, that for the creation of this positive impact, individuals acting entrepreneurial are needed. Numerous academics already recognized this necessity and claim its satisfaction can be achieved through the appropriate preparation of students for these tasks. Additionally, students themselves show an increased interest in entrepreneurship related study content (Henry et al., 2005).

Moreover, students are increasingly attracted in a possible entrepreneurial life after graduation and therefore strive to enhance their possibilities of employment in a proficient job. Students aim to gain more practical knowledge and skills which they can apply in work life, allowing them to stand out against their competitors (Henry et al., 2005).

Students understood the importance of small or medium sized enterprises as a future possible place of employment or even business ownership and strive to receive more knowledge on this sector (Cooper et al., 2004). In this light, it can be presumed that entrepreneurship education is important because of two reasons: (1) the undeniable importance of entrepreneurship for economic growth and (2) the increasing interest of both academics and students.

Based on these premises, a lot of higher education institutions (HEI) answered with an increasing amount of entrepreneurship programmes and courses. The earliest recorded university course on entrepreneurship was held in 1938 by Professor Shigeru Fujii at Kobe University in Japan. The first course in the western world took place in Harvard Business School in 1947, even though some authors argue the first notable course was the “entrepreneurship and innovation” class held by Peter Drucker in 1953 at the University of New York (Keen et al., 2019). Kuratko (2005) provides the most recent numbers on the development of entrepreneurship courses and reports over 2.200 courses held in more than 1.600 institutions in the USA alone. As most of the entrepreneurship literature concentrates on the US economy, little data is available on the pertinent courses in European countries. Keen et al. (2019) highlights the first conference in Europe on small businesses and their possible issues was held at the University of St. Gallen in Switzerland in 1984. He furthermore reports an intense increase in entrepreneurial activities and research in the 1980ies and 1990ies without referring to any geographical context.

The European Commission carried out several surveys regarding entrepreneurship education as well as entrepreneurship in HEIs, however the publications overall lack accurate current figures. The most recent available data is over a decade old, which can't be considered relevant anymore in such a fast-changing research area and is therefore just mentioned for completion: In 2008, almost a quarter of all European students participated in any kind of entrepreneurial course (NIRAS Consultants et al., 2008). Thus, it can be said, that the interest in entrepreneurship education in Europe arose several decades after it was already implemented in certain universities of the United States. Even besides the lack of data, a rising understanding of the importance of entrepreneurship education can be observed across European countries.

One sector for which entrepreneurial education is of considerable interest, is the travel and tourism industry. It is responsible for one out of ten businesses within the European Union but underlies a strong fluctuation, as reported by Eurostat (2020). Therefore, the literature affirms the characterization of the industry by a large number of new businesses and services. However, it is striking that the individuals who create new enterprises often show limited innovativeness and management skills (Ndou et al., 2019). This lack of highly qualified human capital can be traced back to tourism still being widely considered a more vocational and practical oriented field, rather than being associated with higher academic education. However, higher education is known to be key in the development of certain entrepreneurship related skills and attitudes, which in turn are highly necessary for the competitiveness of tourism businesses.

The tourism education sector already responded to the need for entrepreneurship education by an increasing offer of courses dedicated to establish “[...] awareness about entrepreneurship and providing students with abilities and competencies related to opportunity identification and exploitation for creating new ventures [...]” (Ndou et al., 2019). However, researchers question the scope

of facilitating tourism students with essential features that foster entrepreneurship (Gurel et al., 2010).

Already over a decade ago a considerable gap was found between the necessity of entrepreneurship in the tourism industry and the structure of tourism related degrees offered by educational institutions (Zehrer & Mössenlechner, 2008). That this gap still exists can be inferred by the fast pace of the tourism industry and the accompanying changes reviewed in detail in chapter 2.2.3. A recent examination of the literature found that some scholars even refer to a growth in this gap, emphasizing the reconfiguration new technology causes to the tourism industry (Ndou et al., 2019).

In sum, it can be declared, that entrepreneurship education is of paramount importance all around the globe – especially for graduates in industrialized countries and their transition from education to work life. As this insight is of general nature, a geographical framework for the present paper is developed in the following section.

1.2 Geographical context of this work

Entrepreneurship and its education have received much attention in the context of the UK and the USA, but few researchers have addressed this topic within northern European countries. As this paper is written for an institution located in Finland, a research within that country seems evident. Furthermore, entrepreneurship receives increasing attention in Finland and has reached a certain level of importance to the overall economy, which is briefly explained in the following. As Entrepreneurship is closely related to the establishment of new enterprises, a dataset provided by Statistics Finland (2020b) on the openings and closures of businesses is reviewed. The table shows 35.308 new enterprise openings in the year 2018, which are almost 7.000 more than just three years ago. The latest available data reveals stagnating numbers in early 2019 but a significant rise of over 22% in the third quarter of the year. Additionally, the table shows a steady decline in enterprise closures over the past years. From almost 24.000 closures in 2015 the number dropped by 4.000 until 2018. By the turn of the year a strong increase in closures by roughly 40% could be recorded but with a look at the most recent data of 2019 a further decline can be expected as the comparison of the second quarter of 2019 to the previous year shows dropping numbers again.

From the examination of this dataset an overall increase in entrepreneurial activities across Finland can be assumed. However, a high number of entrepreneurs or new enterprises is not necessarily an indicator for a country to have an excellent entrepreneurial activity. In fact, the quality of entrepreneurs as well as a well-functioning and supporting ecosystem is more important. To explain further, the highest percentage of self-employment can be found in economies with considerable low income, as a result of their resource shortage that prevents the creation of high-quality jobs. Consequently, very few people in low-income economies

run innovative start-ups or are business owners by definition, which *inter alia* would be a requirement for entrepreneurship.

Having said this, another method is now applied in order to evaluate Finland's quality of entrepreneurship and the scope of its facilitating ecosystem: *The Global Entrepreneurship Index* (GEI) is an accurate measurement provided by the Global Entrepreneurship and Development Institute (GEDI Institute), the upfront organization in research on the relationship between entrepreneurship and an economy's development (Acs et al., 2018). The GEI is a complex index derived from analyzing datasets of 137 countries. It is based on 14 components¹ that each include an institutional as well as an individual variable to avoid unilateral observations as seen in previous research. These components in turn are clustered into three mutually dependent sub-indices that comprise of information on entrepreneurial attitudes, abilities, and aspirations. The (1) *Entrepreneurial Attitude Pillar ATT* represents data on the overall attitude of a country's population towards entrepreneurs and entrepreneurship. The GEDI Institute defined questions on the general feelings of a society about opportunity-recognition, the awareness and appreciation of other entrepreneurs, calculated risk-taking as well as on the inherence of a skill set to start an enterprise successfully. The (2) *Entrepreneurial Abilities Pillar ABT* reflects the individual's capabilities of becoming entrepreneurs as well as their companies' characteristics. In this section, data can be found concerning the entrepreneur's education and motivation as well as on existing competitors and market entry barriers. The (3) *Entrepreneurial Aspiration Pillar ASP* comprises of information on the quality of the reasons and goals of becoming an entrepreneur. These aspects are measured in the early stage of a startup and the entrepreneur's attempt of internationalization, product and process innovation, growth of human capital and the financing of the business (Acs et al., 2018).

Table 1 - Finland's GEI and sub-indices 2018

Finland	GEI	ATT	ABT	ASP
Score	67.9	79.0	62.9	61.8
Rank	12	4	16	21

The most recent available results show that Finland scored 67.9 out of 100 in the GEI report of 2018 and therefore ranked 12 in the complete listing of the analyzed countries. Rated as the most entrepreneurial economy are the USA with a score of 83.6 whereas Chad scored the lowest with 9.0. As a normal distribution of scores over the 137 analyzed countries is naturally not given, it is important to state at this point, that the median is 27.8. Finland therefore scores in the upper quantile of the GEI ranking besides 15 other countries. The scores of the leading countries are tied so closely together, that just a slight change in decimals can change the ranking substantially.

¹ A comprehensive list of all 14 pillars and its descriptions can be found in Acs et al. (2018, pp. 16-19)

As mentioned above, the GEI is dedicated to measure the health of a country's entrepreneurial ecosystem and thereby create a better understanding if and how it effects the country's overall economy. Following the conventional approach, to connect ambiguous entrepreneurship measurements with the economic performance in terms of a country's GDP, Acs et al. (2018) emphasize to distinguish between economic growth and productivity. Therefore, the authors suggest using the two components that are economically most relevant: Productivity (P) and Innovation (I). While the productivity of a country refers to its capacity to efficiently allocate and exploit available resources, the innovation aspect deals with the creation of new products and services. The multiplication of these two variables shape the total factor productivity TFP of a country ($TFP = P * I$). A relatively strong correlation (0,35) is declared between the TFP and the GEI score of a country.

Therefore, it is postulated that Finland exhibits an overall good performance and its entrepreneurial ecosystem improves the country's TFP by productivity and innovation.

Figure 1 shows, that Finland is positioned close to the trendline, suggesting that its general performance in terms of its economic performance, innovation and quality of entrepreneurship has a positive connotation and is approximately located where GEDI Institute's calculations and suggestions expect it to be.

In sum, entrepreneurship is of big relevance in the Finnish context and therefore outlines the scope for the present thesis.

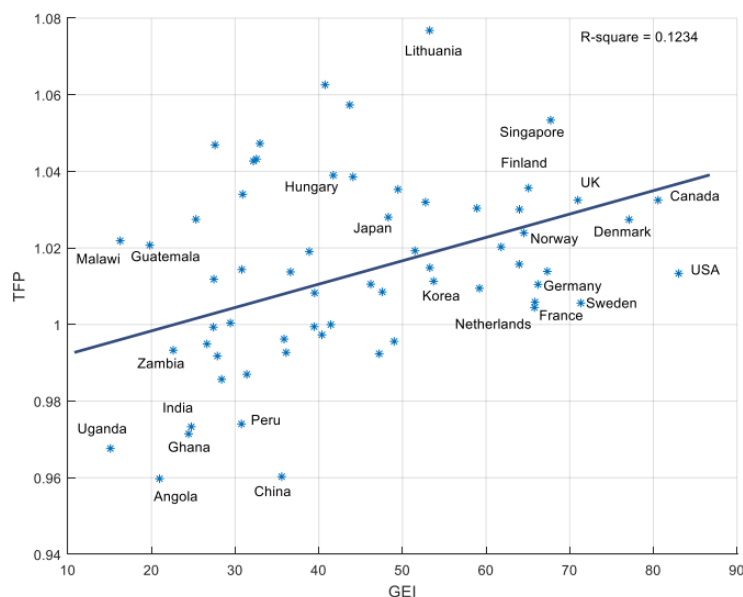


Figure 1 - Global GEI and TFP

1.3 Research aims

This paper emphasizes the importance of both, entrepreneurship, and tourism as important contributors to Finland's overall economy. Therefore, it is presumed, that entrepreneurial tourism professionals can bring an even greater value, which is why we strive to investigate on the origins of entrepreneurs in the respective industry. The extensive literature review in section 2.1.2 leads to the understanding that entrepreneurship can be taught and should be subject to institutions of higher education.

Therefore, the investigation on the state of art of entrepreneurship education among tourism education programs in Finland is at the core of this work. We strive to research on the efficacy, respective education has on the students. To do so, the students themselves are surveyed on their entrepreneurial attitudes, their subjective opinions on their own control over their entrepreneurial behaviour as well the perceived opinion of their personal environment towards entrepreneurship. These three factors are understood to be influenced by entrepreneurial education and will lead towards the intention to act entrepreneurial and eventually the entrepreneurial behaviour.

Therefore, the aim of this paper is to illuminate on the efficacy of entrepreneurial education through researching on the tourism students' intentions to become an entrepreneur. To reach this goal, the following hypotheses are tested during the course of the thesis. A detailed derivation is displayed in section 2.3.3.

Main Hypothesis

Entrepreneurship education has a positive effect on the entrepreneurial intentions of students being enrolled in tourism degrees of HEIs in Finland.

Hypothesis 1 - Attitude

Tourism degree students in Finland with a stronger attitude towards entrepreneurship have higher entrepreneurial intentions than those being averse to entrepreneurship.

Hypothesis 2 - Subjective norms

The more positive the perceived opinion of society is towards entrepreneurship, the higher are the entrepreneurial intentions of tourism degree students in Finland.

Hypothesis 3 - Perceived behavioural control

The higher the belief in the possible control over the own entrepreneurial behaviour is, the higher is the entrepreneurial intention of the tourism degree students in Finland.

Hypothesis 4 - Subjective norm and attitude

The subjective norm of a tourism degree student in Finland positively influences their personal entrepreneurial attitude.

Hypothesis 5 - Subjective norm and behavioural control

The subjective norm of a tourism degree student in Finland positively influences the perceived behavioural control.

1.4 Quantitative research

To test the outlined hypotheses, data is collected from tourism degree students in Finland through a specifically designed survey. The chosen research instrument for this paper is the entrepreneurial intentions questionnaire which is derived from the work of professor Francisco Liñán and his colleagues (Liñán et al., 2011; Liñán & Chen, 2009) and slightly modified to meet the specific needs of the present paper.

The survey mainly consists of Likert-like scales, on which the respondents indicate their level of agreement or disagreement to a range of statements in order to allow withdrawing conclusions on the overall constructs.

After roughly four weeks of data collection, 73 answers could be recorded, of which just one dataset got removed from any further analysis, due to incompleteness of the answers.

To avoid answer biases and detect outliers, several of the tested items are reverse drafted, which we invert in the first phase of the analysis: the data cleaning and coding phase.

In the following, descriptive statistics on the study population are illustrated with regards to their backgrounds and demographics as well as their opinions on entrepreneurship as part of their education and their personal entrepreneurial objectives

A more in-depths analysis is dedicated to the four core variables of this research (entrepreneurial attitude, subjective norms, perceived behavioural control and entrepreneurial intention). Through calculating Cronbach's alpha, the internal consistency of the used scales is demonstrated before the validity of the data is tested. In the final phase, linear regression analyses are carried out to test the hypotheses.

A detailed description of the research methodology, operationalisation of the survey and process of the analysis can be found in chapter 3.

1.5 Structure of the thesis

The present thesis is organized in five consecutive chapters, of which the first presents the background of the study as well as the underlying motivation to carry it out. The geographical limitation is explained before the research aims and questions in the form of several hypotheses are displayed. The chosen methodology to test those hypotheses is briefly displayed in this section as well.

The second chapter lays the foundation for the successive chapters by reviewing the most relevant literature on entrepreneurship education and provides an overview and categorization of the key terms and concepts. The complexity of the tourism industry is highlighter as well as its importance as a contributor to the global economy. Light is shed on the Finnish tourism industry with insights on

its contribution to the local GDP and labour market. Trends and challenges are analysed that are expected to change the requirements for the workforce within the industry in the future. The last section combines the two antecedent theory parts and illuminates on the need for entrepreneurial individuals within the Finnish tourism industry. The assumption this demand can be met by certain education within tourism degrees of higher education institutions is outlined in detail in the last section of this chapter with illuminating on the effects, entrepreneurship education has on the intentions to act entrepreneurial. Based on Ajzen's (1991) theory of planned behaviour, the research questions are withdrawn in the form of hypotheses that are to be tested in the course of this paper.

The research design is therefore the central matter of the third chapter. The quantitative research design is described in detail, beginning from defining the exact study area and population as well as the research method and the selected variables that are to be analysed. In the process of operationalisation, the development of the used entrepreneurial intentions questionnaire is illustrated including the question types and answer scales. This section closes with a detailed description of the following evaluation process that is subject to the subsequent chapter 4. After assuring the reliability and validity of the datasets and the used scales, the hypotheses are tested through linear regression analysis and all results are displayed firstly without any interpretation.

The examination and conclusions of the outcomes are in fact object to the last chapter 5, where furthermore limitations of the study as well as possible theoretical or practical implications are discussed. This paper closes with suggestions on further research possibilities.

2 THEORETICAL FRAMEWORK

In their early paper on theorizing about entrepreneurship, Bygrave & Hofer (1991, p. 13) state that “[...] good science has to begin with good definitions.” This is especially important in entrepreneurship research, where a variety of terms are commonly used interchangeably, although they might not be the same. Furthermore, it is indispensable in quantitative research to know precisely what will be investigated and explained through which variables. Therefore, this chapter does not simply provide general definitions of the core terms used in this research, but rather creates an overall understanding of entrepreneurship education and its relation to the tourism industry.

More specifically, the chapter begins with illuminating on the existing definitions of entrepreneurship education from different perspectives as well as its implementation into educational systems and its possible effects on the future behaviour of the students.

The subsequent section provides an overview of the tourism industry and its positive economic contribution. Trends and challenges within the industry are examined and their effects on the future of the respective work force, outlining the need for more entrepreneurial behaving individuals.

