EXPLORATION OF ACTIVE CITIZENSHIP, ENTREPRENEURIAL BEHAVIOUR AND CALLING IN CAREER

A Thesis submitted by

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For the award of

Doctor of Philosophy

2017

Abstract

In light of the research gap in the entrepreneurship literature on the contextual variables and values impacting the entrepreneurial career decision-making, this thesis had been designed to combine - by means of rapprochement – threads of thought from three seemingly distinct disciplines: career development, entrepreneurial psychology and active citizenship.

In order to resolve the gap, the research presented 'borrows' from vocational psychology into the entrepreneurship enquiry in order to understand more about: 1) how entrepreneurship may help express different career orientations and personal goals and 2) the consequences of these orientations and goals for business behaviours and success. It also addresses the research into the contextual variables and values by introducing two concepts which are new to the domain: calling and active citizenship behaviour. Active citizenship can be regarded as a distal personal variable in the Social Cognitive Career Theory model and is comparable to the construct of social justice. This thesis is pioneer in its way of approaching and handling the construct of active citizenship behaviour in the SCCT model.

The research advances an integrative, theoretically-based conceptualization of flourishing as a perceived result or consequence of choosing the entrepreneurial path that is not only testable but also links the generated distal contextual variables such as calling and active citizenship behaviour constructs to rich conceptual accounts of self-efficacy, outcome expectations, interest and flourishing. It also extends the existing Social Cognitive Career Theory research and specifically its module on career decision-making by investigating, for the first time, the direct and indirect roles of calling and active citizenship behaviour.

The research method adopted a three-stage solution whereby conceptual models were developed from a simpler to a more sophisticated model, and were presented in three distinct Studies. Both the first and the second studies draw on archival databases (N1 = 197; N2 = 5677). In the third study, the proposed conceptual models were tested in a sequential design with a sample of graduate students (N = 336).

In Partial Least Square structural equation analyses focusing on predictive relationships between constructs, calling has been found to be a strong and significant predictor of entrepreneurial and career-decision self-efficacy, outcome expectation and furthermore, as demonstrated in the detailed analyses, it also predicts flourishing by the mediating means of outcome expectations. Active citizenship proved to be a significant and strong predictor of calling, outcome expectations and to a lesser extent, of vocational self-efficacy. It did predict

entrepreneurial self-efficacy via the mediating role of vocational self-efficacy, as demonstrated in the decomposed model analyses.

Taken together, the studies constituting the present research have provided new perspectives and a great deal of data on the role and relevance of active citizenship behaviour and calling as new constructs in the extended SCCT career decision-making model.

Certification of Thesis

This thesis is entirely the work of Zsuzsanna Erzsébet Horváth except where otherwise acknowledged. The work is original and has not previously been submitted for any other award, except where acknowledged.

Student and supervisor signatures of endorsement are held at USQ.

Ass. Prof. Peter McIlveen

Principal Supervisor

Ass. Prof. Gavin Beccaria

Associate Supervisor

Prof. Em. Erzsébet Nováky

Associate Supervisor

Acknowledgements

I dedicate this thesis for my late parents, Dr. Erzsébet Vadász and Dr. Győző Horváth, both medical doctors serving a lifetime and engaged educators at their Medical School. Peace with you my dear parents and thanks for all the inspiration, courage and support that you provided for me from the beginning of my doctoral journey! I only wish you were able to see the end product of my main preoccupation of many years!

My second dedication goes to the late Professor Buday-Sántha of Pécs University, who was an exemplary educator and my mentor in the initial stage of the doctoral program. His encouraging words resonate in my ears yet today.

I wish to extend my heartfelt thanks to my supervisor, Associate Professor Peter McIlveen, without whose help this thesis in its current form and content would not exist. He has been instrumental in the formulation of my thinking and methodological approach and set me on the unexpected and surprisingly fascinating track of career development. Oftentimes I felt I was treading on thin ice, but Peter with his genuine tact guided me back to the right track. I believe this time offered an enriching experience for both parties.

My gratitude to my colleague and friend Dr. Ahmed Al-Sabawy, who taught me most of the 'tricks' in statistical analyses when we shared the same research space during a short 2 months. Thanks my friend and former PhD student Dr. Sophia Imran for your insight and support within and outside the educational setting. Also thanks David Smith, my fellow PhD student, mentor and friend – has been a source of support, knowledge and inspiration, and someone who has always been interested in my academic development since commencing my studies at the University of Southern Queensland in 2013. His help was unconditional, unfailing and ubiquitous.

I acknowledge Professor Emerita Erzsébet Nováky and Associate Professor Gavin Beccaria, my associate supervisors who, over the course of my doctoral studies, have been points of contact and have inspired my passion for quantitative methodology. Their advice, which has been so graciously given, is greatly appreciated. I would also like to acknowledge the assistance of Eszter Kovács in formatting this thesis in line with USQ requirements.

There is a good number of people who helped me in various ways to achieve my goal: among them I wish to extend my special thanks for my fellow PhD students from USQ and Pécs University Doctoral School of Regional Economics.

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"The emergence of the entrepreneurial society may be a major turning point in history." (Drucker, 1996)

"The essence of the spirit of twenty-first century flexible capitalism is that the cultivation of self as enterprise is the calling to which individuals should devote themselves" (Kelly, 2013)

Chapter One
Introduction

1.1 Background to the Study

Owing to the impact of new technology and of globalisation of markets, the traditional model of career is fragmenting. This process represents a career quake: a shaking of the foundations of traditional structures, but with the opportunity to build new and more robust structures in its wake (Watts, 2001). Resulting from the career quake is the individual's responsibility for enacting their own career development as they encounter new work-related situations on a lifelong basis. Employment no longer presents security, which is indeed found in employability: accumulating skills and reputation that can be invested in new opportunities as they arise (Kanter, 1989). In this 'risk society' (Beck, 1992), individuals have to construct their own work identity, on an ongoing basis, as part of a reflexive process connecting personal and social change (Giddens, 1994).

1.2 Employability and Career Management

Transformations in various aspects of career management have resulted in people having to manage their own careers and to be involved in proactive career behaviours for objective and subjective career success (Hall, 2002). This trend has allowed for a better exposure of proactivity in vareer development, not so well tackled formerly (Hirschi, Freund, & Herrmann, n.d.).

Given the rise of assignments and jobless work, vocational psychology must now focus attention on employability rather than employment (Fugate, Kinicki, & Ashforth, 2004). When assignments replace jobs the change in the social reorganization of work produces a new psychological contract between organizations and its members. This is because employment differs from employability. The psychological contract of employment involves a long-term relationship; employability involves a short-term transaction. Employment in a traditional job depends upon mastering some uniform body of occupational knowledge with specialized skills. Employability depends on mastering, for recurrent use, the general skills of getting, keeping, and doing an assignment. Employability requires basic skills and higher order skills such as decision-making and problem-solving, and affective skills such as conscientiousness and honesty (Savickas, 2011). The postmodern idea of the 21st century postulates that the self does not exist *a priori*; but its construction has become a life project. The social constructionist paradigm for the self and career makes available new core constructs for the study and

management of 21st century work lives. Vocational psychology and career counselling's innovative responses to the important questions raised by people living in information societies will continue the discipline's tradition of helping individuals link their lives to the economic circumstances that surround them.