The last section of this chapter is a combination of the two antecedent sections within the previously explained geographic context. Therefore, it deals with entrepreneurship education in tourism related degrees of Finland’s institutions of higher education. The importance of entrepreneurial education is outlined for the respective students and a positive effect on the students’ future entrepreneurial behaviour is presumed. The chapter closes with the derivation of the hypotheses, based on which the efficacy of entrepreneurial education will be examined through researching on the students’ intentions to become entrepreneurs.

2.1 Entrepreneurship education

This sub chapter is devoted to the concept of entrepreneurship education, its implementation in educational institutions and its possible impact of future behaviour. As entrepreneurship education is the core issue of this paper, a valid definition is firstly derived through a chronological literature review.

The subsequent section discusses whether entrepreneurship can be taught, or is something individuals have inherent. Through the historical overview of implementing entrepreneurship as a discipline in institutions of higher education this paper sides with those authors who understand entrepreneurship as teachable. Furthermore, it appears to be more important to determine *how* entrepreneurship is taught and shall be taught. Therefore, a conceptual framework is derived from educational literature, comprising of an educational and an ontological level,

each in turn consisting of several items. The conscious determination of the single items allows the creation of entrepreneurship courses or modules for each individual situation.

The last section of this chapter investigates on the effect, entrepreneurial education has on individuals' behaviours. As the positive impact of entrepreneurs on the economy is well known, it is also obvious that a striving economy needs more entrepreneurial acting individuals. Therefore, this chapter closes with the presumption, that a respective education can increase an individual's entrepreneurial intentions and respective activities.

2.1.1 Categorizing entrepreneurship education

A consensus about a general definition of entrepreneurship education has not developed in the literature (yet), even though it has been researched on and written about for several decades already. The following provides a chronological assessment of the most relevant explanations to derive a clear definition for the purpose of the present paper.

As an early approach, Jamieson (1984) suggested a framework which is often cited and used as a foundation in the present literature. He proposed to distinguish between three types of entrepreneurship education, according to their main goals: education *about* enterprise, education *for* enterprise and education *in* enterprise.

The first category mainly concentrates on building an awareness for entrepreneurial activities as well as for the creation of businesses. The aim is to transfer knowledge on starting, owning, and running a business from a theoretical perspective. The second category, education *for* enterprise, is more tangible and deals with encouraging and supporting the students to create and run an own business - some courses may even include drafting a real business plan. With an emphasize on teaching practical skills, the main aim is to prepare the students for a career in self-employment. Education *in* enterprise, the third type, targets already established entrepreneurs and provides support for the development of their existing enterprises. General business management courses are included in this section as well as support for any matter entrepreneurs need additional assistance with.

With his work, Jamieson (1984) essentially distinguished between entrepreneurship training and entrepreneurship education, of which the latter typically takes place in academic institutions.

A decade later, Garavan & O'Cinneide (1994) offered a broader understanding with their classification based on the common confusion between the terms *entrepreneurship*, *enterprise* and *small business*. The authors affirmed Gibb's (1993) explanation, that the aforementioned terms have a different connotation depending on the geographical context they are used in. Following this declaration, the term of entrepreneurship education is mainly used in the US and is equivalent to enterprise education which is the more commonly used term in Europe.

To offer a global understanding, Garavan & O’Cinneide (1994) differentiated between the two categories *entrepreneurial education* and *small business and entrepreneurship education and training*. The former refers to courses and modules that teach about the favourable conditions and characteristics for successfully creating and running a business as an entrepreneur. The latter is sub-divided into three further categories that depend on the individual’s level of development. The first, *small business awareness education* refers to courses usually offered in secondary schools or undergraduate degrees and specifically aim to increase the student’s awareness for self-employment as a career option as well as increasing their sensitivity towards small firms. This category can be seen equivalent to Jamieson’s (1984) education *about* enterprise, as both don’t strive to impart in-depth knowledge and are of theoretical nature.

As second category, Garavan & O’Cinneide (1994) list *continuing small business education*, which refers to courses that are designed to help already existing entrepreneurs or business owners. The main aim is comparable to Jamieson’s education *in* enterprise, as both provide business owners with the possibility to acquire and enhance their personal skills and knowledge.

Education and training for small business ownership is the third category, which received the most attention in the paper and refers to practical help for those that seek to change from traditional employment to a career in self-employment. These programmes are designed for highly motivated and enthusiastic individuals and include for instance courses on financing, marketing, accounting, or human resources. Also courses for unemployed people, teaching a range of skills to start into self-employment are clustered in this category, which in turn can be compared to Jamieson’s (1984) education *for* enterprise.

In his work, Kirby (2004) reviewed and analysed several pertinent courses and segmented them in two categories: Education *about* entrepreneurship and education *for* entrepreneurship. He elaborates, that in common perception, entrepreneurship is mainly related to new venture creation and owner-management of small businesses. It is clear, that this understanding is not the status quo and is therefore criticized by the author. He draws the conclusion that based on this (wrong) understanding, most of the offered courses are *about* entrepreneurship rather than *for* entrepreneurship. The author strongly condemns the lack of the latter courses and emphasize the importance of education and development of entrepreneurial skills, attributes, and behaviours of the students.

It is concluded that the focus of the respective literature underwent a shift from education *about* to education *for* entrepreneurship. As already concluded by Rae (2010), the importance of more tangible education seems evident. Evaluable course outcomes, such as actual business plans appear to be more important than the theoretical knowledge on the desirable skillsets of a successful entrepreneur. Furthermore, the categorization by means of programmes is criticized by Pittaway & Cope (2007), who point out the lack of research on the relationship be-

tween educational input and the actual entrepreneurial outcome. With their systematic literature review the authors determine *graduate entrepreneurship* as well as the *employability of graduates in SMEs* as output of entrepreneurial education. Another approach to define entrepreneurship education is offered by Gorman et al. (1997), who differentiate by means of the target group. The authors distinguish between students of formal education, out-of-school individuals, owners of an already existing business and others. Support for this approach can be found in Block & Stumpf (1992), who already pointed out the importance of teaching not just potential future entrepreneurs, but rather individuals that are already active as entrepreneurs in organizations as well as top managers to enhance their entrepreneurial skill set.

Based on the above literature review, as well as inspired by the work of Jones & English (2004), a definition is withdrawn that shall be effective in the present paper. Even though, teaching programmes *about* entrepreneurship appear to be more common, courses *for* entrepreneurship appear to be increasingly important. Therefore, none of the courses shall be excluded in the present paper and the withdrawn definition reads as follows:

In the context of this study, entrepreneurship education refers to the process of preparing students in academic institutions *about* and *for* an entrepreneurial career through “[...], a teaching style that is action-oriented, encourages experiential learning, problem solving, project-based learning, creativity, and is supportive of peer evaluation” (Jones & English, 2004, p. 422).

2.1.2 How can entrepreneurship be taught?

Even though entrepreneurship itself receives increasing attention over the past decades, no consensus has evolved “[...] whether entrepreneurs are born or made” (Henry et al., 2005, p. 98). Quite the contrary, this disagreement feeds a long ongoing discussion whether entrepreneurship can be taught or not.

Even though he is the founder of the entrepreneurship programme at the Columbia Business School, Low (2001) states that Entrepreneurship has just achieved a poor level of educational legitimacy. He claims the task of teaching entrepreneurship being too broad to be attainable.

Another argument is that essential entrepreneurial characteristics, such as talent and temperament are required to be a successful entrepreneur and can't be acquired by learning because they are inborn (Thompson, 2004).

The Austrian economist Peter Drucker, on the other hand, referred already in 1985 to entrepreneurship as a practise and discipline and therefore claims it can be taught like any other discipline, such as history or sociology for instance. The leading researcher and author in the management literature doubts, entrepreneurial behaviour is inborn but can rather be acquired (Drucker, 1985).

With their comprehensive literature review, Gorman et al. (1997) examined publications on entrepreneurship, enterprise and small business management education between 1985 and 1994. The authors found considerable consensus “[...] that entrepreneurship can be taught, or at least encouraged, by entrepreneurship

education" (Gorman et al., 1997, p. 63). A similar statement is given by Kuratko (2005), who affirms, that it is possible to learn entrepreneurship – or at least certain parts of it.

Given the quantity of the academic literature on this debate, it can be concluded that the benefits of entrepreneurship education have been widely acknowledged and therefore, the present paper sides with those who agree that entrepreneurship – or parts of it – can be taught.

Following Fayolle & Gaily (2008), the important question therefore is not asking whether entrepreneurship can or should be taught but rather how. As Fiet (2001a) reports, the answer to this question lies in the understanding of the overall theory of entrepreneurship which also determines the way and content of teaching it. With his two-part article, Fiet (2001a) (2001b) investigates on entrepreneurship education from a theoretical as well as a pedagogical perspective. He argues that the teaching content of pertinent courses is mainly of theoretical nature, as this is the core of what even can be taught. The teaching strategy on the other hand mustn't be very theoretical, as such a pedagogical method is not inspiring and efficient enough. Furthermore, the author reports the theory itself as the problem, as the field of entrepreneurship lacks a universal theory. Therefore, he urges for a more developed theory on entrepreneurship as well as a better way of teaching it, to be more encouraging for the students.

For a better understanding, Fayolle & Gaily (2008) borrowed a conceptual framework from educational sciences with its help the authors introduce their *teaching model framework for entrepreneurship education* (see Figure 1 below). It reflects the mutual dependence of the two main levels *ontology* and *education* and it follows a display and explanation of the single elements.

The concept of *Entrepreneurship Education* essentially consists of the two domains entrepreneurship and education, which are both dealt with on the *ontological level*. This philosophical layer seeks to shade light on the definition of entrepreneurship itself as well as to explain the implication that education has in an entrepreneurial context on its educator and students (Fayolle & Gaily, 2008).

As often reported in the literature, the definitions of entrepreneurship and entrepreneurship education are vague, and several core terms of the field lack a uniform understanding. This problem is reflected for instance, in the common interchangeable usage of the terms entrepreneurship, enterprise and small business management. Ucbasaran et al. (2001) derive this confusion from the great variety of disciplinary perspectives the field can be studied from. Thus, entrepreneurship gets interpreted different from different viewpoints, which does not lead to any consensus but rather confusion as the communication between the different approaches is missing. Therefore, Fayolle & Gaily (2008) propose to define entrepreneurship always in the context of the individual educational programme. Researchers are far from agreeing on an overall definition as the approaches are either too broad or too narrow.

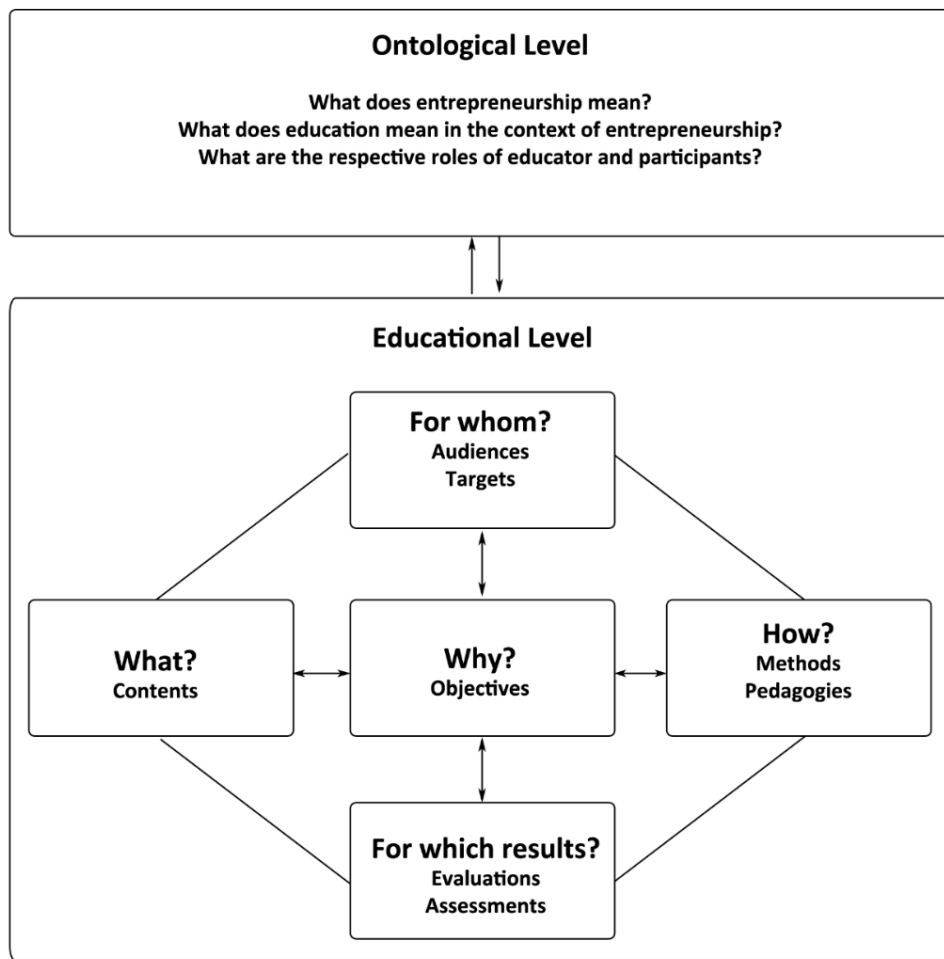


Figure 2 - Teaching model framework adapted from Fayolle & Gailly (2008)

With the help as well as for the support of the ontological level, the *educational* level seeks to help designing a framework for new or existing educational programmes and courses. It follows a short display and explanation of the five interrelated key dimensions.

The central question “*Why?*” asks for the objectives of the pertinent courses. As entrepreneurship can be taught to a variety of individuals in different facilities, the teaching goals may differ fundamentally. A detailed elaboration of the individuals’ as well as the institutions’ goals is a necessary basis for answering the remaining questions (Fayolle & Gailly, 2008).

“*For whom?*” asks for an in-depths understanding of the targeted audience’s profile and background. It is obvious that there are significant differences in the target groups’ educational backgrounds, as for instance high school students have different needs and requirements than post-graduates, PHD students or even teachers. Furthermore, prior experience in entrepreneurial activities asks for disparate didactics. Specific goals of the students, their abilities and interests as well as many more variables strongly influence the entire teaching model and therefore must be questioned and understood in detail (Bécharde & Grégoire, 2005).

A lack of research on the effectiveness and outcomes of entrepreneurship education is pointed out in the literature (Garavan & O’Cinneide, 1994). The dimension “*For which results?*” therefore asks for the goals of the pertinent courses or degrees. Fayolle & Gailly (2008) suggest that the evaluation criteria are decided on as soon as the degree is designed as well as assuring the effective measurement of it. Both are challenging tasks for which help can be found in a measurement framework provided by Block & Stumpf (1992). The authors postulate criteria for the measurement at different times from during the course up until five years after participating in an entrepreneurship course.

As soon as the goals are agreed on, the right teaching content can be chosen by asking “*What*” shall be taught. Based on their literature review, Fayolle & Gailly (2008) assert to divide the teaching content in three categories: professional, spiritual and theoretical. The content of every entrepreneurship course is thereafter expected to consist of a suitable combination of these three.

The last dimension asks “*How?*” and refers to a suitable teaching method for entrepreneurship courses (Fayolle & Gailly, 2008). This highly depends on the targeted audience, the teaching contents as well as desired outcomes, but as every course has a unique combination of dimensions, there is no universal teaching method for entrepreneurship courses. All dimensions must be evaluated carefully before selecting a pedagogical method, which in turn makes it obvious how deeply interlinked the dimensions are. Only a conscious determination of the answers to the five question on the psychological level allow the creation of entrepreneurship courses for each individual situation.

2.1.3 The impact of education on the behaviour

As stated earlier, the positive impact of entrepreneurship on the economy is evident and therefore individuals with a respective mindset are needed to act entrepreneurial. But how can be determined who will act entrepreneurial and can a future entrepreneurial behaviour even be predicted and how can it be fostered? Forecasting human actions in general is obviously of complex nature, however, early studies already suggested the extent of an individual’s intention being the best predictor of the actual behaviour (Bagozzi et al., 1989). Intentions have been generally defined in the literature as the likelihood of carrying out a certain behaviour (Ajzen, 1991). Even though the study of behavioural intentions has its roots in the field of psychology, it already received much attention by entrepreneurship researchers as well. It is argued that entrepreneurial intention is crucial to the entire entrepreneurial process as it can be understood as the first step in developing the long term process of entrepreneurship (Crant, 1996). Based on this understanding, entrepreneurial intention therefore refers to an individual’s desire to own and/or start an enterprise.

As suggested in the literature, the best way to investigate on entrepreneurial behaviour is through entrepreneurial intentions (Boissin et al., 2009). Therefore, the framework that is used for this research is based on the theory of planned behav-

behaviour (TPB), as it is specifically designed to explain and predict individual's behaviour in a specific context. As the theory itself is explained detailed elsewhere (Ajzen, 1991), a simple display of it is shown further below and a depiction of the items in the relevant context of entrepreneurship follows.

The central factor in the TPB is the intention of an individual to perform entrepreneurial behaviour. It should be obvious that a free control over whether to carry out this behaviour or not is a prerequisite and therefore a volitional performance of entrepreneurial activity is presumed.

However, entrepreneurial intentions are based on three motivational factors. Following Ajzen's model (1991), the first antecedent of intention is the *attitude towards the behaviour*, which describes the degree to which an individual values their likelihood of becoming an entrepreneur. Secondly, the *subjective norm* deals with the social circumstances of individuals. It is a subjective evaluation of the perceived social pressure to act entrepreneurial. In other words, it is a rating of other peoples' opinions on the individual's decision to become an entrepreneur. Lastly, the *perceived behavioural control* refers to the perceived level of ease in becoming an entrepreneur and includes previous experience and expected obstacles (Liñán & Chen, 2006). It indicates not just the individuals' feeling of being able to act entrepreneurial but also their perception of being in control over their behaviour.

Concluding, the more favourable an individual's attitude and normative beliefs towards acting entrepreneurial, and the higher the perceived personal control over it, the stronger the intention to become an entrepreneur and establish and/or run a business in the future.

However, some authors argue, that subjective norms may not influence entrepreneurial intentions directly. They indicate a possibility of an individual's subjective norm influencing both, the attitude, and the behavioural control and therefore an indirect effect on the entrepreneurial intentions. Therefore, a causation effect from subjective norms on the other two antecedents is presumed (Liñán & Chen, 2006).

Nevertheless, several scholars questioned the influential factors on formation of intentions and resulted in very different conclusions. For clarification, Bae et al. (2014) carried out an extensive meta-analysis of respective papers which postulates a significant correlation between entrepreneurship education and entrepreneurial intentions. Thus, it is furthermore presumed, that entrepreneurial education supports the development of students' entrepreneurial intentions, which in turn can foster their future entrepreneurial activities.

Based on these premises, Asghar et al. (2019) extended the TPB model in their recent paper by adding education as a further influential factor on entrepreneurial behaviour.

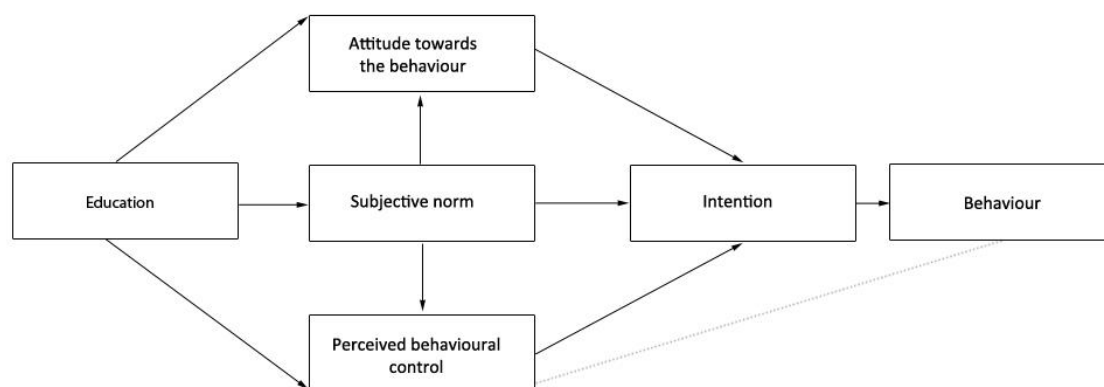


Figure 3 - modified TFP model

Having said all this, it can be concluded that entrepreneurial activities can be increased through the implementation of entrepreneurship-related courses in degree programs and therefore this paper strives to illuminate on the efficacy of entrepreneurial education through researching on student's intentions to become an entrepreneur.

2.2 Tourism

The following chapter introduces the reader to the phenomenon of tourism and its complexity. It also sheds light on its important impact on the local economy with its significant contribution to Finland's GDP and labour market. The most important touristic markets for Finland and the different methods of transportation are displayed as well as insight is given on the different travel motivations of the tourists. After a short analysis of the tourism regions within the country, this section closes with an analysis of the trends and challenges that shape the requirements and expectations for the industry's workforce in the future.

2.2.1 Tourism as a driver of the global economy

Countless different approaches can be found that try to explain the phenomenon of Tourism as an industry, an economic sector or as a concept. Academic writers commonly derive their own definition from the literature that suit the purpose of their work best. The World Tourism Organization UNWTO (2010) addressed this issues already a decade ago in their "international recommendations for tourism statistics" and provided a definition that is widely known and cited nowadays but still not accepted as a uniform definition.

The explanations are all based on the generic term *travel*, which refers to the movement of *travelers* between different geographical areas. Travelers who visit any (main) destination for any (main) reason – besides employment – and for any time frame less than a consecutive year undertake a *tourism* trip. Whether or not an overnight stay is included in the trip defines the visitors as overnight or same-

day-visitors. For the sake of simplicity, no distinction shall be made in the following course of this paper and therefore every visitor undertaking a tourism trip shall be referred to as *tourist*. Consequently, *tourism* refers to the activities of individuals that travel to locations outside their usual environment and reside there for business, leisure, or other personal purposes for less than an entire year. Leisure travel is the main purpose of visits in the world, followed by visiting friends and relatives or for health / religious reasons. Business travels just make up 13 % of all visits. The most often chosen mode of transportation is the air travel, with over half of all visits taken place by plane. Land travel - no matter if on roads or rails - decreased over the past decade by the same amount air travel. Furthermore, it is observed that almost every second travel is undergone by a European citizen, while Chinese tourists spend the most money and account for one fifth of all international tourism expenditure. Additionally, it is striking that 4 out of 5 tourists travel within their own region (World Tourism Organization, 2019a).

Tourism is understood as a highly versatile and complex cross-sectoral industry that influences and comprises of several other economic industries, such as accommodation or transportation industries. Its complexity and importance can be seen best from numerous factors which can be divided into three different levels: the direct, the indirect as well as the induced level.

Direct effects are derived from the production of goods and services that are directly requested by tourists, as for instance accommodation services or flights. However, indirect, and induced effects refer to the economic effect tourism has on other business sectors. Thus, the construction of new hotel premises is done by construction companies and therefore monetary resources are spent in the construction sector, which is understood to be an indirect effect of the tourism sector. Furthermore, money gained in the tourism industry that is spent in another economic sector, such as a travel agent buying a new automobile displays an induced effect (World Travel & Tourism Council, 2019b).

The economic impact of an industry can be measured by means of its contribution to the labour market. With 319 million direct, indirect, and induced jobs worldwide, the tourism industry is known to be one of the most significant employers in the world. As the World Travel & Tourism Council (WTTC) (2019b) reports, it is responsible for every 10th job in the world.

Furthermore, it is stated that the tourism sector generated 10.4% of the global GDP in 2018, which equates to over 8.8 trillion USD. This even exceeds the GDP contribution of the automotive manufacturing and mining sector together.

To understand the full extent of the tourism sector's global impact, the WTTC (2019b) contrasts it to 8 other key sectors, namely agriculture, automotive manufacturing, banking, constructions, financial services, health, mining and retail. In the direct comparison, the tourism industry is ranked on average regarding their GDP and labour market contribution. Nevertheless, the annual growth rate of 3.9% makes tourism the fastest growing industry in the world and 2018 marked the 9th consecutive year. The growth takes place at a higher rate than the overall economy and is not expected to decrease in the upcoming years.

2.2.2 Tourism in Finland is continuously expanding

With 23.9 billion USD, the travel and tourism industry contributes with 8.7% to Finland's GDP and is responsible for almost 10% of the total employment in the country (World Travel & Tourism Council, 2019a).

These key performance indicators stress out the importance of the tourism sector for the Finnish economy and therefore follows a detailed display of the travel and tourism industry in Finland. The most important markets are displayed, thereafter the different methods of transportation as well as the travel motivation of Finland's tourists are addressed. This section closes with a brief analysis of the different tourism regions within the country.

Regarding the World Tourism Organization (2019a), 710 million international tourist arrivals made Europe the world's most visited region in 2018. The continent accounts for half of the world's international tourist arrivals and Finland contributed to this number by attracting roughly 3.2 million international tourists in 2018. The most important country of origin of Finland's inbound tourists is the Russian Federation with over 377 thousand arrivals per year. The neighbouring country Sweden ranks second, followed closely by Germany with each country comprising for over 300 thousand arrivals. Having regard to the United Kingdom as well, these four countries are responsible for over 40% of all international tourist arrivals in Finland. Even though, the four mentioned countries represent the stable main sources of Finland's international tourism over several years already, the Chinese tourist arrivals are the strongest growing market. With an increase of over 500% over the past ten years, the Republic of China is now responsible for over 200 thousand tourist arrivals in Finland – almost as many tourists from the UK two years ago - and this market segment is also steadily growing. Moreover, what is striking is, that the Finnish tourism sector benefits as well from 8.7 million domestic tourist arrivals (Statistics Finland, 2020c). These numbers demonstrate that just roughly a quarter of all tourists in Finland are international travellers and the main source of value creation through tourism are domestic travellers.

In choice of transportation, Finland can be reached by air, water and on ground. Being responsible for the maintenance and development of the Finnish airports, Finavia monthly publishes their traffic statistics. In the direct comparison to the previous year, 4.2% more arrivals could be recorded in 2019 which is equivalent to a total of 26.02 million passenger arrivals, of which 20.14 million were international and 5.88 domestic arrivals. By far the most frequented airport in the country is Helsinki-Vantaa, handling over 84% of all arriving passengers. This hub also serves as a layover hub for most of the other airports in the country. However, it is noticeable that just in 2017, the five airports of Finnish Lapland marked the 1 million passenger line. This can be traced back to the increasing number of tourists arriving in Finland as well as the fact, that several international direct flights got introduced to airports such as Ivalo, Kittilä and Rovaniemi in the winter season – where usually Helsinki-Vantaa serves as a hub. This might also be a contributing fact to the rise of almost 6% in international flights while domestic

flights decreased by 0.9%. Nevertheless, Helsinki-Vantaa remains the most important airport in Finland (Finavia, 2020).

As the country possesses a very long coastline, another significant way of inbound travels takes place on water. The busiest international passenger port of Europe is located in the country and consists of four particular harbours along the shore of Helsinki and handled a total of 12.2 million passengers in 2018. Most of the passengers travelled by regular liner traffic but a noticeable increase of 8.5% in the international cruise vessel traffic lead additionally to more than half a million passenger arrivals. Regarding its operator Port of Helsinki Ltd. (2019), 79.5% of all passenger liner traffic of Finland is handled here. The most frequented route is towards Tallinn (EE) and back, handling almost 3/4 of all passengers of the port of Helsinki. Another 19% of the passengers travel to and from Stockholm, followed by the ports of Saint Petersburg (RU) and Travemünde (GER), which together constitute roughly 3% of all passengers (Port of Helsinki Ltd., 2019).

Of further interest are the tourist arrivals on the roads which can be retrieved through the publications of the Finnish Transport and Communications Agency Traficom. The agency lists all occurring traffic on the 21 border crossings towards the neighbouring countries by month. Both, Sweden, and Norway have each six border crossings to Finland, while nine crossings are located on the eastern border to Russia. In 2019, more than half of the 5.8 million inbound vehicles crossed the border from Sweden to Finland, while almost two million vehicles came from Russia and roughly half a million from Norway southwards. It is further noticeable that just a small percentage of the recorded vehicles are heavy busses or lorries, leaving 92% of all inbound traffic to light passenger cars and caravans. During the summer months an increase of traffic can be recognized, especially in the high season month of July (Finnish Transport and Communications Agency Traficom, 2020).

The travel motivation of foreign tourists in Finland are recorded in the border interview surveys carried out by statistics Finland, though these statistics have been discontinued since 2013. With just outdated information being available, an extrapolation and assumption for the travel purposes nowadays is difficult. However, if a consistency in the travel motivation is presumed, about 65% of all inbound travellers visit friends or relatives, or travel for any other leisure purpose. Another 21% declared their travel motivation to be of business purposes, while the remaining 14% travel for other purposes or don't specify just one reason but rather a variety of motivations (Krzywacki, 2013).

Besides the stated travel motivations, Finland is an attractive destination due to several reasons. Considering the global political situation at present, the growing desire for a secure journey and destination is obvious. As stated in the recent Travel & Tourism Competitiveness Report (2019), Finland ranks first for safety and security in the country due to the minimal impact of crime and terrorism as well as having a very reliable police force.

Furthermore, the wish for a more sustainable travel gained more interest over the past years. Finland answers this wish with a comprehensive and effective sustainability policy. The country follows strictly the in 2015 by the UN Member

States resolved *Agenda 2030* for Sustainable Development in the economic, social, and environmental dimensions. The 17 implemented Sustainable Development Goals (SDGs) and 169 sub targets apply to all countries in the world and are supposed to be met by 2030. Finland committed to reach the goals both in the country as well as in international cooperation and is known to be one of the forerunners in the Agenda's implementation (Ministry for Foreign Affairs of Finland, n.d.). In Finland, roughly 1,300 accommodation businesses exist, which are not evenly distributed over the country. More than a quarter of all existing businesses are registered and located in the capital region Uusima and Lapland, which are the main tourism destinations of the country. Of all accommodation establishments, 200 are just open during the summer months June, July, August and some even in September as summer is the most frequented travel period in the whole country. In the winter months – especially in February and March – the room occupancy of Lapland's accommodation businesses rises to almost 70%, while the average occupancy rate in the entire country lies at about 50%. (Statistics Finland, 2020a)

2.2.3 Of trends and challenges

The increasing positive impact of the travel and tourism industry on the world economy got recognized and well addressed in the latest G20 meeting, held in Osaka, Japan in June 2019. The G20 conferences are of utmost importance as the 19 participating countries as well as the European Union represent a major part of the world economy. The participant's leaders use these meetings to discuss significant global economic challenges together. In their latest declaration it is stated that they seek "[...] to maximize the [travel and tourism] sector's contribution to the creation of quality jobs and entrepreneurship [...]" (World Tourism Organization, 2019b). Pursuing this goal, the countries' tourism ministers and several industry representatives participated in an ancillary G20 meeting to discuss issues regarding the industry more in-depth. In their recent conference, the ministers requested a detailed report on the future development of work and skills within the sector, which they addressed towards the UNWTO, who in turn published an adequate policy paper (2019b) already in the same year.

Undoubtedly, trends have a tremendous economic influence as well as they produce monumental changes to an industry and its future. Travel and Tourism is not an exception to this and as it is such a highly human capital intense industry, the future of work within this sector is extremely affected by changes in trends such as the development of new technologies, changes in demographics and the environment. Therefore, the UNWTO elaborates on the impact global trends and their changes have on the development of skills and work within the tourism sector. The organization took issue with the pessimistic expectation of a declining labour market due to automatization, but rather makes clear that the purpose of work evolves into areas that automation and artificial intelligence are yet unable to provide. In other words, that means less human workforce will be needed for merely executive tasks while on the other hand the demand for employees will

increase in areas that are based on characteristics such as creativity or emotional intelligence and will also bring greater value. This shift is a serious challenge to the tourism industry, as most jobs are of repetitive and executive nature, which can be easily replaced. Those, who do not possess the skills for more demanding tasks will be left behind unemployed as they fail to seize the opportunities to shift towards a job of greater value. Furthermore, it is made clear that previously acquired skills are quickly outdated in such a fast-paced environment, thus the skillset of today does not match the job market of tomorrow. These troubles show the necessity of acting towards improving the tourism industry as otherwise the existing inequalities in its labour market will increase further. In this light, the UNWTO concludes by stating „The ability to adapt the workforce, transforming their skills through education and labour relations, will be key in this process [...]” (World Tourism Organization, 2019b).

Deloitte (2018) carried out a two-phased study to reveal the most important driving forces for the future of work. In the first phase, five realities emerged that are highly likely to shape work-related issues during the next decade. The results of the second phase validated the outcome of the first phase and discovered two additional elements. The total of these identified technological and social forces are referred to as the *7 emerging realities*, of which the UNWTO derives consequences for the tourism sector. It is important to mention, that the intensity and way these realities influence the tourism sector may differ across countries or destinations, but as a matter of fact they are already present to a certain level and therefore cannot be dismissed. It follows a short display of the 7 emerging realities applied to the tourism industry.