1.3 The Rise of the Entrepreneurial Society

In a definition provided by Schumpeter (1934), entrepreneurs are seen as individuals attempting to reform or revolutionize production by introducing a novel technical possibility for manufacturing a new product or item, or devising a new way of manufacturing an old one. Nevertheless, his endeavour requires skills and capacities that only a handful of people possess in any given community. As it ensues from Schumpeter's definition, the success of entrepreneurs depends upon the attitudes, interests and values of the individuals – and this, on top of the allowing organizational and institutional environment (Bird 1988).

The growing attention on the effects and importance of entrepreneurship is the result of current trends in various aspects of modern life: the convergence of globalization, technological innovations, knowledge-based economies and demographic trends. Entrepreneurship has become the driving force of economic development, structural change and job creation. Kirchoff (1989) in his seminal paper defined that "entrepreneurs are key drivers of economic and social progress". Rapidly growing enterprises or 'gazelles' as they are called, allow for productivity growth and employment and SME's (small and medium-sized enterprises) provide a large majority of all jobs in emerging economies). Fostering a favourable regulatory framework for individuals' entrepreneurial activities has become a priority for many economies globally, and governments strive to provide integrated responses embedded in modern socio-economic perspectives (WEF Entrepreneurship Report, 2014), as presented by the following international authors:

Rae and Woodier-Harris (2013) label the post-2008 environment as the 'New Era' where entrepreneurship will function as an engine of economic development. Thurik et al. (2013) in their paper depicting the future of dynamic capitalism refer shift from managed economy, "where economic performance is positively related to firm size, scale economies and routinized production and innovation to entrepreneurial economy, characterised by a convergence of institutions and policy approaches designed to facilitate the creation and commercialization of knowledge through entrepreneurial activity" (p.303). They suggest that "Policies ... should enable individuals to build and apply knowledge in new collectives, be they firms, networks, or alliances, making use of new information and communication technologies" (p.309). The

rise and globalisation of entrepreneurship is discussed in Sarasvathy and Venkataraman's (2011) paper entitled: Entrepreneurship as Method: Open Questions for an Entrepreneurial Future where the authors postulate a rise and a global dispersion of entrepreneurial thinking, attitude and behaviour.

Lately, the topic of well-being has been gaining presence in social. Policy-makers have started to investigate and providesolutions for factors with the potential of increasing well-being of the population— satisfaction with areas such as life in general and job in particular (Bosma 2014). Stiglitz, Sen and Fitoussi (2009) in their seminal work on the wealth of nations discuss how and why GDP cannot be further viewed as an appropriate mean of assessing wealth and suggest other means such as the Human Development Index. In this same paper they suggest that a novel approach would encompass considering the subjective well-being and this would involve individuals' capacity to be economically independent. In their view, entrepreneurial economies can empower individuals which will ultimately lead to increased level of subjective well-being.

Fast-paced changes in the world result in a wholly new environment of growing economic disparity and inequality with uncertain future. As a reaction to this volatile and unpredictable work environment, where individuals are compelled to mind their own careers and stable long-term employment is not granted for anyone, educational institutions and educators are urged to address the issues of employability.

When addressing the (socio) economic impact of entrepreneurial behaviour, there are some key elements, and entrepreneurial aspirations are one of these. Entrepreneurs offering new products and services, creating a number of workplaces, getting in the international streamline of trade contribute in many ways to the developmentof communities in which they are nested. Owing to their significance in society, entrpreneurs and their beneficial activities are actively promoted by many governments conscientious of the welfare of society. Entrepreneurship seems to be the solution to remediate the growing unemployment rate, which is especially nefarious among the youth (OECD, 2015).

Governments' entrepreneurship policy needs to tackle both the present circumstances, status, challenges, achievements as well as the future prospect of entrepreneurship. Policy planning should also take into consideration the shifting value system of the young generations, specifically in the domain of vocation and career. As in the current global context the promotion of the entrepreneurial career seems to be the call of the day, it is of utmost importance, even inevitable that policy-makers base their decisions on research issuing from the research

community on the understanding of entrepreneurial processes including its psychology (Horváth, 2015).

Among the main benefits of entrepreneurship are employment creation, productivity and economic growth, and its capacity to offer innovative solutions to social and environmental problems. It can be considered as a satisfying career choice, one that respondes to many of the modern challenges: increased uncertainty, responsibility, time-pressure and insecurity (Amoros & Bosma, 2014). Despite the financial, managerial, and personal challenges associated with entrepreneurial careers—often resulting in high failure rates (BarNir, Watson, & Hutchins, 2011)—as a career choice, "entrepreneurship offers the opportunity for personal growth, independence, flexibility, and the opportunity to generate and reap profits and to achieve recognition". Being entrepreneurial, creative and adaptive are qualities that are of general value in today's labour markets, especially in jobs that favour initiative and leave room for innovation.

1.3.1 Motivation for the study.

As Chell (2008) asserts, entrepreneurial careers from a lifetime perspective have not yet been satisfactorily investigated. A deeper understanding of how such different career patterns develop is lacking. Entrepreneurial psychology attempting to explain facets of the entrepreneurial character that predisposes individuals for the entrepreneurial career and the entrepreneurial process itself fail to identify the numerous aspects that propel individuals to the career. This allows research to 'borrow' from vocational psychology to enable insight into: 1) how different career orientations and personal goals are achieved by entrepreneurship and 2) the repercussions of the same orientations and goals for business activities and subsequent success (Chell, 2008).

International thinkers are asking if the real drivers of success in work have moved beyond technical skills. Globally competitive knowledge-intensive firms' recipe for success is the employment of skilled workers comfortable at an international scale entailing different organisational and disciplinary cultures.

Universities, in their third role, are held responsible by society-at-large in the education of generations of active citizens (Osler & Starkey, 2002). Active citizens are engaged members of society perceived to be the pillars of democratic institutions (Print, 2007). Their contribution to societal well-being is by their participation in the democratic decision-making processes, including providing feedback to policy-makers. The absence, or the non-participation of citizens leads to a political apathy in any established democracy (Lange et al., 2013). It is a particularly important role of education leadership to transfer positive examples of active

citizenship behaviour to youth before they enter the job market, as active citizenship is seen today as a global employability skill (Lange et al., 2013)

In societies with a defective practice of democratic participation, such as Central and Eastern Europe, active citizenship education is preeminently important (Lane & Johnstone, 2012; Inman & Schuetze, 2010). When coupled with entrepreneurship education, active citizenship education can prove to be a powerful tool in engaging students, advancing proactive and autonomous behaviour, future orientation and abandon passivity. These types of behaviour are lackig in societies with democratic deficit (Koiranen 2008; Oser & Veugelers 2008). "Proactivity involves taking the initiative to address problems in one's service domain and a commitment to excellence in one's domain of expertise." (Trani & Holsworth, 2010, p.16). Thus, my motivations for conducting this research project are to explore the factors that motivate individuals toward entrepreneurial careers as a vehicle of active citizenship.