- (1) *Exponential organizations* are defined by their high output though relatively small input compared to their rivals as well as their exponential return on assets. As a prime example serves Airbnb Inc., which tackles the competitive landscape of the entire industry through generating significantly high booking rates while not owning any of the offered real estate listings.
- (2) The ongoing debate on how to legislate new business models is referred to by the reality of *regulated innovation*. As in the example of Airbnb Inc., consumers themselves become suppliers and therefore new regulations are necessary. The legislating institutions are required to not prevent or restrict the development but rather take care of the interests of all involved stakeholders.
- (3) *The nimble enterprise* offers an explanation why the size of a company is no indicator for its success anymore. Due to concepts such as big data and Internet of things new technologies are today also available to small, innovative companies that hence obtain the possibility to challenge their large competitors. Linked to the already mentioned emerging realities, as well as driven by the sharing economy, the tourism industry experiences a rise in collaborative platforms. This refers to mostly online platforms, where individuals offer products and services for a price ratio that cannot be undercut by traditional enterprises. Doerz Co. Ltd. Oy, as an example is an online platform through which individuals can offer their services as for instance tour guide to travelers at a lower fare than an agency would be able to.

- (4) Several factors, such as the growth in freelance work, the change in mobility or the request for products and services to be available 24/7 *unleashed the workforce* from the traditional full-time job that is bond to a physical workplace towards a more flexible model. Detaching the work from a certain place will provide the employees with a total freedom of choice where to reside while it will also lead to a more competitive labour market in areas where it is already challenging to find a workplace.
- (5) With the extension of work years and a later retirement age lifelong learning becomes more and more necessary. Just learning in educational institutions before graduation is not enough anymore, but rather a continuous process of learning and developing new skills and competencies throughout the entire life. Deriving therefrom the need for a *lifelong reinvention* emerges which focusses on the learning of skills that go beyond theoretical knowledge and distinguish humankind from machines. The improvement of the overall educational system will be the key in this progress.
- (6) The increasing use of artificial intelligence and the falling costs of automatization and robotization lead towards the reality of *technology, talent, and transformation*, which refers to the reallocation of tasks. Labour that is carrying out mainly routine tasks may get replaced while the market value of the more skilled labour increases. The later cannot get that easily replaced due to their human skills such as creativity and empathy what a machine is not able to carry out - yet.
- (7) Lastly, high *ethical standards* are increasingly important to be maintained within an enterprise. New policies and laws are required to protect the evolving work force from the newly evolving work environment. These required relation frameworks cannot be set up by the organizations themselves alone but rather together with public policy makers. The rise of a legal minimum wage payed to employees in the tourism industry may serve here as an example as well as the distribution of additional benefits to better accommodate disabled employees.

To create an even better understanding of the needs and expectations of the future work and skills within the tourism industry, the UNWTO (2019b) conducts additionally an own survey which is carried out worldwide among the four main stakeholders of the industry: the public sector, the tourism private sector, educational institutions and professionals (workers and students) themselves. The results of the survey, together with the seven emerging realities, allow the UNWTO to derive conclusions and give recommendations for the future of education and skills development in tourism. Overall, the cooperation of all stakeholders – especially the government, the private sector and the workforce itself is necessary. Of importance for the further course of this paper are the UNWTO's (2019b, pp. 49–50) recommendations for an increasing investment in education and skill development:

- 1) Acceleration of research to identify the skill mismatch as well as the forthcoming required skills related to new ventures.
- 2) Education systems must ensure to be responsive to the needs in the labour market while considering the evolution of work.
- 3) Increase and optimize the usage of digitalization in education and skills development.
- 4) Foster a never-ending learning process, knowing that the old approach of finishing studying to start working does not apply anymore.
- 5) Enhance the development of key skills in communication, customer focus, (online) marketing and promotion, planning and policy making. Furthermore, international conformity of standards is requested, especially in food safety and accommodation quality.
- 6) Encourage and support the transition from education to work as well as from work to education to accelerate the reskilling of professionals.

2.3 Entrepreneurship education in tourism in Finland

The following section illustrates the importance of entrepreneurial education within tourism degree programs. More specifically is firstly the Finnish education system displayed and the implementation of tourism degrees in the country's institutions of higher education. Subsequently a conclusion is withdrawn that higher education is the key for the development of entrepreneurial skills. Therefore, the importance of entrepreneurial education is emphasized, and the overall research question is derived, asking about the current implementation of respective education in tourism degrees.

It is furthermore derived that education has a great effect on the future behaviour of students. In other words, tourism students receiving entrepreneurial education are more likely to act entrepreneurial in the future. Armed with this understanding, this section closes with the derivation of the research hypotheses which are to be tested in the following course of this thesis.

2.3.1 Tourism as a part of Finland's education system

The education in tourism has a long history and its fundamentals exists since humankind started travelling. Even though, workforce in tourism is often characterized by low level skills and knowledge, educational offer has changed over the years, decades and centuries, when vocational trainings got established but also the need for a more formal education arose, which regarding to Hsu et al. (2017) got initially satisfied with the establishment of the world's first hotel college *École hôtelière de Lausanne* in 1893 in Switzerland. Throughout the 20th century the main development of hospitality degrees took place in the USA. Tourism as a field of study is mentioned in the literature as early as the 1920ies, even though Airey (2015) emphasizes that the actual acceptance of tourism as an area for

teaching and scholarship is to be ranged within the 1960ies and 70ies. The author explains this through the rising number of tourism degrees and students in several countries. As for instance in the 1970ies, two tourism degree programs were offered in the United Kingdom and attracted roughly 20 students per year, as of 40 years later the country records over 9.000 enrolled students in more than 100 respective programmes (Airey, 2015; Walmsley, 2012). An even more drastic example is provided by Xiao (2000), who remarks the first tourism degree program to be taught in mainland China in 1978. In 2010 in turn, almost half a million students are enrolled in about 1.000 respective programmes.

These metrics indicate, that within the past decades, tourism has become an established part of higher academic education, but it leaves the question “Why did it grow such significantly?” for which Airey (2015) offers four reasons that together make up the answer: Firstly, the growth of tourism itself, which already got explained earlier in this work. Secondly, the growth of education in higher education institutions, which arose to meet the needs for higher educated workforce. Thirdly, HEIs recognized the rising interest of students in economic areas that offer a high potential growth and lately, the offer of courses and degrees that attract students. Over the past decades HEIs realized, that tourism attracts students and the action of offering more tourism degrees contributed well to the establishment of tourism education in the academic environment.

A bit later than the UK and China, Finland introduced basic courses in tourism to its higher education system in the 1980s (Saukkonen et al., 2013). In the beginning, tourism education was scattered through regional and interdisciplinary irregularities, which were eliminated a decade later through the funding of the Finnish University Network for Tourism Studies (FUNTS). Its preliminary goal was to develop a comprehensive model applicable by and for all institutions of higher learning that offer tourism related courses and degrees in Finland (Saukkonen et al., 2013).

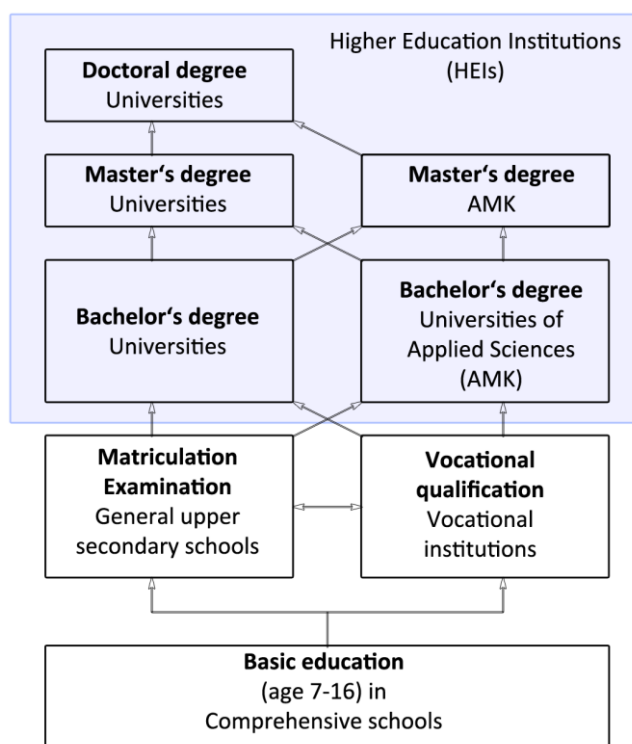


Figure 4 - Education system in Finland

Being the coordinating unit of the FUNTS, the University of Eastern Finland reports, that students of the participating HEIs are encouraged to receive a multi-disciplinary education with multi-professional skills through studying tourism related topics as a minor while pursuing a major in a more comprehensive domain. Therefore, the students will receive a Bachelor's or Master's degree from their own institution while specialising on tourism (University of Eastern Finland, n.d.).

However, this paper focusses on tourism degree programs and not just single tourism related courses offered within HEIs. For a better understanding, a simple display of the Finnish education systems is shown in Figure 2. Basic education in Finland is mandatory and usually undergone from age 7 to 16. These comprehensive schools are followed by upper secondary or vocational schools, whose successful graduates are eligible for continuing their education in institutions of higher education. In Finland, those are 13 Universities as well as 23 Universities of Applied Sciences.² Two institutions of the latter category – namely the Saimaa and the Lahti University of Applied Sciences – merged during the development of this paper and are therefore viewed as one entity (*LAB University of Applied Sciences*, n.d.). Two of Finland's Universities as well as 13 Universities of Applied Sciences offer tourism related degrees which are taught either in Finnish or in English.

2.3.2 The demand for entrepreneurial individuals

As stated earlier in this paper, the travel and tourism industry is of great importance to the overall economy due to its immense contribution to the world's GDP and labour market. With its constant growth over the past years, the industry is today responsible for roughly 10% of all operating businesses within the European Union (Eurostat, 2020). In other words, every tenth business is owned and/or run by a tourism professional, and as business management/ownership is closely related to entrepreneurship, many entrepreneurial individuals are needed in the industry now and in the future (Ahmad et al., 2018).

Furthermore, the constant changes and developments within the industry call for an adjusted skillset of the future workforce. As already in detail illustrated in chapter 2.2.3, conventional competencies in management areas such as marketing or finance are still important, but not sufficient anymore. No matter, if a tourism graduate will found an own business or be employed in an enterprise, a higher-level skillset will be required in any case and more entrepreneurial thinking individuals will be needed for the rising number of management positions. Researchers therefore claim, that tourism education institutions need to adapt to the changing realities of the business world and extend the respective degrees through entrepreneurship related teaching contents and methods (Hsu, 2018).

² The Finnish term for University of Applied Sciences is ammattikorkeakoulu, abbreviated AMK

As illustrated in chapter 2.1.2, higher education is central to the development of respective competencies, but as tourism education is still considered to be of vocational nature and more action oriented, it is questioned to which extent it prepares the students to act outside existing practises and paradigms (Airey, 2008). However, entrepreneurship education is based on an action-oriented and project based teaching style that encourages experiential learning and problem solving (Jones & English, 2004). Following this understanding, the practical approach of teaching in tourism degrees cannot be wrong. Naipaul et al. (2009) even point out that due to the nature of the industry a certain level of practice will always be needed in the education of tourism professionals. Therefore, the authors presume an appropriate combination of theory and practice to encourage entrepreneurship among tourism students.

Olsen et al. (2012) researched on the implementation of entrepreneurship in degree programs in a similar context: the hospitality industry. Even though hospitality just represents a large part of the tourism industry, both share significant characteristics which is why we understand a direct comparison as appropriate. The authors found that entrepreneurship can be successfully incorporated in almost any hospitality course, which leads to the assumption that entrepreneurship can also be successfully implemented in tourism degrees.

Entrepreneurship already received increasing attention by the tourism education sector, but still a considerable gap exists between what the HEIs offer and what is requested by the industry. To overcome this gap, tourism education institutions continuously extend their curriculums with courses and modules dedicated to entrepreneurship and new venture creation. However, the implementation of entrepreneurship in tourism degrees has so far received little attention in the literature (Ndou et al., 2019). Thus, this paper strives to explore on the respective present situation in the Finnish context and effects of entrepreneurial education on the tourism degree students as illustrated in the following section.

2.3.3 The effect on entrepreneurial intentions

Of closer interest to this paper is the future entrepreneurial vocation of tourism degree students. As already outlined in section 2.1.3, the first step in the long-term process of entrepreneurship is an individual's desire to own and/or start an own enterprise. The best predictor of these future entrepreneurial activities appears to be the individuals' intentions and as entrepreneurial intentions of students are presumed to have a positive correlation towards entrepreneurial education, we strive to investigate on the education's implication on students' future entrepreneurial activities. Putting this understanding in the context of tourism students in Finland, allows us to derive the main research hypothesis.

Hypothesis

Entrepreneurship education has a positive effect on the entrepreneurial behaviour of students being enrolled in tourism degrees of HEIs in Finland.

Given the specific context of this work, the theory of planned behaviour (TPB) provides the best framework to explain and predict future behaviour (Ajzen, 1991). Withdrawn from the model is the general assumption, that the stronger the expression of entrepreneurship intention is, the more likely is the actual future entrepreneurial behaviour of the students. Entrepreneurial intentions in turn are based on three factors, which are investigated separately. Given the composition of the model and the previous explanation of the individual factors, three sub hypotheses are derived at this point, similar to those used by Liñán & Chen (2011) to research on the tourism students' entrepreneurial intentions.

The first determinant strives to identify the degree to which the students evaluate their entrepreneurial behaviour. The strengths of the students' attitude towards a future entrepreneurial career appears to affect their entrepreneurial intentions in the same direction

Hypothesis 1 - Attitude (ATT → EI)

Tourism degree students in Finland with a stronger attitude towards entrepreneurship have higher entrepreneurial intentions than those being averse to entrepreneurship.

Subsequently, the students' perceptions of other peoples' opinions regarding carrying out an entrepreneurial behaviour is investigated. As favourable normative believes of the students are expected to influence their entrepreneurial intentions positively, the second hypothesis reads as follows.

Hypothesis 2 - Subjective Norms (SN → EI)

The more positive the perceived opinion of society is towards entrepreneurship, the higher are the entrepreneurial intentions of tourism degree students in Finland.

The last determinant, behavioural control, refers to the perceived level of ease or difficulty in carrying out entrepreneurial actions. It determines the perceived control the students have over exercising entrepreneurial behaviour. It is presumed, that an increased perceived behavioural control can increase the students' entrepreneurial intentions.

Hypothesis 3 - Perceived Behavioural Control (PBC → EI)

The higher the belief in a possible control over the own entrepreneurial behaviour is, the higher is the entrepreneurial intention of the tourism degree students in Finland.

Concluding, it is presumed that the stronger the expression of the three determinants is, the stronger is a student's entrepreneurial intention and respectively their future activities as entrepreneurs.

However, no significant direct relationship of subjective norms and entrepreneurial intention is proven in the literature yet, but rather presumed that those norms significantly influence the attitude as well as the perceived behavioural control. Therefore, two further hypotheses are formulated for completion of the research. The assumption that subjective norms have a causal effect on entrepreneurial attitude and perceived behavioural control is tested through the following two hypotheses.

Hypothesis 4 - Subjective norm and attitude (SN → A)

The subjective norm of a tourism degree student in Finland positively influences their personal entrepreneurial attitude.

Hypothesis 5 - Subjective norm and behavioural control (SN → PBC)

The subjective norm of a tourism degree student in Finland positively influences the perceived behavioural control.

3 RESEARCH DESIGN

Every research project needs an appropriate research design, which defines the methods and procedures used for collecting and analyzing the relevant information while keeping in mind the objectives of the research as well as the available resources. Therefore, this section is dedicated to developing a logical and comprehensive description on what will be done to test the above derived hypotheses.

As an integral part of the research design, the study population, data collection methods, as well as the used variables are described in the following. The development of the research instrument is explained in detail as well the operationalization. Towards the end of this chapter, the data analysis process is described, which allows the display of the results in the subsequent chapter 4.

3.1 Research methodology

This section deals with the explanation and justification of the chosen research methodology and methods.

Empirical research can generally be done through qualitative or quantitative research methods, which can be used separately or combined in a so-called mixed methods study. Qualitative research on the one hand strives to explain interrelations or understand concepts and its results are based on non-numeric but verbal and/or visual data. Through its inductive approach, this research method is not applicable to investigate on universal statements. Furthermore, conducting an entire research process qualitatively requires a lot of time and money resources, which are not available for this paper. Quantitative research in turn allows the collection of a wide range of data through less effort and resources. It strives to precisely examine already established hypotheses and ensures the statistic evaluation of the results through its structured research procedure.

Therefore, a quantitative research method is chosen to test the above developed hypotheses. However, qualitative data is collected first to develop a foundation for the subsequent quantitative research as well as for providing possible answers to the research question regarding the implication of entrepreneurship education in tourism degree programmes in Finland.

The study population, research instrument, data collection phase as well as the data analysis procedure are discussed in this section.

3.1.1 Defining the study area and population

In the beginning of the research process, secondary data is collected for two reasons. Firstly, to find preliminary insight on the implementation of entrepreneurship education in tourism degree programmes in Finland. Secondly, certain data is needed as a foundation for the further research.

More specifically, the present paper strives to test the previously withdrawn hypotheses for a certain study population, which must be defined in terms of time, function, and geographical area (von der Heyde, 1999). Therefore, the web-based desk research in the beginning of this process is inevitable for the definition of the research area and its population.

The information from the previous chapters shows that the study population for the following research consists of all students being enrolled in tourism related degree programs of HEIs in Finland during the spring semester of 2020. This definition shall explicitly include students of all genders, ages, and nationalities.

Consequently, all institutions of higher education in Finland are the gateway for any further research. Based on www.studyinfinland.fi/universities, a comprehensive list of all 13 universities and 23 universities of applied sciences in Finland is created.

In the second step of this desk research, all institutions are to be determined that offer a minimum of one tourism degree program. The institutions' own websites serve as the research sources in this step. Through the navigation bar on the landing pages, all offered degree programs can be viewed. Based on the broad spectrum of the tourism industry, all degree programs that anyhow relate to tourism are included in this research. This refers mainly to programs in hospitality and tourism management, but also event management, aviation management or hotel and restaurant administration are included.

To avoid any exclusions, both international degrees as well as those taught in the local language are considered.

The results therefore are bachelor's and master's degrees as well as their Finnish compliances, Restonomi and Ylempi. The degrees are mainly allocated in areas such as hospitality management but also in social sciences and business administration.

Furthermore, a contact person for each degree program is identified to allow a quick and easy way of contacting in the later phase of this study. This column of the list includes program coordinators, representatives, and directors as well as in some cases the head of the respective school.

For defining the size of the study population, we rely on these contact persons, which will be asked in the further course to provide the numbers of students being enrolled in the respective degree programs of their institutions.

Lastly, to gain first insights on the implementation of entrepreneurship related content or teaching methods in the derived degrees, each program description is examined as well as the detailed structure of it including a list of the mandatory courses.

3.1.2 Research method and selected variables

The further research requires primary data collection as to our best knowledge no existing data on the same research subject is available. Thus, this section is dedicated to the decision for the most appropriate research method and the determination of the used variables.

As already stated, this paper strives to research on the intentions and behaviour of students. Therefore, we think it is more than accurate to follow the common approach in the literature on entrepreneurial intentions and research among the students themselves. We furthermore believe no one else can answer questions on their behaviour and intentions better than the students themselves.

As the size of the study population is yet unknown but expected to be rather large, we do not anticipate being able to research among all the respective students. Hence, the research will be carried out through a (hopefully large-scale) sample. Further information on the research sample and its compilation can be found further below in section 4.1.1.

One type of research that specifically collects information from a sample in order to withdraw conclusions for an entire population is the *survey research* (Check & Schutt, 2011). As researching among university students is a common approach in academic literature on entrepreneurial intentions, the chosen method for the present research is a survey among the respective students. Furthermore, surveys are especially well-suited for descriptive studies as they can produce a large amount of empirical data in a short amount of time at a fairly low cost. Additionally, as stated in Singleton & Straits (2009) surveys are commonly used to explore and describe human behaviour, which is the core of this research.

To ensure the research instrument is aligned with the research objectives, all variables used in the survey are to be defined. To begin with, the variables that are object of this study are the explanatory variables, which in turn are divided into dependent and independent variables. Those, a researcher is interested in explaining and predicting are dependent variables. In the present paper this refers to the entrepreneurial intentions of the students. The intentions to act entrepreneurial can be understood as the presumed effect, which is caused by the influence of other variables: The independent variable, which in this research are the three previously described factors attitude, subjective norms, and perceived behavioural control. To assure the validity of the results, further variables are needed that are not of primary concern to the study subject. These control variables are kept constant during the data collection phase and in entrepreneurship research commonly situational factors such as demographic data are used that describes a typical entrepreneur's profile.

As an illustration, all used variables and its attributes are displayed in the table below.

Table 2 - Research variables

Dependent variables	Independent variables	Control variables
<ul style="list-style-type: none"> ○ Entrepreneurial Intention (EI) 	<ul style="list-style-type: none"> ○ Attitude (A) ○ Subjective Norm (SN) ○ Perceived Behavioural Control (PBC) 	<ul style="list-style-type: none"> ○ Age (a) ○ Gender (g) ○ Work experience (wx) ○ Self-employment experience (sx) ○ Role models (rm) ○ Immigration (im)

3.2 Operationalisation

This section is dedicated to explaining the development of the chosen research instrument. In the context of hypotheses testing, a quantitative research design appears to be best suited and therefore the data is collected by the means of a survey. The development and its compilation of questions is explained in detail in this section as well as the selection and justification of the used question and answer types. This section ends with illustrating the distribution of the survey to the research population.

3.2.1 Instrument development

Entrepreneurship education research literature abounds with research methods which are often inconsistent and questionable. Common empirical approaches can be found for instance in Kolvereid (1996), Chen et al. (1998) or Krueger et al. (2000) but as a comparison of different research instruments is rather difficult, no evaluation could be carried out yet.

However to overcome the limitations of previous research instruments, a suitable questionnaire was developed, based on theoretical and empirical literature on Ajzen's previously explained theory of planned behaviour (Ajzen, 1991, see also chapter 2.1.3). Applying the TPB in the entrepreneurial context as well as carefully monitoring the already existing instruments, allowed the emergence of the Entrepreneurial Intentions Questionnaire (EIQ) with its goal to analyse students' intentions towards becoming an entrepreneur (Liñán & Chen, 2009). Furthermore, the authors tested the validity and reliability of the EIQ in two different cultural environments and found its results to be overall satisfactory. Based on the found support for the adequacy of this model among Taiwanese and Spanish students, the further usage of the EIQ in varying countries is suggested to confirm the findings in different geographical contexts.

The first two developed and used versions of the EIQ serve as the foundation for the development of the following survey (Liñán & Chen, 2009; Liñán et al., 2011). To tailor the questionnaire to the specific needs of this paper, the questions and items get slightly extended and modified in their order and formulation, which is explained in the following section.

Overall, the EIQ consists of three main sections: Firstly, the introduction to the survey gives a brief statement of the background and purpose of this research to introduce the students to the topic of the following questionnaire. Furthermore, it serves as a motivator to enhance participation in offering an incentive as well as outlining the short completion time of roughly 10 minutes.

The second part of the survey is the main part and consists of the actual questionnaire. As the arrangement of the questions might have an influence on the participants, they are divided into 10 sections, which are each displayed on a single page for clarity. As to our best knowledge no exact impact of the succession of the questions is known, we focus on a logical and clear construction of the thematical grouped questions. Special attention is paid to the first page of the questionnaire, as this is expected to decide whether or not the participant continues with the survey. For a first overview of the arrangement of the questionnaire see table 3 below. A detailed description of the pages and their contents follows.

Table 3 - Arrangement of the questionnaire

Page	Questions	Description
1		Introduction
2	1 - 4	Current Education
3	5 - 13	Professional Education
4	14 - 16	Entrepreneurship Education
5	17 - 19	Entrepreneurial Knowledge
6	20 - 21	Professional Attraction (ATT)
7	22 - 24	Social Valuation (SN)
8	25 - 26	Entrepreneurial Capacity (PBC)
9	27 - 28	Entrepreneurial Intention (EI)
10	29 - 32	Entrepreneurial Objectives
11	33 - 37	Personal Data
12		Thank you

To encourage the students to fill out the entire survey, the first question is specifically chosen to be personal and easy to answer. It is advised in the literature not to start a survey with the collection of demographic data, as those are often sensed as tedious or dull by the participants (Porst, 2013). To minimize the risk of early dropouts, the first page of the questionnaire asks about the current education and collects information about the degree and institution the student is currently enrolled in. This information will allow a deeper insight whether gathered information is universally valid for the study population or if outstanding features appear across degrees or institutions and a certain comparison might be more informative.

Thematically connected to the current education is the previously experienced professional education, which is subject to page 3. The control variables work experience (wx) and self-employment experience (sx) are retrieved from here. The following page 4 bridges the personal education to the core issue of this paper: entrepreneurship education. Withdrawn from the early version of the EIQ (Liñán & Chen, 2009), this section collects information on the entrepreneurial education the students may have received as well as their understanding of the term itself. At this point it seems interesting to know whether the students distinguish

between education *for* entrepreneurship and education *about* entrepreneurship or not. The students are asked to evaluate to which extent the courses or modules helped them developing certain aspects, such as their knowledge about the entrepreneurial environment or their preference to be an entrepreneur.

The following section provides insight on the students' personal entrepreneurial environment and their own knowledge on business associations and support bodies for entrepreneurs. This knowledge is not expected to directly affect the entrepreneurial intentions of an individual but might be useful in identifying their influence on the independent variables (Liñán & Chen, 2009).

Pages 6, 7, 8 and 9 cover the core elements of the entrepreneurial intentions model as defined above. Attitude (ATT), subjective norm (SN), perceived behavioural control (PBC) and entrepreneurial intentions (EI).

On page 10, data on the entrepreneurial objectives of the students is collected. This allows drawing conclusions on the students' perceptions of entrepreneurial success and the considered degree of importance in business growth and development.

In the final section of the questionnaire, the participants are asked to provide some personal data for determining the remaining control variables age (a), gender (g) and nationality (im). Furthermore, questions regarding the education and occupation of their parents are included for the variable role models (rm).

On the last page, the students can provide their contact details to join a raffle for the incentive and we take the opportunity to thank all attendants for their participation.

3.2.2 Question types and answer scales

The formulation of the questions and statements within a survey strongly influences the quality of the derived information. Following Strack & Martin (1987), the participants must understand the questions, be able to generate an opinion, and express their responses. Even though the used questions are overall derived from the existing EIQs, we nevertheless pay great attention to assure a short and simple formulation. Apart from that, we refrain to use assumptions and insinuations to avoid unnecessary misunderstandings. Possible unknown terms are avoided as well as questions for which the participants might need additional information. That is why we for instance left out a question from the original EIQ asking for the students' total household income. As this would on the one hand require a further question on the household size and constellation to allow any interpretation of the findings. On the other hand, the participants might not feel comfortable sharing this information or might not even know about it.

To collect answers to the questions, answer possibilities are predefined and are to be assessed on a scale. An appropriate measurement level is vital to the evaluation of the resulting data. Fundamentally can be distinguished whether the collected variable is metric, ordinal, or nominal.

The usage of metric scales allows arithmetic operations such as adding, subtracting, or averaging. As it is rarely appropriate in the present survey, this scale is

used in just a few questions, such as those regarding the years of work- or self-employment experience. These questions are prime examples for quantitative scales as it might be of importance to shed light on the students' average length of work experience.

Nominal scales are generally used in qualitative research and are expressed verbally, where the order is not of relevance. In the present survey this scale is mainly used for collecting data on the control variables such in question 35 regarding the students' place of birth. As in this case just the selection frequency of the answers is relevant, the possible answers are just *Finland* and *other*, while the latter has the additional possibility to specify the students' country of origin. Some open-ended questions are included in the questionnaire as well, to disperse the structured survey process. These questions can be considered special cases of the nominal scale, as it can be seen from question 5 regarding the work experience. As a list of all possible positions of previous employment would be endless, an open response field allows the collection of all answers that can be sorted and reasonable clustered afterwards.

The values of ordinal scales are as well expressed in verbal terms but are subject to a certain rank order. It is used when not the exact expression of the attribute is of interest, but rather an overall structure of the answers is to be identified. A typical example in the present survey is question 10 asking about the size of a company the student worked at. The size in this case is determined by the number of employees and the answer possibilities are clustered, as not the exact number is of interest, but rather if the students were employed in small, medium, or large corporation.

The ordinal scale is the primary used level of measurement in this questionnaire and is among others used for the questions regarding the core elements of this survey. Almost all question in the sections 6, 7, 8 and 9 are formulated as statements and the students are asked to indicate their level of agreement on a scale. Intentionally a 7-point scale was chosen, even though arguments can be found in the literature to use even scales to avoid a neutral middle. However, we presume that it could be counterproductive to force the participants to agree or disagree with every statement. For reasons of clarity just the starting and end point of the scale are labelled. In most of the cases the lowest number (1) equals total disagreement and the highest (7) total agreement.

Furthermore, the statements regarding the variables that are central to the entrepreneurial intention model are not rated directly but by means of several correlating *sub statements*, the *items* of a Likert-type scale. As already early reported in the literature, responses to multi-item scales are more valid, accurate and reliable than responses to just one statement (Rushton et al., 1983). Through aggregation of an individual's answers, a conclusion on the actual investigated variable can be drawn.

Five items are used to measure the attitude towards entrepreneurship, although earlier studies used belief-based measurements to withdraw conclusions on the students' attitudes. However, Ajzen (1991) stressed out, that believes are just the

antecedents of attitudes and therefore cannot explain them directly. An additional question is included, asking for the students' preferences towards entrepreneurship and salaried work, which both are to be rated on an own 7-point scale.

Although earlier studies occasionally left this section out, the social norm in the present EIQ is also measured through an aggregated scale. It is dedicated to determining, what important people in the student's personal environment think about entrepreneurs and entrepreneurship. Therefore, the statements ask for the students' perceived opinions of their family, friends, and colleagues.

Six items are used to research on the respondents' personal behavioural control over enterprise creation. As the literature suggests using self-efficacy measurements, five items ask the students to rate their capability and knowledge of starting an own business. However, Ajzen (1991) understood perceived behavioural control as a much wider concept and therefore Liñán & Chen (2006) included one more item rating the controllability.

The entrepreneurial intention is investigated through 6 items to which the students individually respond. For drafting the statements, several sorts of intention measurements can be distinguished: desire (I want to...), self-prediction (How likely is it...), interest (How interested are you...) and behavioural intention (I intend to...). Although these types have been used in several combinations in the literature, we side with Liñán & Chen (2006), who use a measure just based on intentions. The statements are used to identify different aspects of intention and are inspired by Chen's work (1998). Additionally, one yes/no question is included, which is not expected to give insight directly on the intention but might be useful for comparisons.

In the original EIQ, the statements were all formulated unilateral, which the authors themselves already criticized (Liñán et al., 2011), as it may cause acquiescence biases. It is possible that pure positive formulations may influence the responses in a way that answers are given mainly on the positive or negative side of the scale. Therefore, the authors modified some statements into a reverse wording to increase the reliability and validity of the model.

To break up this highly structured questionnaire, single choice items are included in the question that are not central to entrepreneurial intentions. Especially the control variables are determined through open ended and single choice questions.

3.2.3 Distribution of the survey

As nowadays plenty of tools are available to carry out online surveys, own requirements were established to decide on an appropriate provider of the tool.

The most obvious tool to be considered is the Webropol survey tool, as the institution this paper is written for has a campus license for its students and staff. Having access to a tool that is used by several of Finland's HEIs led us to the assumption that it might be as well an appropriate tool for the present research. Considered to be most important for this paper is an attractive user interface for both, the researcher, and the respondents. Firstly, the tool's user interface got

tested and found satisfactory from both the creator's as well as the respondents' side. It allows the creation of a survey suitable to display on computers as well as on mobile devices. In addition to carrying out the survey in an easy and attractive way, Webropol allows real time reporting and conducting quantitative and qualitative analyses of the created data. Furthermore, and even more important, the ability to export the raw data for in-depth analysis is demanded. All these requirements are met by Webropol, which is why this tool is the chosen one for this paper.

To avoid drastic mistakes in the questionnaire, it is distributed to four independent individuals for a pre-test first. These people outside of the entrepreneurship research domain are asked to fill in the survey under the same circumstances as the students will. No additional content-related information is provided for the pre-test and the participants are asked to give pertinent feedback on the procedure, structure and understanding of the questions and answers. This phase helped determining one question that may cause misunderstandings. As the respective question is not of relevance to the core elements, it got removed. Furthermore, the pre-test participants confirmed a completion time of roughly 10 minutes, which we consider as accurate for the purpose of this paper.

The survey was distributed to the students online, because of two main reasons. Firstly, the time restrictions of this research process and secondly, the mandatory personal distance. During the development of this paper the contact lessons in all of Finland's HEIs were suspended.³ Therefore, an online survey, distributed through the responsible teacher seemed to be the most convenient solution for the data creation of this thesis.

The data was collected in the time frame between the 4th of May and the 1st of June 2020. Firstly, an e-mail was sent to the earlier determined teachers, shortly introducing the author and the thesis. Furthermore, support was inquired to help defining the actual size of the study population, in other words asking how many students currently are enrolled in the identified degree programs.