It is expected of entrepreneurs, considered as role models in their respective communities, that they will be involved in the day-to-day activity of that community. From this involvement, it is just one further step to fully embrace the function of an active citizen of society, to hold and maintain democratic values, to be politically active in representative democratic institutions, and to favour social change (Hoskins & Mascherini, 2009, p.473). This research project endeavours to shed a light on the interconnectedness of active citizenship and entrepreneurial activity from the perspective of vocational psychology.

Regarding the intrinsic development of entrepreneurship as a field of enquiry, it has been formed by either *multidisciplinary* (the "melding" of concepts from different discipline bases) or *interdisciplinary* ("the discrete adoption of knowledge and methods from recognizable base disciplines") approaches. It will be for the future researchers to adopt a transdisciplinary approach (Chell, 2000), that is, to assimilate knowledge captured from diverse sources—not simply disciplinary—for understanding "reality" by the constitution of new knowledge and frameworks. The ways young enterprises are established can be modelled with the understanding that this activity is carried out in a much wider interactive framework than can be accounted for by the actions of sovereign *homini economici*. Complex individuals, nested in a tight network of social relationships, are the actors of the entrepreneurial activity, right from the inception of the idea. Therefore, it is society that offers the context for the evolution of economic processes.

Regardless of the angle of enquiry, entrepreneurship requires to be considered as a socially embedded phenomenon, by adopting the 'new economic sociology' thinking (Swedberg, 1997; Bögenhold, Fink, & Kraus, 2014). This makes entrepreneurship an inter-discipline "that

operates between and among economic, sociological, and psychological aspects, meaning that it is a complex, heterogeneous, multifaceted field of research" (Gartner et al., 2006; Grichnik, 2006; Bögenhold et al., 2014). Business action is as social activity and it is interposed between sociological and economic perspectives, with the economic agent as a social being in its center (Bögenhold et al., 2014).

Today, the solution of economic policy issues is largely facilitated by sociological core competencies that are manifest in societies. Career research asks questions relating to the motivation of individuals in doing what they do and their use of resources and strategy components to capitalise on life opportunities (Bögenhold, 2003).

While the generic practice lies in investigating company start-ups from the angle of events, this largely restricts the understanding of 'cultural and historical perceptive filters' facilitating the differentiation of secular trends from short-term cycles. It would be more conducive to the understanding of the interplay between causes and effects to observe and analyse events and developments within their corresponding conditional contexts. This means that the entrepreneurship phenomenon can fully be understood by the systematic research and exploration of complementary economic activity nested in social activity. Today, the discourse of enquiry of the field is permeated by a functionalist paradigm, creating an impediment to other perspectives (Carter et al., 2003). The future of the field will be shaped by the broadening of perspectives allowing for "debate, friction, creativity and ultimately new theories and understandings" (Grant & Perren, 2002).

It has been recently acknowledged by international authors that modern and especially future management skills and therefore business education at large should embrace sustainability principles, both economic and social. In particular, this entails the training for the "commitment to using specialized knowledge for the public good, and a renunciation of the goal of profit maximization, in return for professional autonomy and monopoly power" (Robinson, Smith, Zsolnai, Junghagen, & Tencati, 2012; p.123). Key skills of future managers are the capacity to change, to have an open mindset, to be able to learn from others and to nurture an entrepreneurial spirit. An entirely new profile of the future managers engaged in *progressive entrepreneurship* has been developed who, in addition to cooperating with social and political actors are advocates as well as producers of sustainable values for their whole business ecosystem (WEF Entrepreneurship Report 2014).

1.4 Unresolved Issues in the Entrepreneurial Process Literature

Various authors have stipulated that the widely-used models of entrepreneurial intention do not fully explain societal variables, perception and miscellaneous factors such as entrepreneurial culture and do not explore the additional attributes that distinguish entrepreneurs from non-entrepreneurs (Fayolle, Liñán & Moriano 2014; Liñán, Santos & Fernández 2011; Fayolle & Liñán 2014; Carsrud & Brännback 2011). Fayolle and Liñán (2014) highlight research lines that would serve to expand and consolidate the usefulness and applicability of entrepreneurial intention models and point to the intention–action process in particular.

There are a number of relevant gaps in knowledge concerning the role that values and motivation play in entrepreneurship. In particular, it is stipulated that the articulation of the values and motivations in the entrepreneurial process and the expansion of extant intention models could be very promising (Liñán et al., 2011; Carsrud & Brännback 2011).

Entrepreneurship researches have been arguing that the extant models do not fully explain the entrepreneurial process and new sets of variables, such as contextual variables, temporal evolution of beliefs, perceptions and intentions should be included in a more dynamic model.

1.5 Study Objectives

The ultimate objective of the study is to combine - by means of rapprochement – threads of thought from three seemingly distinct disciplines: career development, entrepreneurial psychology and active citizenship. Although the approach is novel the idea of teaching citizenship in the same programme with entrepreneurship is not new. In the United Kingdom, career education began to be incorporated into the school curriculum as early as in the 1970's (Schools Council, 1972), and with the advent of a National Curriculum in England and Wales in the early 1990s, careers education and guidance was defined as one of five "cross-curricular themes": the others were health education, economic and industrial understanding, environmental education, and citizenship (Watts, 2001). The creators of the curriculum realised the need for an encompassing career education enabling students with employability skills. The thesis follows this path by demonstrating that the education for active citizenship and entrepreneurship can be and must be complementary to each other.

The intention of individuals to start a business or using a more recent term: 'start-up' has been in the focus of attention of entrepreneurship research for some decades (Davidsson, 2003). Recently, this focus seems to have shifted from the macro- and meso-level factors of the entrepreneurial ecosystems to the person variables such as cognition and emotion (Rauch & Frese, 2007). In the effort of investigating the simultaneous predictors of entrepreneurial

intention (EI), researchers have omitted boundary conditions for competing theories. Recent voices in the field (Carsrud et al. 2009; Shook et al. 2010) draw attention on the study of potential moderating effects of contextual factors, facilitating the understanding of direct effects. At present, the way how the interplay of beliefs, attitudes, and perceptions impact individuals in their intentions toward starting a business is an area which is less researched and therefore the amount of information is not significant (Schlaegel & Koenig, 2013).