Most HEIs in Finland require a written application for a research permit in their institution. As the latest permission was granted in the last week of May, the data collection period was closed on the following Monday in the first week of June. The survey could be successfully distributed to all students enrolled in tourism degrees of six HEIs in Finland.

3.3 Process of Analysis

In order to test the earlier developed hypotheses, a roadmap is required on how to proceed with the collected data, which is portrayed in the present chapter.

³ This thesis was created during the outbreak of COVID-19 and the following mandatory physical distancing.

Subsequently to the collection phase, the data is exported from the survey tool into a software which allows advanced statistical analysis. The chosen software for the following analysis is IBM SPSS Version 26.

The analysis process begins with preparing and clearing the data to allow further usage of it. As noted by Chandler & Lyon (2001), entrepreneurship education research often lacks sufficient treatment of its reliability and validity. Therefore, both are assessed as the essential psychometrics and are elaborated in the following. The reliability of the Likert-type scale is shown through the calculation of Cronbach's alpha of each used item in the questionnaire. The work of Liñán & Chen (2009) shows evidence, that the used measurements in fact measure the superordinate construct. Adjacent, a factor analysis is carried out to distinguish the degree to which the items of a construct relate to each other.

After ensuring the quality of the scales and data itself, we proceed with testing our previously derived hypotheses through an extensive regression analysis that also includes insight on the correlation between the items of the constructs.

A detailed description of the data analysis process follows hereafter.

3.3.1 Cleaning the dataset

Prior to the actual analysing process, the collected data is carefully reviewed, formatted, and adjusted.

The items within the Likert-type scales are brought into a homogeneous order, so that the value 7 always represents the most favourable answer. Accordingly, the value 1 is equivalent to the most negative answer possible. Therefore, all reverse formulated statements are singled out and their answers scaled inverted, to ensure consistency among the items.

Furthermore, missing values are identified, which could occur in the present survey due to not obligatory answers. Hardly any abstentions were found throughout the survey, however, those that could be determined, were allocated special codes, to not exclude the respondent's other answers from the analysis. A common approach is, to allocate a value outside the range of values of the possible answers. For the following evaluation, a coding with negative values is chosen, which offers the advantages of easy optical recognition of the missing values.

Respondents who answered less than 75% of the provided questions, were eliminated from further analysis, as they are not expected to be sound and meaningful. Incomplete datasets will be reviewed individually, and case-dependent decisions are made whether to exclude them. In the case of several dropouts, an additional analysis of the dropout and completion rate is conducted.

Additionally, the answers of the open questions are thorough reviewed and coded reasonable as well. For instance, in question 2 regarding the degree title, the students are currently enrolled in, the same degrees are clustered, no matter the spelling or used abbreviations. The answers are coded with consecutive numbers to allow quantitative data analysis.

3.3.2 Test of reliability

As already mentioned above, a thematic relationship is assumed between all items of a Likert-type scale. To allow cross charging the single items to withdraw conclusions on the superordinate statement, a relationship in between the answers is required. Therefore, the internal consistency of the answers is verified in a first step of the analysis through the most popular reliability coefficient Cronbach's alpha, which is also the most suitable calculation in behavioural studies. As stated by Gliem & Gliem (2003) it is particularly essential to compute and review the internal consistency when using Likert-type scales in the respective research.

The formula for the calculation is displayed below and is built around the items' mean inter-item correlation r that is adjusted through the number of items N .

Equation 1 - Cronbach's alpha

$$\alpha = \frac{N * r}{1 + (N - 1) * r}$$

The possible range of values is defined between 0 and 1, whereas the value 0 represents no internal consistency at all and 1 absolute consistency. A consensus on the optimal value of Cronbach's alpha has not evolved in the literature yet, wherefore the frequently suggested value of $\leq 0,7$ is pursued for the present survey (Nunnally, 1994). The greater the value, the greater the internal consistency, however a value significantly close to 1 is to be handled critically, as this might indicate redundant items (Schmitt, 1996).

An appropriate value of Cronbach's alpha allows the analysis of the entire construct, however if a poor value results, the statements are evaluated individually. After assuring the reliability of the scales we proceed with testing its validity.

3.3.3 Test of validity

For the following step of the evaluation process, Chandler and Lyon (2001) suggest to ensure the validity, so that the subsequent measurement actually measures the intended construct. Therefore, the authors suggest several possible methods. Unlike the structural and content validity, where we mainly rely on the work of Liñán & Chen (2009), the construct validity requires further in-depth measurements. It ensures that measurements that *should* be related to each other are *in fact* related to each other. It is demonstrated by analysing the convergent and discriminant validity of the construct, which are both determined in the following.

Convergent validity is assessed through an exploratory factor analysis. It is carried out to determine the degree to which the items of a construct that – based on the sound theory – should be related are in fact related to each other. If an item

correlates with another item in a way the theory suggests, the convergent validity is supported.

Firstly, a Kaiser-Meyer-Olkin test (KMO) is carried out to determine, whether the single items are suitable for factor analysis. This measure of sampling adequacy can achieve a value between 0 and +1, whereas a higher number represents a more adequate sampling and 0.5 is the general accepted threshold (Field, 2013). A KMO close to 0 shows several unilateral correlations in contrast to the total amount of correlations. These widespread correlations illustrate a problem for the factor analyses which could not be carried out in this case.

Consequently, a Bartlett's test of sphericity is performed to assure carrying out a factor analysis is appropriate, which applies whenever the Bartlett's test is significant, meaning results in a value that is ≤ 0.05 .

In its essence, factor analysis strives to assure that every variable has its justified purpose in the research. It can reduce the number of used variables by eliminating those that do not load above the 0,5 threshold. Everything that did not get eliminated in this step forms the foundation for the actual data analysis in the form of regression analysis.

As our earlier proposed hypotheses each strive to research on the relationship between two variables, the last phase is dedicated to determining the causality of the variables. However, statistics cannot *prove* causality but rather underpin existing theories on the relationships. The statistical analysis therefore deals with determining whether a relationship exists between the variables and if so, how strongly it is expressed. Items are expected to correlate stronger within their own construct than with items of any other construct. A respective analysis helps furthermore to identify extreme values or statistical outliers (Zwerenz, 2012). Correlation values can rank any number between -1 and +1, whereas 1 is both negative as well as positive the maximum expression and indicates a perfect relationship. A positive value indicates a positive correlation, meaning in other words, if one variable increases, the other variable increases as well. Similarly, if the value is negative, an increase in one variable causes the decrease of the second variable. However, if the correlation value is 0, there is no correlation at all between the two variables.

3.3.4 Testing the hypotheses

In the final phase of the data analysis, the theory-based hypotheses are tested through regression analyses. Generally spoken, regression analyses assume a functional relationship between variables (Zwerenz, 2012). In the simplest case, one variable is linear dependent on another variable.

The goal of this analysis phase is now to determine what happens to the dependent variable, when the independent variable changes. In the example of hypothesis 1, we illuminate how the entrepreneurial intentions of tourism students react to a change in their entrepreneurial attitudes. The formulation of the hypothesis assumes that an increasing attitude leads to a higher intention, which demonstrates a positive relationship.

For every hypothesis, a scatter plot can be drawn with the value pairs of the respective variables derived from the questionnaire. However, this does not necessarily give insight on the direction of their functional relationship. Therefore, a straight line is demanded, that fits through this scatter plot in a way that shows the estimated value pairs. It is based on the calculations of the least square method and its composition is similar to a basic linear equation; however, the parameters are different. X refers to the independent variable, while \hat{y} represents the estimated value of the dependent variable y. The y-intercept is b_0 , while b_1 represents the slope - an example is illustrated in table 4 below. Detailed instructions on the calculation of the parameters can be found in the respective literature.

Equation 2 - Regression line

$$\hat{y} = b_0 + b_1 * x$$

Lastly, the difference between the estimated values along the regression line and the actual measured values is to be minimized, meaning errors are supposed to be as small as possible. With the help of R-squared (R^2) can be evaluated how well the regression line estimates the actual values. Therefore, R-squared compares the distance between the actual values and the mean with the distance between the regression line and the mean. Results can take values between 0 and 1 whereat 0 shows no fit at all and 1 a perfect fit. Implementation and interpretation of this analysis follow in the next chapter.

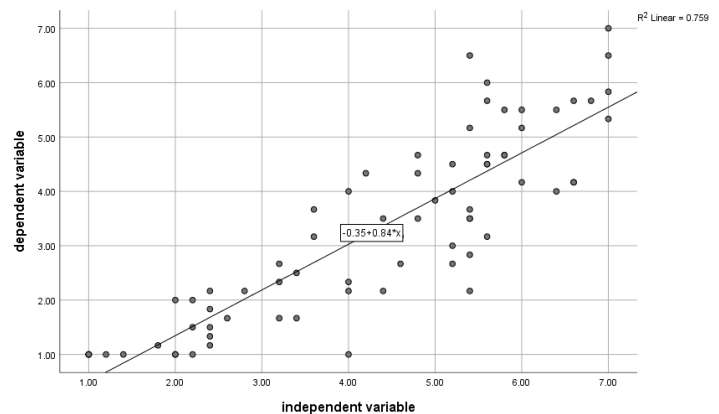


Figure 5 - Scatter plot and regression line

4 RESULTS AND ANALYSIS

The results of the questionnaire and calculations of the core values are presented in the present chapter.

The first section gives an overview of the descriptive statistics. Firstly, the participant's backgrounds and demographics are illustrated. Subsequently first insights are displayed on the implementation of entrepreneurial education in tourism degrees of HEIs in Finland, based on the students' perceptions and experience. Thereafter, the students' entrepreneurial objectives are displayed.

In the second section, the actual data analysis is carried out, following the above in detailed explained course.

After assuring the reliability and validity of the scales, the method of summated ratings is applied. As the literature criticizes the treatment of ordinal scales as interval scales (S. Jamieson, 2004), we cannot assume equal intervals between the ranked values. Therefore, the median and standard deviation of each construct are calculated to measure the central tendency, which serves as the basis for the subsequent regression analysis to assess whether the hypotheses are supported or not.

4.1 Descriptive statistics

This section provides a general overview of the respondents' structure. Their demographics as well as their educational, work related, and entrepreneurial backgrounds are displayed first. Afterwards, the students' opinion on entrepreneurship education as well as their personal experiences are displayed.

Lastly, the students' opinion on their hypothetical future enterprises are displayed, including their opinions on growth and importance of several other factors regarding firm establishment, firm size, and employment type.

4.1.1 Participants' background and demographics

By the end of the data collection phase, 74 responses to the distributed questionnaire could be collected, of which one is excluded from further analysis due to insufficient answers.

Firstly, the respondents' demographic structure is reported before their educational backgrounds are illuminated, and the section closes with illustrating their professional experiences. The respondents' age ranges from 18 to 51 years whereas most students are in their early twenties with almost two thirds of the participants being less than 25 years old. Over 70% of those surveyed, identify as female, 22% as male, while almost 8 % chose not to input any information regarding their gender. The majority of respondents reported their place of birth being

Finland, while ten students were born in Asia, six in European countries, four in Russia and two in the Americas.

The questionnaire was distributed in six institutions of higher education in Finland, of which the University of Eastern Finland is the only participating University and contributed with six responses. Residual answers source from Jyväskylä University of Applied Sciences (24 students), Satakunta University of Applied Sciences (18 students), LAB University of Applied Sciences (10 students), Lapland University of Applied Sciences (9 students) and the South-Eastern University of Applied Sciences (6 students).

Almost 92% of the respondents are enrolled in a bachelor's degree, while the remaining 6 respondents are currently studying in a master's degree. As anticipated, all participating students are enrolled in a tourism related degree, mainly in tourism & hospitality management (63%), but also in international tourism development (13.7%), tourism & service business (11.0%) tourism marketing & management (8.2%), and hotel, restaurant and tourism management (4.1%).

Almost 90% of the students reported to already have work experience, of which half are still employed in either a full- or part time position. Nearly 50% have already experience from positions in the hospitality and gastronomy sector. Further students have experience from customer service or sales related position, although some also declared professional experience from positions not related to the tourism industry at all.

Similar to the students' age, the collected data reveals a wide-ranged distribution of work experience. While two students have less than a year of professional experience, others report more than 25 years, however, the median work experience is 4 years. Of those respondents with work experience, roughly 50% replied that they have experience in a leading position. Additionally, eight respondents have been self-employed or owners of a small or medium Enterprise with the median experience time of three years. While five stopped their self-employment between one and eight years ago, three of the students still are self-employed.

When the students were asked about their parents' educational background, almost half replied that their parents have received a higher education in University of Applied Sciences (Father 45.2% and mother 49.3%). This is contrasted by roughly 10% of the parents having received primary or secondary education and leaving almost 40% with received vocational trainings. When asked about their parents' present occupations, 16.4% reported their mothers to be self-employed and even 28.8% of the fathers.

4.1.2 Comprehension of entrepreneurship education

In question 14, the students were asked to indicate to what extent they think it is possible to offer entrepreneurship education (courses or modules) to develop several aspects from (1) not possible at all to (7) highly possible. The overall response was very positive, and the results are displayed in Table 4 below.

When the students were asked about their own background, 51 responded that they have already experienced a course or module that can be considered entrepreneurship education. Of the remaining students, 12 pointed out that even though they have not experienced any entrepreneurial education yet, they will take an according course or module in the future.

All those, who have experienced a respective education, were asked to evaluate how well it contributed to develop the same subjects/matters used in the question above. The results were again positive, even though not as significantly high as in question 14.

Table 4 - Survey results on entrepreneurial education courses

Aspect	Median (Question 14)	Median (Question 16)
Knowledge about the entrepreneurial environment	6	5
Greater recognition of the entrepreneur's figure	5	5
The preference to be an entrepreneur	5	4*
The necessary abilities to be an entrepreneur	5	5
The intention to be an entrepreneur	5	4
<i>Total responses N</i>	73	51
*multiple modes exist. The smallest value is shown		

As can be seen from the table, the expectations of the students, what entrepreneurship education can or could teach are partially higher than the actual experience of those who underwent respective courses or modules.

Results from the desk research have revealed, that just two of the six participating institutions mentioned entrepreneurship in their degree descriptions, of which one AMK listed a mandatory course on basics of entrepreneurship, while the second presents entrepreneurship as a possible career option after graduation.

However, the statistic results show, that not just students from these two institutions have already experienced respective courses or modules, which leads to the assumption that the experience originates from previous education or is not publicly listed as a part of the investigated degree programs.

4.1.3 Entrepreneurial objectives

In the second last section of the questionnaire, the students were asked to evaluate their own entrepreneurial objectives.

The students indicated their own perceived importance of several factors for their theoretical future enterprises on a scale from (1) not important at all to (7) extremely important.

Table 5 - Entrepreneurial success

Factor	Median	Std. Deviation
Competing effectively in world markets	5	1.51
Reaching a high level of income	5	1.43
Doing the kind of job, I really enjoy	7	1.01
Achieving social recognition	5	1.31
Helping to solve the problems of my community	5	1.47
Keeping the business alive	6	1.03
<i>Total responses N</i>		73

Despite a considerable high median across the single statements, most of the students considered working in a role they really enjoy as the most important factor contributing to entrepreneurial success. The second most important factor from the list is to keep the business effective and viable over time.

In the potential case of starting an own business, 6.8% of the students prefer to not employ others but rather be self-employed, while most respondents (76.4%) would strive to achieve a micro-enterprise with up to 10 employees. Additional 16.4% would aim for a small or medium enterprise, while no one is interested in founding a large enterprise with over 250 employees.

Apart from number of employees, the majority of the students understand continuous growth and development as a particularly important to their potential future enterprise (median 5 out of 7).

Question 32 lists several strategies to expand a business and the students are asked to indicate the degree of likelihood that they would use these strategies in their own companies from (1) not likely at all to (7) extremely likely. Answers were throughout positive for every strategy, showing that the students would consider several ways and approaches to expand their enterprise. The most reported answers of high likelihood are found for reaching cooperative agreements or partnerships with other firms and offering specialized trainings for the employees. Compared to planning the different areas of the firm precisely in detail, which does not appear to be very likely to be executed by the students in their future enterprises.

4.2 Testing the hypotheses

This section covers the analysis of the core variables of this paper: entrepreneurial attraction (ATT), subjective norms (SN), perceived behavioural control (PBC) as well as entrepreneurial intentions (EI).

In line with the earlier described analysis process, we will ensure the reliability and validity of the scales first, before proceeding with a factor analysis. This will lead us in the end of this phase to testing the previously derived hypotheses through linear regression analysis.

The Likert-like scale of each variable is a 7-point scale ranging from (1) total disagreement to (7) total agreement.