Concomitantly, from within the vocational psychology literature, there has been an urge towards further exploration of the predictors of career choices, and/or vocational calling, encouraging individuals to start out on a specific career path. The study attempts to respond to the urge to explore contextual variables of the entrepreneurial process and in particular, the entrepreneurial intention. A new model, taken from the vocational psychology literature, will be deployed to refine and deepen the awareness of the entrepreneurial intention and its components. This thesis belongs to the group of cross-cultural studies that intend to explore the predictive utility of the Social Cognitive Career Theory (SCCT) (Brown et al., 2008; Lent, 2013; Lent & Brown, 2006, 2013; Lent, Brown, & Hackett, 1994, 2000; Lent et al., 2008) for explaining entrepreneurial interest.

1.6 SCCT Model of Entrepreneurial Career Decision-making

The thesis' objective is to contribute to the extant entrepreneurship literature by testing a model of entrepreneurial intention (EI), which special emphasis on contextual variables of individuals resulting in their self-efficacy beliefs to start or to continue to run an enterprise. It will attempt to provide a theoretical integration to explain entrepreneurial behaviour by introducing the Social Cognitive Career Theory (SCCT) (Brown et al., 2008; Lent, 2013; Lent & Brown, 2006, 2013; Lent, Brown, & Hackett, 1994, 2000; Lent et al., 2008) widely used in the vocational psychology research but not known in the entrepreneurship literature. The SCCT career decision making model is depicted in Figure 1.1.

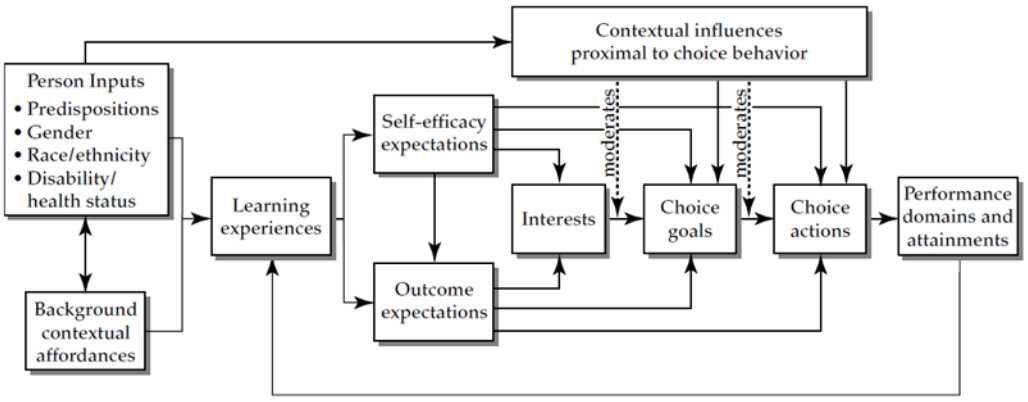

Figure 1.1. Career decision-making module of the SCCT. Adopted from Lent, R. W. & Brown, S. D. (2006). On conceptualizing and assessing social cognitive constructs in career research: A measurement guide. Journal of Career Assessment, 14(1), 12–35. Sage Publications.

Both the research topic and the methodologies applied within offer novel ways of understanding entrepreneurial behaviour. The fundamental motivation for writing this paper was to bridge the surprising gap in contemporary literature of fully understanding not only entrepreneurial intentions but also career orientations preceding the adoption of the entrepreneurial career path. In an equally pioneer way, the paper suggests an alternative model to grasp the central tenet of SCCT applied to entrepreneurial behaviour: predictive relationships between entrepreneurial self-efficacy, outcome expectations and calling resulting in the intention to start an enterprise.

The following words of caution by Bandura had a great impact on the approach, vision and methods applied in the thesis as I tried to follow them in every respect: “Full evaluation of the social utility of psychological theories should also extend beyond comparative predictiveness to the principles they provide for developing human capabilities for effecting individual and social change. This is the weak part in our scientific enterprise” (Bandura, 2012, p. 40).

1.7 Anticipated Contributions of the Present Research

The research is expected to bring major contributions to policy, theory and practice by delivering the following outputs.

For Theory:

- the present research is the first to test the Social Cognitive Career Theory’s utility as a research framework applied to career choice in a domain of enquiry in which it has not yet been applied (i.e., entrepreneurship research),

- the research advances an integrative, theoretically-based conceptualization of flourishing as a perceived result or consequence of choosing the entrepreneurial path that is not only testable but also links the generated distal contextual variable such as calling and active citizenship behaviour constructs to rich conceptual accounts of self-efficacy, outcome expectations, interest and flourishing,
- the research extends the existing SCCT research and specifically its module on career decision-making by investigating, for the first time, the direct and indirect roles of calling and active citizenship behaviour,
- the research provides timely meta-analytic data on the construct of calling as a new construct in the extended SCCT model,
- the research is the first to conceptually and empirically decompose the total effect of calling and active citizenship on flourishing in the entrepreneurial career path into specific direct and indirect relationships.

For Practice:

- the research is the first to highlight and detail factors affecting career decisions of adapting the entrepreneurial path that can be ultimately turned into curriculum changes,
- as a result of the implementation of curriculum changes, youth can be attracted to the entrepreneurial career path in greater number, thus resolving unemployment issues.

For Policy:

- the research finding highlight how the attractiveness of the entrepreneurial career can be enhanced by education and training solutions,
    - the research also highlights what the latent barriers are to this choice.

1.8 Structure of the Thesis

This thesis will comprise of 7 chapters to achieve the study objectives outlined above.

Chapter 1 overviews the background, motivations, problems and objectives and the significance of the study. It also offers an insight to the personal journey of the author leading to the endeavour of PhD studies and finally to the writing of the thesis.

Chapter 2 will focus on the presentation and analysis of literature related to the study. The formulation of the research questions, the solutions to respond to these questions and ultimately, the development of the model have all been based on a deep understanding on this assembly of relevant literature elements.

Chapter 3 is a description of the rationale of the particular research methods adopted when addressing the research questions, whereas Chapter 4 will describe the research methods in detail.

Chapter 5 and 6 will present and discuss the 3 studies undertaken to address the research questions.

Chapter 7 will offer a general discussion drawing on the 3 studies, highlighting the individual characteristics of each of the studies' findings. It will also comprise an overview of the achievement of the study objectives, contributions, recommendations, limitations and suggestions for future research.

Chapter Two
Literature Review

2.1 Employability in the 21st Century

2.1.1 Background.

Fast-paced changes in the world result in a wholly new environment of growing economic disparity and inequality with uncertain future. As a reaction to this volatile and unpredictable work environment, where individuals are compelled to mind their own careers and stable long-term employment is not granted for anyone, vocational psychology, educational institutions and educators are urged to address the issues of employability.

For young adults in the 21st century, entering the world of work, it is a prerogative to be work-ready, employable and to be able to sustain their employability (Marock, 2008; Pool & Sewell, 2007). Their self-directedness or personal agency is driven by their employability inasmuch as they are capable of retaining or securing a job or employment. The set of personal career-related attributes deployed in the effort are exactly the qualities that employers and researchers invariably hold as alternatives to job security in an insecure and unstable work environment (Bezuidenhout, 2011; Fugate, Kinicki & Ashforth, 2004; Rothwell, Jewell & Hardie, 2009; Schreuder & Coetzee, 2011).

This section provides a background setting comprising of elements impacting on the career decision-making landscape. In the changing world of working, many, formerly stable and given conditions and underlying structures came to be either redundant, restructured or otherwise altered which young people have to factor in when making career-related choices and decisions. The section will outline and briefly touch upon the socio-economic drivers that will necessitate the adaptation of new work skills. An additional source of uncertainty is that today, one may not be entirely sure about the nature and characteristics of future jobs as they may not be even invented (Friedman, 2013). In addition to the drivers of work skills, the work value system of the young generations will be addressed as their attitude and approach to working will also impact their career choices.

2.1.2 Future work skills for 2020.

According to the Institute for the Future of the University of Phoenix Research Institute (2011), the future work skills will be dramatically reshaped by current and future trends affecting both the human life and the world of work.

These drivers will be (derived from the description of a phenomenon called the 2nd IT revolution by Pitroda (2014, pp. 30-40), which is predicted to entail the democratisation of information, and will result in sweeping transformation in some areas of the organisation of work.

- Extreme longevity – Increasing global lifespans modify careers and learning;
- Computational world – the world is becoming a programmable system as a consequence of IT developments;
- Superstructed organisations –new forms of production and value creation are put into place by novel social technologies;
- Rise of smart machines and systems – end of repetitive tasks for humans and the dominance of workplace robotics;
- New media technology – new media literacies are created to respond to novel communication challenges;
- Globally-connected world – organisations need to be globally interconnected, and are driven by diversity and adaptability;
- The 'big data' phenomenon (G20 Yes, 2011, p.17) – the ability to collect, store and analyse huge amounts of digital information–enables technology-savvy companies to create new products and services, enhance existing ones, and invent entirely new business models.

2.1.3. Generation Y work values.

Generation Y (Gen Y) is the largest generation that will be shortly entering the workforce. Gen Y is distinguished from anterior generations pertaining to work-related, recruitment and retention characteristics (Luscombe, Lewis & Biggs, 2013). The attitude of Gen Y members regarding job flexibility is peculiar: instead of committing to a long-term job, they are looking for short-term employment where they can capitalise on their networks and focus on the enjoyment and creative side of the job (Martin, 2005). In their careers, they are risk takers, not hesitating to swiftly move from one employment to the other, much faster than any antecedent generation would do. This shift, and the devotion of much time to their private lives and the maintenance of personal relationships is rendered possible by sustained parental support. For the members of this generation work-life balance has become an important value (Crumpacker & Crumpacker, 2007). Concomitantly with the endeavour to maintain a satisfying private lifestyle, Gen Y members remain career focused and on the lookout for meaningful work-related roles (Martin, 2005). An ancillary feature of the generation is their comfortableness with

technology that in turn will be shaping workplace interactions, favouring instant messaging, text messages, and e-mails over face-to-face conversations (Crumpacker & Crumpacker, 2007; Glass, 2007).

2.1.4 Overview of the traditional career perspective.

Traditional career perspectives developed in the 1950's and 1960's tend to perceive career as an essentially linear, invariant, seamless and flow, in which the school-leaver after some casual experimentation chooses a career path and then consolidates her achievements. In this perspective, stability and continuity are essential characteristics and as a consequence, changing an already established career path is perceived to indicate poor career decision-making (Archer & Davison, 2008; Fugate et al., 2004; Teijeiro, Rungo, & Freire, 2013). Traditional theories of career are based on the premise of a relational psychological contract (Rousseau, 1997) between employees and employers, where loyalty and continued commitment to the firm are provided in exchange for loyalty (Teijeiro et al., 2013).

Career success could be equated with organizational advancement and its rewards were higher salary, increased status and greater responsibility. The traditional perspective holds the organization responsible for managing employees' careers. The organization offers formal training, coordinates work assignments, and plans career progression for the employees. In consequence of this nurturing function, employees are passive and detached from their own career development, having to rely on the company for the representation of their interests when it comes to career decisions (Potgieter & Coetzee, 2013; Teijeiro et al., 2013).

Recent changes in the socio-demographic and economic landscape however, have significantly altered the conception of career. Increasing global exposure and resulting competition, deregulation and tariff reductions have all impacted upon the nature of the work by creating a more turbulent, aggressive and unpredictable market. Corollary to this development, workers formerly seen as immune from the negative effects of downsizing have experience the highest job loss rates as a result of organizational restructuring. Organizations are also choosing to 'outsource' a range of services that were previously the responsibility of in-house staff, resulting in a proliferation of contract employment, with these workers often re-marketing their skills to their previous employers on a consultancy basis.

Other fundamental changes in careers are due to people's altered perception of work-life balance resulting in novel ways of work models such as part-time work, distance work and home-based work. Demographic and social changes brought forth an increased participation of women in the workforce. Mature-age workers now afford the opportunity to pursue professional

careers, which may have been inaccessible during their early adulthood. Adults undertake career change at midlife because their initial career choices were limited by the scarcity or the non-availability of educational or training offerings, or, the inadequate access of information to these sources of further education or vocational training. Research also indicates that motivation to develop new learning and skills is a significant predictor of career change in employed adults (Fugate et al., 2004; Teijeiro et al., 2013)

The increased demand placed on the workforce and competition for limited resources across the globe restricts the potential that work has in fulfilling the need for interpersonal connections, which are such an integral component of people's lives. The relational *psychological career contract* between employees and employers has been significantly eroded and replaced with one that is essentially *transaction-based* (Rousseau, 1997). Under this new contract, preconized by some as the 'one-day employment contract' emphasis is placed on the short-term benefits for the economic gain of both parties. Beyond the obvious benefits of this type of transactional contract there are disadvantages undermining the work relationship on both sides such as increased job insecurity, heightened cynicism and reduced organizational commitment. Security nowadays has ceased to implicate *employment* but it rather refers to *employability*: in other words, it has become more important to benefit from new opportunities as they arise when one is in the possession of skills and reputation (Kanter, 1989). In this 'risk society' (Beck, 1992), individuals have to construct their own work identity, on an ongoing basis, "as part of a reflexive process connecting personal and social change" (Lange et al., 2013).

Employment differs from employability (Fugate et al., 2004). The psychological contract of employment involves a long-term relationship; employability involves a short-term transaction. Employment in a traditional job depends upon mastering some uniform body of occupational knowledge with specialized skills. Employability depends on mastering, for recurrent use, the general skills of getting, keeping, and doing an assignment. Employability requires basic skills such as communication and mathematic skills, higher order skills such as decision-making and problem-solving, and affective skills such as conscientiousness and honesty. In a flexible firm, employability depends on the ability to quickly apply these general skills to gain the particular occupational skills needed to perform diverse tasks (Savickas, 2011). A good temporary assignment is one that adds to the worker's skills. The shift from employment in jobs to employability for assignments has implications for how practitioners and researchers conceptualize a career. Today, the big question that society asks of vocational psychology is

"How might individuals cope with the re-organization of work and employment in multicultural information societies?" (Savickas, 2011).