4.2.1 Cronbach's alpha

The *entrepreneurial attraction* of the respondents was primarily researched on through question 21 and its five items. The second and the fifth row were inverted statements and therefore got coded accordingly first.

All 73 participants evaluated each item and the calculation of Cronbach's alpha reveals a very high level of internal consistency with $\alpha = 0.909$. The value could

be increased by deleting one of the five items. However, it would just increase by 0.05, which is why all items are kept for further analysis.

Table 6 - Item statistics ATT

	Mean	Std. Deviation
ATT 1 - Being an entrepreneur implies more advantages than disadvantages to me	4.164	1.818
ATT 2 - A career as an entrepreneur is very attractive to me	4.589	2.159
ATT 3 - If I had the opportunity and resources, I would love to start a business	4.603	2.080
ATT 4 - Being an entrepreneur would give me great satisfaction	4.315	1.985
ATT 5 - Among various options, I'd rather be an entrepreneur than anything else.	4.082	2.026
Total responses N		73

Question 24 researched with its five items on the perceived *social norm* of the students' environment and 73 valid answers are recorded as every participant did evaluate on every item. Cronbach's alpha achieves a value of $\alpha = 0.833$, which lies above the aspired ≥ 0.7 threshold. Additionally, the item statistics show similar scores, which was strived for when constructing the scale. The proximity of the means shows the similarity between items and indicate that no item has an unusual score. Furthermore, item-total statistics reveal that the removal of any item would impair the alpha for this variable.

Table 7 - Item statistics SN

	Mean	Std. Deviation
SN 1 - My friends would approve my decision to start a business	5.712	1.172
SN 2 - My immediate family would approve my decision to start a business	5.644	1.273
SN 3 - My colleagues would approve of my decision to start a business	5.452	1.214
Total responses N		73

Question 26 provides insight into the *perceived behavioural control* of the respondents. Two items were formulated negative and are coded first. The six items revealed a Cronbach's alpha of $\alpha = 0.839$, which is higher than the threshold. As it cannot be improved further, no items are deleted, and the scale is considered to be internally consistent.

Table 8 - Item statistics PBC

	Mean	Std. Deviation
PBC 1 - Starting a firm and keeping it viable would be easy for me	3.411	1.352
PBC 2 - I believe, i would be completely able to start a business	4.548	1.972
PBC 3 - I am able to control the creation process of a new business	3.932	1.316
PBC 4 - If I tried to start a business, I would have a high chance of being successful	3.890	1.410
PBC 5 - It would be very easy for me to develop a business idea	4.397	1.698

The *Entrepreneurial intention* of the students was the subject matter of question 28. Again, two items were inverted for the questionnaire and coded during the data cleaning phase. Based on the six items a Cronbach's alpha of $\alpha = 0.929$ revealed a very high level of internal consistency of the scale.

Table 9 - Item statistics EI

	Mean	Std. Deviation
EI 1 - I am ready to do anything to be an entrepreneur	2.822	1.782
EI 2 - I will make every effort to start and run my own business	3.219	1.880
EI 3 - I don't have any doubts about starting my own business one day.	3.383	1.927
EI 4 - I am determined to create a business venture in the future	3.466	1.780
EI 5 - My professional goal is to be an entrepreneur	3.069	1.866
EI 6 - I have a very high intention to start, to start my own business one day.	3.973	2.345
Total responses N		73

4.2.2 Validity test

As every variable's scale passed the reliability test, no construct gets excluded, which is why an exploratory factor analysis is run on all the 20 items of the core variables ATT, SN, PBC and EI.

Prior to the actual factor analysis, the qualification of the data is assessed. Results show that the sampling adequacy is notably high with a KMO = 0.907 and already indicates the suitability of the items for the factor analysis. Bartlett's test of sphericity is with 0.000 strongly significant and therefore rejects the null hypothesis. Both tests imply a strong enough correlation of the items to carry out the factor analysis.

Table 10 - KMO and Bartlett's Test

Kaiser-Meyer-Olkin Measure of Sampling Adequacy.		.907
Bartlett's Test of Sphericity	Approx. Chi-Square	1212.335
	df	190
	Sig.	.000

Subsequently, the communalities were illuminated to discover the degree to which the variables correlate with each other. As too low extractions would indicate to not include them in the factor analysis as it can be expected to not load significantly on any factor. As results reveal extractions between 0.554 and 0.896 and therewith overcome the suggested thresholds of 0.3 (Pallant, 2013), the factor analysis is carried out as anticipated.

The factor analysis revealed four variables with Eigenvalues greater than 1, explaining together 75.17% of the variance.

After rotating, factor 1 contributes with over 52.99% to the explanation of the variance, while factor 2 just provides 9.93%, factor 3 with 6.90% and factor 4 with 5.35% respectively.

Table 11 - Total variance explained

Component	Initial Eigenvalues			Extraction Sums of Squared Loadings			Rotation Sums of Squared Loadings ^a
	Total	% of Variance	Cumulative %	Total	% of Variance	Cumulative %	Total
1	10.598	52.991	52.991	10.598	52.991	52.991	10.048
2	1.986	9.928	62.920	1.986	9.928	62.920	3.976
3	1.379	6.895	69.815	1.379	6.895	69.815	3.186
4	1.071	5.353	75.168	1.071	5.353	75.168	3.420
5	.787	3.933	79.101				
6	.608	3.040	82.141				
7	.549	2.745	84.886				
8	.492	2.458	87.344				
9	.376	1.878	89.222				
10	.336	1.678	90.899				
11	.332	1.659	92.558				
12	.274	1.372	93.931				
13	.261	1.304	95.234				
14	.211	1.055	96.289				
15	.178	.892	97.181				
16	.145	.727	97.909				
17	.127	.636	98.545				
18	.119	.593	99.139				
19	.108	.542	99.681				
20	.064	.319	100.000				

Extraction Method: Principal Component Analysis.

a. When components are correlated, sums of squared loadings cannot be added to obtain a total variance.

The following rotated component correlation matrix shows the distribution of the items on the four identified factors as well as the correlations between each variable and the estimated factor.

In other words, it shows which variables is expected to measure which factor to which extent. To create a clear table that allows further interpretations, the varimax rotation method is suggested to distribute the factor loadings in a way so that each item measures precisely one factor. However, if some items load on two or more components, all values are shown if the correlations are above 0.5.

Table 12 - Rotated component matrix^a.

	Component			
	1	2	3	4
ATT 1 - Being an entrepreneur implies more advantages than disadvantages	.801			
ATT 2 - A career as an entrepreneur is very attractive to me	.772			
ATT 3 - If I had the opportunity and resources, I'd love to start a business	.768			
ATT 4 - Being an entrepreneur would give me great satisfaction	.819			
ATT 5 - I would rather be an entrepreneur than anything else.	.648			
SN 1 - My friends would approve my decision to start a business		.868		
SN 2 - My immediate family would approve my decision to start a business		.793		
SN 3 - My colleagues would approve of my decision to start a business		.864		
PBC 1 - Starting a firm and keeping it viable would be easy for me	.517		.658	
PBC 2 - I believe, i would be completely able to start a business	.684			
PBC 3 - I am able to control the creation process of a new business			.585	
PBC 4 - If I'd to start a business, I'd have a high chance of being successful	.503		.512	
PBC 5 - It would be very easy for me to develop a business idea				.849
PBC 6 - I know about the practical details needed to start a business			.855	
EI 1 - I am ready to do anything to be an entrepreneur	.703			
EI 2 - I will make every effort to start and run my own business	.850			
EI 3 - I don't have any doubts about starting my own business one day.	.508			
EI 4 - I am determined to create a business venture in the future	.858			
EI 5 - My professional goal is to be an entrepreneur	.842			
EI 6 - I have a very high intention to start, to start my own business one day.	.875			

Extraction Method: Principal Component Analysis.

Rotation Method: Varimax with Kaiser Normalization.

a. Rotation converged in 6 iterations.

Analysis of the table is satisfactory, as it reveals the majority of the tested items relating to each other, or at least within the groups they were originally designed for.

Consequently, component 1 combines the items that tested the student's attitude towards entrepreneurship (ATT 1, ATT 2, ATT 3, ATT 4 and ATT 5) with the items regarding their entrepreneurial intentions (EI 1, EI 2, EI 3, EI 4, EI 5 and EI 6) as well as the item PBC 2 indicating the degree to which the student is able to start a business. Although, PBC1 and PBC 4 load stronger on another factor, their loadings on component 1 are not to be disregarded.

Additionally, factor 2 received very high loadings from the items testing the students' perceived opinion towards entrepreneurship of family (SN 1), friends (SN 2) and colleagues (SN 3), which strongly supports the theoretical construct.

The third component combines four items of the perceived behaviour construct (PBC 1, PBC 3, PBC 4, and PBC 6), which leaves the item PBC 5 alone to load on factor 4.

Concluding, this analysis shows an underlying relationship of the entrepreneurial attraction, entrepreneurial intention and to some extent the perceived behavioural control of the students. Although it does show correlations of the items, it does not allow any conclusions on their causality, which is why a regression analysis is carried out in the next phase.

However, the sample size in the present study is considerably low with $N = 73$ and the literature recommends sample sizes to be adequate from a minimum of $N > 100$ up to $N > 1.000$ (Maccallum et al., 1999). For further analysis, the means are computed over those items that measure similar factors and are presented in the table below.

Table 13 - Descriptive statistics, core variables

	N	Mini- mum	Maxi- mum	Mean	Std. Devia- tion
Entrepreneurial Attitude (ATT 1 + ATT 2 + ATT 3 + ATT 4 - ATT 5)	73	1.00	7.00	4.35	1.73
Subjective Norms (SN 1 + SN 2 + SN 3)	73	2.67	7.00	5.60	1.06
Perceived Behavioural Control (PBC 1 + PBC 3 + PBC 4 + PBC 6)	73	1.00	6.00	3.74	1.15
Entrepreneurial Intention (EI 1 + EI 2 + EI 3 + EI 4 + EI 5 + EI 6)	73	1.00	7.00	3.32	1.67

4.2.3 Regression analysis

Based on the previous derived results, this final phase of the data analysis is dedicated to testing the five theory-based hypotheses. In the following, a single linear regression analysis is carried out for each hypothesis.

Hypothesis 1: *Tourism degree students in Finland with a stronger attitude towards entrepreneurship have higher entrepreneurial intentions than those being averse to entrepreneurship.*

A vigorous correlation of $R = 0.871$ is calculated for the relation between entrepreneurial attraction as a predictor on the dependent variable entrepreneurial intentions. R Square reveals that the attraction explains with almost 76% a large part of the variation in the entrepreneurial intention.

Furthermore, a probability level of $p = 0.000$ at $F(1,71) = 223.72$ shows that the regression model statistically significantly predicts the outcome of Entrepreneurial Intention.

Table 14 - Coefficients - ATT → EI

Model		Unstandardized		Standardized	t	Sig.	95.0% Confidence Interval	
		Coefficients		Coefficients			for B	
		B	Std. Error	Beta			Lower Bound	Upper Bound
1	(Constant)	-.336	.263		-1.277	.206	-.860	.188
	ATT	.841	.056	.871	14.957	.000	.729	.953

Dependent Variable: EI

Following, a student's entrepreneurial intention can reliably be explained with the formula $EI = -0.336 + 0.841 * ATT$. This formula shows a negative intention as long as the attraction towards entrepreneurship is non-existent or very low. However, as soon as the students evaluate their attraction even with a low value, a certain level of intention can be seen and every increase in the attitude will result in an increase of the entrepreneurial intentions.

Concluding, these findings *support* hypothesis 1: The stronger a student's attitude towards entrepreneurship is, the stronger is the entrepreneurial intention expressed.

Hypothesis 2: *The more positive the perceived opinion of society is towards entrepreneurship, the higher are the entrepreneurial intentions of tourism degree students in Finland.*

When plotting entrepreneurial intention against the perceived social norms, a correlation of $R = 0.359$ is found, which still indicates a moderate correlation of the two variables, however it is not as strong as aspired. The adjusted R Squared exhibits that about 12% of the variance in the entrepreneurial intention of the students can be accounted for their perceived social norms. Although the literature suggests for such a low value to not necessarily imply any difficulties especially in behavioural studies, the results are to be interpreted with caution. The significance level of $p = 0.002$ at $F(1,71) = 10.51$ indicates a moderate level of probability in finding the estimated values to be as extreme as the observed data.

Table 15 - Coefficients SN → EI

Model		Unstandardized		Standardized	t	Sig.	95.0% Confidence Interval	
		Coefficients		Coefficients			for B	
		B	Std. Error	Beta			Lower Bound	Upper Bound
1	(Constant)	.150	.995		.151	.881	-1.835	2.134
	SN	.566	.175	.359	3.242	.002	.218	.914

Dependent Variable: EI

Based on these findings, the formula to predict entrepreneurial intention as a function of the perceived social norms can be drafted as $EI = 0.150 + 0.566 * SN$. This leads to the conclusion, that every student has initially the intention to become an entrepreneur to a certain degree, even if nobody in their personal environment would approve their decision to start and run their own business. As we can conclude that a stronger perceived social recognition leads towards an increase in the entrepreneurial intention, hypothesis 2 may be *supported*: The stronger the perceived social norms of a student, the higher their intention in becoming an entrepreneur.

Hypothesis 3: *The higher the belief in a possible control over the own entrepreneurial behaviour is, the higher is the entrepreneurial intention of the tourism degree students in Finland.*

To test hypothesis 3, the perceived behavioural control of the students over their own entrepreneurial behaviour is charged with their intentions towards entrepreneurial actions. A strong correlation could be retrieved with $R = 0.720$ and the adjusted R Square indicates that the students' perceived behavioural control can explain 51% of their entrepreneurial intentions. The small gap between R Squared and the estimated R Squared ($\Delta = 0.007$) reveals just a minor difference between the observed and the estimates values. Furthermore, the PBC statistically significantly predicts the EI at $F(1,71) = 76.54$ and $p > 0.005$.

Table 16 - Coefficients PBC → EI

Model		Unstandardized		Standardized		95.0% Confidence Interval		
		Coefficients		Coefficients		for B		
		B	Std. Error	Beta	t	Sig.	Lower Bound	Upper Bound
1	(Constant)	-.580	.466		-1.243	.218	-1.510	.350
	PBC	1.042	.119	.720	8.749	.000	.805	1.280

Dependent Variable: EI

For predicting entrepreneurial intentions based on the perceived behavioural control over entrepreneurial actions, the equation $EI = -0.580 + 1.042 * PBC$ is withdrawn.

Without believing in the own control, ability, and knowledge to start a business, the students would show negative intention towards entrepreneurship regarding the formula. However, the higher the students rate their PBC, the stronger is their intention expressed towards an entrepreneurial career. Therefore, we understand hypothesis 3 as *supported*.

After carrying out three single linear regressions which all show a certain degree of being able to explain the variance in the same dependent variable, a multilinear regression is conducted. Thus, we strive to determine the causality in between

the sum of the three predictors ATT, SN and PBC on the entrepreneurial intentions. The multiple correlation coefficient of $R = 0.907$ shows a high quality of the prediction of the dependent variable EI. The adjusted R Squared reveals that the three predictors make up 81.5% of the EI's variance. As seen from above, none of the three variables alone shows a proportion on the EI's variance as high as in their combination.

The following coefficient table illustrates how much the EI varies depending on one independent variable, while all others are held constant.

Table 17 - Coefficients ATT, SN, PBC → EI

Model		Unstandardized		Standardized		95.0% Confidence Interval for B		
		B	Std. Error	Beta	t	Sig.	Lower Bound	Upper Bound
1	(Constant)	-1.251	.467		-2.678	.009	-2.182	-.319
	ATT	.661	.061	.685	10.782	.000	.539	.783
	SN	-.001	.088	-.001	-.012	.990	-.177	.174
	PBC	.455	.094	.314	4.825	.000	.267	.643

Dependent Variable: EI

Although the entrepreneurial attraction as well as the behavioural control have a positive correlation with the EI, the B(SN) reveals a decrease in the EI, when the SN rises. However, the value is very low at $B(SN) = -0.001$ it represents a decrease by 0.001 for each time the SN increases by 1, which is a major difference to the results of the single regression analysis. Furthermore, the level of reliability substantially exceeds the threshold of $p < 0.005$, which is why the subjective norms are to be excluded from further interpretations and the hypothesis 2 is *rejected* as the $p = 0.990$ indicates no evidence for its reliability.

To confirm the findings, a second multiple regression is carried out after removing the variable SN. The regression is run to predict the entrepreneurial intentions of the students from their attitude towards entrepreneurship and their perceived behavioural control.