2.1.5 Foundations of employability.

Employability is conceptualized as a "form of work specific active adaptability that enables workers to identify and realize career opportunities. As such, employability facilitates the movement between jobs, both within and between organizations" (Fugate et al., 2004). The construct focuses largely on person-centred factors because individuals have virtually no input into employers' hiring criteria, such as years of experience and job specific skills (external factors).

Fugate and Kinicki (2008) define dispositional employability as "a constellation of individual differences that predispose employees to (pro) actively adapt to their work and career environments. Employability facilitates the identification and realization of job and career opportunities both within and between organizations. Conceived this way, employability is a disposition that captures individual characteristics that foster adaptive behaviours and positive employment outcomes" (p.206).

Many authors view entrepreneurship, especially in the wake of the seminal paper by Watson (2013) more than a specific set of skills; it has become a generalized method of methodological perspective or a form of reasoning and logic the exercise of which -they argue - would be as useful a skill as arithmetic, reading, writing and basic scientific reasoning. It has grown to be an equally important skill as civic engagement, civil discourse and the critical development of moral and ethical judgment. Entrepreneurship, therefore ceases to be a mere career option or in case of employer downsizing or economic downturns; it has found a new role as a widespread driver of social change in its own right (Weber, Heinze, & DeSoucey, 2008).

2.1.6 Employability attributes.

Employability influences the adaptation requirements delineated by Ashford and Taylor (1990): opportunity identification, individual attributes and alternatives. Identification of opportunities pertains to employable individuals obtaining accessible and practical information on the setting where they want to be employed and also on how they can make use of their qualifications (feedback) (Fugate et al., 2004), because that is how they can act corresponding to their salient career identities (Ashforth & Fugate, 2001; Berzonsky, 1990, 1992). The second requirement postulates that employable people possess individual attributes that they can deploy in effective adaptation—career identity, personal adaptability, and social and human capital — these

attributes relate to individual characteristics defined by Ashford and Taylor. Career identities are cognitively associated to these elements and their impact is reinforced by energy and direction. As for the third requirement, employability intensifies the option to personal as well as job changes. Salient career identity confers employable people the possibility to persevere in exploring executing personal and job-related changes (personal adaptability) (cf. Ashforth & Fugate, 2001).

Fugate, Kinicki and Ashfort (2004) depict the dimensions of employability as concentric circles integrating a synergistic combination of salient components such as career identity, personal adaptability, and social and human capital. They postulate that employability encompasses each of the three facets discussed above and that this combination of attributes capacitates individuals in their identification and realization of career opportunities (Fugate et al., 2004). Nevertheless, attributes will have varying degrees of impact on individuals, as a result of the salient factors of any given situation.

As a consequence, "employability is a psychosocial construct that represents the career-related attributes that promote adaptive cognition, behaviour and affect, and increase one's suitability for appropriate and sustained employment opportunities" (Fugate et al., 2004; Potgieter & Coetzee, 2013). "It embodies individual characteristics that foster adaptive cognition, behaviour, and affect, and enhance the individual-work interface. This person-centred emphasis coincides with the major shift in responsibility for career management and development from employers to employees" (e.g., Hall & Mirvis, 1995). It is the employees' duty and responsibility to acquire the knowledge, skills, abilities, and other characteristics (KSAOs) which are in demand by current and prospective employers. Based on the attributes that constitute the construct of employability, individuals are predisposed to change and advance their situation (pro) actively, and to be flexible in a sustained way —and to do this is a constant response and reaction to the changeable environment (Chan, 2000; Fugate et al., 2004).

Further facets of employability comprise of pro-active career behaviours and capacities assisting people in successfully applying for and fulfilling a job, or creating it. These actions demand occupation-related and career meta-competencies (Potgieter & Coetzee, 2013). In the wake of globalization and the subsequent adjustments in the world of working, individuals need to have a set of skills that are globally known or accepted. These came to be known as global employability skills and they refer to individual attributes and personality preferences – as they are the accompanying attributes of the proactive management of their career development (Potgieter & Coetzee, 2013). The presence of these skills is especially important in the case of

graduates as they can associate their global employability (acquiring a job or any other form of ((self)) employment) with a sense of self-directedness or personal agency. This is also important on their way of identity creation in the emerging adulthood (Jensen & Arnett, 2012).

Youth aspiring to take up global careers must verify that they possess, past the technical and/or discipline-specific knowledge interpersonal and civic competencies, called global citizenship competencies (Archer & Davison, 2008; Riebe & Jackson, 2014; Walmsley, Thomas, & Jameson, 2006; Brown, McGrath, & Morgan, 2009). These comprise intellectual and social competencies associated with citizenship or civic-mindedness enabling active participation in a democratic society (Osler & Starkey, 2004). Value creation, management competencies, and global corporate citizenship can contribute significantly to global leadership and, thus, albeit indirectly, to global problem-solving (Pies, Beckmann, & Hielscher, 2010; Jensen & Arnett, 2012) .

The institutional embeddedness of these competencies varies across different cultures and one of its manifestations is in the United States, where the *enGauge 21st-century Skills report* (NCREL, 2001) defined student competence in personal, social and civic responsibility as a basic skill (Print, 2007). *Partnership for 21st Century Skills* (2003) highlighted civic competence and civic literacy in its list of essential 21st-century subjects and topics. The European Union's Turing Project sets out a framework of general competencies designed to shape educational reform. Interpersonal competencies, which play a key role in civic competence as such (González & Wagenaar, 2003), are the most highly rated by academics, employers and university graduates. In addition, in the *Recommendation of Key Competencies for Lifelong Learning* (Official Journal of the European Union, 2006), the European Parliament and the Council of Europe define eight key competencies, one of which is social and civic competence (Lange et al., 2013).

2.1.7 Emerging career models.

Recently, there have been a number of emerging perspectives attempting to grasp the altering career development process in conjunction with the changing work environment and relations, and linked them to the new psychological contract. These nascent perspectives or career types can be clustered together as they share a number of common traits and fundamental assumptions such as increased self-directedness, flexibility, and the aim of subjective career success (Herrmann, Hirschi, & Baruch, 2015). Oftentimes, these careers are portrayed as the career decision results by autonomous, unfettered, satisfied and self-actualised individuals exercising volition in their decision, however, they have arisen largely in response to organizational and

lifestyle and life-work balance expectation changes. With the significant changes recently occurring in the world of work and the growing rate of individuals compelled to engage in autonomous economic activities as self-employed, it is worth while taking a closer look at the individual career models. These models will exert great impact on the individual's career decision-making preparations. Before the discussion of the forms and ensuing characteristics of the career models, the phenomenon of self-employment is worth presenting. Especially in emerging economies, such as the case of Hungary, self-employment would be the solution to unemployment which is exceptionally high among youth: 20.9 % among those aged 15-24 years was (still below the EU average of 21.7 percent) (MFA, 2015). The section below will look at the macro-economic implications of self-employment as an emerging career option.

2.1.8 Self-employment.

Individuals' strive to maintain their socio-economic status and viability in the altering world of work, and 'risk society', has induced a rise in the ratio of self-employment in the total employment. Self-employment can be perceived as a type of 'survival' career shift of people made redundant in the process of organizational restructuring, a career option of young people or graduates at the beginning of their professional life, or people returning to work following a shorter or longer break caused by life changes. In Eastern Europe, deficiencies in systemic change and transformation resulted in the rise of 1 000 000 self-employed 'necessity entrepreneurs' (Laki, 2010; Futó, 2011) at the beginning of the 1990's. These new forms of self-employment came into being as a reaction to the deep crisis accompanying the transformation and was serving the immediate consumption needs of the entrepreneur and his/her family. Wide social groups have escaped from unemployment into self-employment, and typically, the small firms only offered employment to the owner, family members on full-, or part-time basis (Futó, 2011). Most small firms were unable to separate the budget of the household from that of the business and lacked any ambition to grow.

Self-employment is a type of career self-management requiring a wider set of knowledge, skills, abilities, and other characteristics (KSAOs) (Brown & Lent, 2004; Fugate & Kinicki, 2008). The propensity of being self-employed can change across physical boundaries and time space and is affected by variables such as variations in the socio-demographic characteristics of the population (age, gender, and education), economic environment and changing attitudes toward entrepreneurship.

2.1.8.1 Self-employment and flourishing.

There is a growing body of literature focusing on the connection between self-employment and subjective well-being, or flourishing (Huppert & So, 2013; Arthur, Khapova, & Wilderom, 2005; Binder, 2013; Diener & Chan, 2011; Doenges, 2011) . These authors see the locus of control, individual agency and proactive attitude as prerequisites of the state of flourishing. They state that an individual's subjective well-being depends on a complex vector of factors, ranging from individual determinants (e.g., self-esteem, optimism or other personality traits) to socio-demographic (such as gender, age, education, or marital status), economic (such as income, status, or unemployment), situational (such as health, social relationships), and even institutional factors**.** Measures of subjective well-being are an alternative to the more indirect measures of welfare used in economic policy making.

2.1.8.2 Protean careers.

A thorough review of the topic has revealed that the protean careeris really umbrella term for the new definitions of the career concept. While the traditional approach to organizational career development have construed the organisation's requirements as pivotal and the employee's needs as secondary, the novelty of the protean career orientation is that it posits the central role of employees in the career development and engagement. Employees are engaged in proactive career behaviours and actively pursue career satisfaction (Herrmann et al., 2015). The organization, dethroned from its central role, is now seen as a contextual variable that is offering a medium for the fulfilment of employee aspirations. The protean career centers on Hall's, 1976, 1996, 2002 conception of *psychological success* resulting from individual career management, as opposed to career development by the organization. A protean career has been characterized as (Hall, 1996) "involving greater mobility, a more whole-life perspective, and a developmental progression, driven by individual values and success is measured by psychological success, satisfaction and *wellbeing* are the faces of that success" (Hall, 2004; Hall and Chandler, 2005; Heslin, 2005). Briscoe and Hall (2002) have characterized it as involving both a values-driven attitude and a self-directed attitude toward career management.

One criticism against this career view is that it "neglects to tackle the role of the organisation, leaving every aspect of career development to the individual. It is, however, important to recognise that careers are still enacted within organisational boundaries" (Baruch, 2004). Issues such as the availability of jobs as well as personal constraints could limit an individual's ability to achieve career success as defined by them (Steele, 2009) Other critiques (Hall & Mirvis, 1995) mention "that this is likely to be most difficult for the older worker.

However, it could be argued that this will create problems for all workers, as they will need support to navigate their careers and build an individual identity" (King, 2001).

2.1.8.3 Boundaryless careers.

Changes in the contemporary employment environments require careers to be more 'boundaryless' (Arthur & Rousseau, 1996). The career actor is compelled to be more engaged with independent rather than organizational goals (Cappelli, 1999), and to deploy 'metacompetencies' facilitating shift from one employer to the other (Hall, 2002). This phenomenon came to be know as the 'new deal' (Cappelli, 1999). Boundaryless career opportunities transcend any single employment setting and can be perceived as both psychological and physical (Briscoe et al., 2006). Boundaryless careers can be understood from both psychological and physical perspectives: boundaryless workers operate as independent agents moving freely between organizations and careers. It does not represent a specific career form, but a "range of career forms defying traditional career assumptions" (Arthur & Rousseau, 1996, p.6). A career may consist of lateral moves, periods of disengagement from the workforce for family or reskilling reasons, and radical career move (p.223). The boundaryless career is portrayed as an empowering process with the rationale being that workers are afforded greater freedom of choice, flexibility and control over the choice of their careers.

Arthur (1994) suggested that individuals, in order to cope with this phenomenon of boundarylessness, "needed to exhibit certain skills and behaviours to improve their ability to navigate in these new career realities". He postulates that career competencies necessary for individuals to develop and cope with the boundaryless career constitute the intelligent career model.

2.1.8.4 Portfolio careers.

In Handy's (1994) view, organizational structures have become sequestered into three concentric circles, each comprising a set of workers distinguished by their employment status and links to the firm. They are depicted as the senior, middle managers and having defined skillsets and mainly contributing to the organization and deriving a sense of identity from their employment and contribution. The outer circle comprises a contingent labour force, largely unskilled, interchangeable and therefore disposable. The middle sector has only recently emerged and Handy (1994) predicts their future exponential increase. They are the contractors and specialists fulfilling a variety of the organisation's needs and they are named 'portfolio workers' by Handy to connote the construction of career as an amalgam of discrete and diverse pieces of work. In order to survive this harsh environment, these workers need to assemble a

portfolio of skills, knowledge and experiences, which is readily transferable to a variety of contexts.

2.2 Psychology of Working

Within the past 20 years, there has been a paradigm shift that calls for a return to social justice agenda, evoking a revitalisation and development of new perspectives of career development and learning that are geared toward a broader understanding of the meaning and role of work in people's lives (Ali, 2013; Blustein, 2006). Blustein's (2006) agenda is interpreted and operationalized as a rationale to investigate the meaning of work in people's lives.

Prilleltensky (1997) suggested a categorization of the practice of psychology into four broad approaches: traditional, empowering, postmodern, and emancipatory communitarian (EC). He described each approach with respect to five values, assumptions, and aspects of practice: self-determination, caring and compassion, collaboration and democratic participation, human diversity, and distributive justice. An EC approach defines the self primarily from an interpersonal and socio-political frame of reference. As such, the targets of intervention are both individual problems as well as problems residing in social systems (Blustein, McWhirter, & Perry, 2005). The EC approach to vocational psychology is a vision of values and assumptions to guide our thinking and to critique and enhance our work.