Table 18 - Model summary ATT, PBC → EI

Model	R	R Square	Adjusted R Square
1	.907	.823	.818

Predictors: (Constant), ATT, PBC

Dependent Variable: EI

This regression model shows the highest of all calculated regression coefficients with $R = 0.907$ as well as the highest value of the adjusted R squared. 82.3% of the variance in the dependent variable EI can be accounted for by ATT and PBC. The independent variables statistically significantly ($p = 0.000$) predict the EI of the students as $F(2,70) = 162.776$.

Table 19 - Coefficients ATT, PBC \rightarrow EI

Model		Unstandardized Coefficients		Standardized Coefficients	t	Sig.	95.0% Confidence Interval for B	
		B	Std. Error	Beta			Lower Bound	Upper Bound
1	(Constant)	-1.255	.291		-4.307	.000	-1.836	-.674
	ATT	.661	.060	.685	10.970	.000	.541	.781
	PBC	.454	.090	.314	5.029	.000	.274	.635

Dependent Variable: EI

Although no support was found for the subjective norm explaining the entrepreneurial intention, the theory implied a causality of subjective norm on the attitude as well as the behavioural control, which to determine is subject to the following.

Hypothesis 4: *The subjective norm of a tourism degree student in Finland positively influences their personal entrepreneurial attitude.*

A low correlation could be found between the social perceptions of the students and their entrepreneurial attitude with $R = 0.342$. However, the adjusted R Squared reveals that the SN is just accountable for 10.5% of the students' attitudes' variances.

Table 20 - Coefficients SN \rightarrow ATT

Model		Unstandardized Coefficients		Standardized Coefficients	t	Sig.	95.0% Confidence Interval for B	
		B	Std. Error	Beta			Lower Bound	Upper Bound
1	(Constant)	1.220	1.039		1.175	.244	-.851	3.291
	SN	.559	.182	.342	3.066	.003	.195	.922

Dependent Variable: ATT

Beside the very weak effect size, the subjective norm does have a positive influence on the students' entrepreneurial attitude and can be expressed through the formula $ATT = 1.220 + 0.559 * SN$.

However, the perceived opinion on entrepreneurship by the students' personal environment can just be accounted for a small percentage of the students' own attitude towards entrepreneurship. Furthermore, the p value exceeds the 0.05

threshold and $F(1,71) = 9.402$ at $p=0.03$ is statistically not relevant, which is why this hypothesis is *rejected*.

Hypothesis 5: *The subjective norm of tourism degree students in Finland positively influences their perceived behavioural control.*

When plotting the perceived opinion on entrepreneurship by the students' personal environment against their perceived control over their own behaviour a moderate correlation of $R = 0.399$ is calculated. Though, the adjustment of R Squared just reveals that just a share of 14.8% in the PBC can be accounted for SN. A statistical significance is proven by $F(1,71) = 13.476$ at $p = 0.000$.

Table 21 - Coefficients SN → PBC

Model		Unstandardized Coefficients		Standardized Coefficients	t	Sig.	95.0% Confidence Interval for B	
		B	Std. Error				Lower Bound	Upper Bound
1	(Constant)	1.305	.676		1.932	.057	-.042	2.653
	SN	.435	.119	.399	3.671	.000	.199	.671

Dependent Variable: PBC

Derived from the coefficient table is the formula $PBC = 1.305 + 0.435 * SN$ and concluding based on these findings is the hypothesis 5 understood as *supported*.

5 DISCUSSION & CONCLUSION

In this final chapter the results of the previously carried out questionnaire are evaluated with regards to the reviewed literature.

Firstly, the results of the EIQ are interpreted and an overall conclusion of the findings is displayed before the possible implications are demonstrated.

Furthermore, limitations of the study are outlined, and this paper closes with an outlook for further research.

5.1.1 Evaluation of the research

This thesis strived to investigate on the efficacy of entrepreneurial education in tourism degree programs in Finland's HEIs. The used quantitative study is the entrepreneurial intentions questionnaire which in turn was developed based in the theory of planned behaviour.

Turning to the students' perception of entrepreneurship education it is concluded, that despite the literature suggests a differentiation, the respondents do not distinguish between education *for* and *about* entrepreneurship. Respective education is expected to encourage and support future entrepreneurial activities as well as prepare the students for corresponding tasks. Supplementary it raises awareness for new venture creation and any related processes as well as it imparts necessary knowledge and skills to become a successful entrepreneur.

Overall, the predictive power of the applied model is criticised in the literature. Intention is understood as the degree to which an individual is pulled toward their actual behaviour and scholars argue, the TPB is better applied in situations where the intention and following behaviour are closer related in a timely manner (Boissin et al., 2009). Furthermore, as stated earlier is the volitional control a prerequisite for applying the model, which is not absolutely guaranteed in entrepreneurial research. Individuals may have the free will, but due to other restrictions do not have access to other resources, such as sufficient financial means. Others may have the necessary resources but are obliged to carry out entrepreneurial activities for example as continuing a family business.

However, the validity and reliability of the questionnaire were tested earlier (Asghar et al., 2019; Liñán & Chen, 2006, 2009), these two requirements were addressed in the beginning of the evaluation process of this paper. The findings were overall satisfactory, and the responses to the survey were therefore suitable for statistical analysis. The empirical findings of chapter 4 are displayed in figure 6 below and discussed in the following.

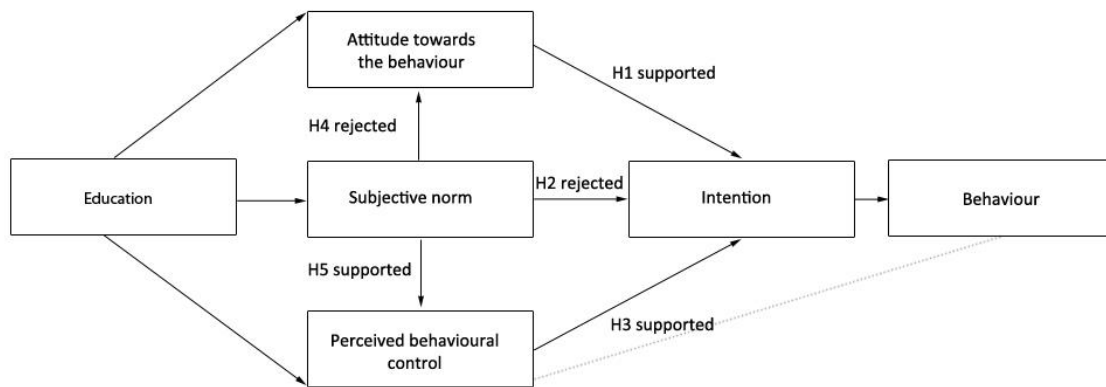


Figure 6 - Empirical findings

Hypothesis 1 was found supported, as the entrepreneurial attitude of the students has a significant impact on their entrepreneurial intentions. However, results also show that the respondents express a strong interest in a future employment compared to being a future entrepreneur. Considering all advantages and disadvantages this insight seems obvious in the present economic situation. It also confirms findings of ATT 3, in which the students indicated a strong interest towards starting an own business, provided that the opportunity and resources are available. However, results may indicate, that some of the students prefer a rather safe position in employment, the respondents are overall not averse of a career as entrepreneurs and even indicate a high attractiveness towards it.

Furthermore, the third hypothesis was found supported, as analyses showed, the higher the students rated their perceived behavioural control, the higher they rated their intention towards an entrepreneurial behaviour. The students showed a great confidence in their ability to start an own business and develop a business idea, even though keeping the firm sustainable and alive over time received a lower rating as well as the expected success. Deeper understanding can be derived from the students' ratings of their own entrepreneurial abilities and skills. Whereas problem solving appears to be the strongest expressed skill, it is along with opportunity recognition, creativity, leadership & communication, new product development and networking rated lower than the scale's median.

This demonstrates that the respondents rather carefully consider entrepreneurship as a future career path based in their actual knowledge and abilities.

More difficult results are derived when researching on the students' social norms. Respondents indicated a very positive approval of their closer personal environment when deciding to start an own business. However, the subjective opinion of friends, families, and colleagues towards entrepreneurship as a more valuable activity than traditional employment received weaker results. The students consider entrepreneurs in Finland as wide accepted, although their role does not appear to be highly valued in the economy.

Liñán & Chen (2009) already recognized SN as the weakness of the model and criticized the usage of aggregated scaling for this construct. Subjective norms can

neither exert their influence on entrepreneurial intention nor on the entrepreneurial attitudes of the students. Solely a weak causal impact on the perceived behavioural control could be computed without disregarding the requirements for statistically significant results.

Although, it appears that perceived social norms do not play a direct role in determining the entrepreneurial intentions, the results of this study were overall satisfactory. Findings support the presumption, that attitude and behavioral control directly influence the entrepreneurial intention in a positive progression. In conclusion, a strong support for the entrepreneurial intention model could be found.

5.1.2 Limitations of the study

As with the majority of studies, this paper is subject to numerous limitations which are to be discussed in the following.

The first major constraint is the limited adequacy of the research sample in its size and constellation, which hinders the generalizability of the withdrawn results on a not sufficiently enough known population.

To define the actual study population, we relied on the information provided by the determined institutions how many students are enrolled in the respective degree programs. Although no standardized research process exists among the respective institutions, many require an individually granted research permission to ensure data protection and compliance with ethical standards. However, not every HEI granted the permission for the present thesis, and we failed to receive answers from some other institutions. Therefore, data is missing on the actual size of the research population and just the number of students within the institutions where the questionnaire was distributed could be defined.

Out of the 13 relevant institutions, the survey was just distributed among six of them, reaching out to a total of approximately 1.000 students. The resulting 74 answers do not comply with the statistically required sample size, as outlined by Mossig (2012).

Equation 3 - Statistically required sample size

$$n \geq \frac{N}{1 + \frac{(N-1) * \varepsilon^2}{y^2 * P * Q}}$$

As P represents the mean of N in percent and Q = 1-P, the calculation for the population of N = 1.000 students, a presumed tolerable error value of $\varepsilon = 5\%$ at a confidence interval of 95% reveals a minimum of n = 278 to a significant sample size.

Furthermore, to allow the generalisation of the findings, the sample is required to represent the population as good as possible. The compliance is evaluated through certain key factors, that can be freely chosen by the researcher, though most commonly demographic information is used. For the present research, the

education level and the place of residence are the only known shared characteristics among the study population: All students are enrolled in a tourism related degree program in an institution of higher education in Finland.

A representative sample furthermore requires, that each member of the population has an equal and mutually exclusive chance to participate in the survey. This is what was strived for in the early course of this paper, as we expected to distribute the survey in paper form and with collaboration with the respective teachers have the students to fill out the questionnaire in class, to assure that every relevant student receives the survey under the same circumstances.

However, this thesis developed during the COVID-19 outbreak and all contact teaching in Finland's HEIs got suspended for the rest of the semester. Therefore, the surveys were distributed online as outlined earlier in this paper.

Further limitations concern the time and location, in which this study was carried out. The focus on one geographical location only does not allow any conclusions on the entrepreneurial intentions of tourism students in general. However, researching on higher education institutions in Finland, may limit the generalizability to the respective country only, it is questioned whether students from different personal backgrounds have different opinions on entrepreneurial matters. As our sample mostly consists of Finnish students, no reasonable comparison could be done based the students' countries of origin.

Additionally, the time constraints this paper is subject to, limit the power of the results' interpretation. The survey itself was carried it in a time frame of just four weeks, while the paper developed during one academic semester. Thus, the only possibility to carry out the research was a cross-sectional survey, that collects data at a specific point of time.

5.1.3 Implications and future outlook

The present study contributes to the domain of entrepreneurship as well as tourism education with some theoretical and practical contributions. Beside closing the earlier existing research gap between entrepreneurial and tourism education in the Finnish context, certain suggestions for the four main stakeholders of the tourism industry are derived and pointed out in the following.

First of all, educational institutions may use results from this study in order to refine and develop their existing degree programs. The derived insight on the students' perceptions on what entrepreneurship education should be able to teach may be implemented in the earlier illustrated teaching model framework of Fayolle & Gailly (2008). The questionnaire's results can be used to define the five dimensions on the educational level of the framework. Institutions of higher education and the respective faculties are therefore suggested to carefully review their existing degree programs and include courses or modules that foster entrepreneurial knowledge and raise the students' awareness and desire for a possible future career as entrepreneurs. The successful implementation of educational

modules *for* and *about* entrepreneurship is the foundation for the tourism industry's workforce to develop desired skills to meet the future needs of the labour market.

Another group impacted by the results is the public sector of an economy, especially law enforcements and policy makers. The transition between education towards work as well as from work back to education must be strongly encouraged and supported by public education. Further educational possibilities shall be provided with access for every individual to foster entrepreneurial education along the work life.

The tourism private sector with its (future) professionals are at the core of this paper and may therefore receive the greatest benefits of all. Insights from the present survey can be used by current students to gain insight on the change in requirements on the future workforce in the industry. This research may enhance the desire to develop greater knowledge in key skills of entrepreneurship, such as problem solving, creativity, leadership, or networking.

Beside the possible theoretical and practical implications of this survey, it is expected to provide useful insights on the research subject and open multiple future research pathways, of which the most important are displayed in the following-

As the present thesis follows Liñán's suggestion to use the EIQ in different geographical locations it can be an encouragement for further investigations. One possibility is to conduct another questionnaire in Finland's HEIs among students being enrolled in a different subject than tourism and hospitality. To withdraw more in-depth analysis on entrepreneurial intentions within the Finnish context, the possibilities range from several natural sciences to other business studies.

Another possibility is to research within a different geographical location among tourism degree students, to withdraw conclusions on the respective students either detached from the location or insights can result that either country fosters entrepreneurial behavior more than the other does. Again, the possibilities are wide ranged from carrying out a questionnaire among similar countries, such as the Nordic towards a more comparative study with among countries with great cultural differences.

As the present paper just collected information a specific point of time, another suggestion for future research is the performance of a longitudinal survey. Data collection over various points of time may allow to find insights on the changes the tourism industry as well as the education system in the respective countries may undergo. Especially due to the present global pandemic situation, the tourism industry was significantly changed and will face a different future. The closure of Finland's borders put the country's tourism on hold for several months. Interruption of air and sea travels as well as the closure of gastronomy facilities are a major trait to the industry and no conclusion can be drawn yet how it will affect the future.

Another pathway is to follow up on the already surveyed students to study possible new venture creation processes of those students with a strongly expressed entrepreneurial intention.

Yet another interesting avenue for future research offers the differentiation between students that experienced entrepreneurial education and those who did not. With an independent sample t-test the answers of the two groups can be compared and may allow withdrawing conclusions on the differences between their attitude towards entrepreneurship, subjective norms, and control over their actions.

However, in any future research, the study population must be defined precisely without any missing information. The sample size is to be enlarged to ensure statistically significant results that allow generalizability of the findings. Additionally, further qualitative studies may be conducted to enrich the quantitative survey with a more comprehensive insight on the respective degree structures, through semi structured expert interviews for instance with tourism professors or heads of the faculties.

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APPENDIX 1

A) Entrepreneurial Intentions Questionnaire

1. What degree are you currently studying in?

- Bachelor
- Master
- other:

2. What is the name of your degree program? (e.g. Tourism Management)

3. In which institution are you currently enrolled?

- Haaga-Helia University of Applied Sciences
- Jyväskylä University of Applied Sciences
- Kajaani University of Applied Sciences
- Karelia University of Applied Sciences
- LAB University of Applied Sciences
- Lapland University of Applied Sciences
- Laurea University of Applied Sciences
- Satakunta University of Applied Sciences
- SeAMK, Seinäjoki University of Applied Sciences
- University of Eastern Finland
- University of Lapland
- XAMK, South-Eastern University of Applied Sciences

4. When do you expect to graduate from this degree?

- This year (2020)
- Next year (2021)
- Later

5. Do you have any work experience? (have worked or are working currently)

- Yes
- No

6. In what position? (If several, in which were you employed the longest)

32. To what extent would you use the following strategies to expand your business? Indicate from (1) not likely at all to (7) extremely likely

	1	2	3	4	5	6	7
Exporting a significant share of production	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Regularly introduce new products / services for your customers / guests	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Regularly introduce new processes or systems of production	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Developing research and development projects	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Planning the different areas of the firm in detail	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Reaching cooperative agreements or partnerships with other firms	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Offering specialized trainings for employees	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Growing your business (personell, premises,...)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

33. Please indicate your age

34. To which gender do you identify the most?

- Female
- Male
- Other
- I'd rather not say

35. Place of birth

- Finland
- Other, please specify

36. What level of education have your parents achieved?

	Primary	secondary	vocational training	University / Applied Sciences	n/a
Father	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Mother	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

37. What are their present occupations?

	Employed	Self-Employed	Retired	other
Father	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Mother	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>