Global recession has provided a unique opportunity for vocational psychologists to demonstrate the importance of work in people's lives. Savickas (2007) has maintained that vocational psychology is fundamentally a part of a common definition of counselling psychology from an international perspective; that is, "that counselling psychology concentrates on the daily life adjustment issues faced by reasonably well-adjusted people, particularly as they cope with career transitions and personal development" (pp. 184–5).

Vocational psychology also addresses the impact of globalization on workers both in their own work needs and in international work structures as implied by the meaning of work in other countries. Blustein et al. (2011) call this localized knowledge and global knowledge because of the importance of understanding work from indigenous perspectives. An important addition to the areas of opportunity for vocational psychologists is the development of a greater understanding of contextual factors that influence work-related decisions. Recently, Blustein et al. (2011) call for vocational psychologists to get engaged in informing policy-makers in a range of areas around work, including school to work transitions, job training, unemployment policies, and affirmative action.

The psychology-of-working perspective proposes that the individual's understanding of the world is historically and culturally embedded (Blustein, Schultheiss & Flum, 2004) with work being a social and cultural construction (Fouad & Byars-Winston, 2005); signifying that the work experience of people across the world differs, depending on the social, political, economic and cultural context. While recognizing the uniqueness of each individual's work experience in today's world, this perspective proposes three basic needs that work fulfils in people's lives: work as a means for survival and power, work as means of social connection and work as a means of self-determination (Blustein, 2006).

2.3 Entrepreneurship in Modern Societies

2.3.1 Significance of entrepreneurship in modern economies and societies – Macro-economic perspective.

The convergence of globalization, technological innovations, knowledge-based economies and demographic trends has led to an increased focus on the effects and importance of entrepreneurship (Volkmann et al., 2009; Cullen, Johnson, & Parboteeah, 2014; Fayolle, Gailly, & Lassas-Clerc, 2006; Martin, McNally, & Kay, 2013). Entrepreneurship is seen as a driving force of economic development, structural change and job creation. Kirchoff in his seminal 1989 paper defined that entrepreneurs are key drivers of economic and social progress. Rapidly growing enterprises (or gazelles as they are commonly called) are important sources of innovation, productivity growth and employment (small and medium-sized enterprises account for a high percentage of all jobs in emerging economies). Entrepreneurial aspirations are of key importance in addressing the (socio-) economic impact of entrepreneurial behaviour. Amongst the typical activities of entrepreneurs where they contribute to economic growth and to the improvement of communities' lives is job creation, involvement in international trade and/or offering new or improved products and services. Acknowledging the services rendered to economy and society, governments globally are actively engaged in promoting entrepreneurship through various forms of support.

The United Nation Millennium Development Goals of reducing poverty can "only be attained by developing human capital in all countries and societies, in remote regions as well as major cities, and in all sectors, to address both the opportunities and major challenges that the world has to face" (UNDP, 1994). "Entrepreneurship and entrepreneurial skills are core components to building socially inclusive and highly participatory economies in an increasingly global and competitive world" (WEF, 2014). Entrepreneurship education, in its various forms,

will be able to train people to proactively pursue opportunities available regardless of the local environments and cultures (Volkmann et al., 2009).

Fostering a favourable regulatory framework for individuals' entrepreneurial activities has become a priority for many economies globally, and governments strive to provide integrated responses embedded in modern socio-economic perspectives (WEF Entrepreneurship Report 2014), as presented by the following international authors:

Rae and Woodier-Harris (2013) label the post-2008 environment as the 'New Era' where entrepreneurship will function as an engine of economic development. Thurik et al. (2013) in their paper depicting the future of dynamic capitalism refer shift from managed economy, "where economic performance is positively related to firm size, scale economies and routinized production and innovation to entrepreneurial economy, characterised by a convergence of institutions and policy approaches designed to facilitate the creation and commercialization of knowledge through entrepreneurial activity". (p.303) "Policies ... should enable individuals to build and apply knowledge in new collectives, be they firms, networks, or alliances, making use of new information and communication technologies". (p.309)

To properly emphasise the role of entrepreneurship in modern societies, Lord Young in his report on SME's to the UK Parliament in 2012 labelled the entrepreneurial activity as available and accessible to new entrants at all ages and at all stages of people's lives. His report came to be known as preconising "Entrepreneurship at all ages at stages" (European Commission, 2012) as a *modus vivendi* or lifestyle.

> "Access to the internet gives anyone an immediate ability to trade online and there has never been an easier time to start. Anyone can mean children learning about enterprise as part of their education and going on to be young entrepreneurs. It can be people over 50 seeking to apply their skills and experience in a business of their own. People out of work may seek self- employment through a business venture as their best opportunity to enter the job market. There are also those in employment – the '5 to 9' entrepreneurs – running a business in the evenings after work" (Young, 2012), p.9).

Entrepreneurship as a lifestyle has been picked up by many other scholars. It is thought to have ramifications in the active solution of rampant youth unemployment as well as the dissemination of the self-employment as a personal career. Some authors go as far as considering entrepreneurship as a scientific method to as is the case of (Sarasvathy & Venkataraman, 2011), reflecting on the normative implication of accepting entrepreneurship as an overarching scientific method, and how its generalised and accessible training would serve as a "necessary and useful skill and an important way of reasoning about the world".

2.3.2 Societal embeddedness of the entrepreneurial activity.

Entrepreneurship is a socially constructed concept and consequently the meanings, and hence the appeal, of the enterprise will vary internationally (Dodd et al., 2013). Korsgaard and Anderson (2011) argue that entrepreneurship is enacted socially, using socially informed actors to engage within a milieu that can be understood socially. But societies and cultures vary; Fayolle, Basso, and Bouchard (2010), for example, argue that American culture values entrepreneurship more than French or Scandinavian cultures. Enactment of entrepreneurship is also the conjunction of perceptions about the self and circumstances (Anderson 2000).

There are many factors bearing an influence on individuals' attitude towards entrepreneurship, choosing entrepreneurship as a career option, the path leading to success or failure, or the support provided by closer family, community or society at large. While there is irrefutable evidence showing the generic impact of these factors play a role, their relative importance by country has not yet been the subject of extensive investigations (OECD, 2015).

Regarding cultural support for entrepreneurial motivation, a higher degree of motivation for entrepreneurship can be expected in those environments where entrepreneurship is socially legitimate and viewed as acceptable behaviour (Liao & Welsch, 2003). Some of the earliest and best-known comparative researches on entrepreneurship at the aggregated societal level deal with environmental factors, both economic and cultural.

2.3.2.1 Entrepreneurship and well-being.

Lately, the topic of well-being has been spreading in social sciences and economics. The promotion of "factors that could increase well-being of the population—for example, how people are satisfied with their lives and their jobs—is progressively seen as essential objectives of policy" (Amorós & Bosma, 2013). Stiglitz, Sen and Fitoussi (2009) in their seminal work on the wealth of nations discuss how and why GDP cannot be further viewed as an appropriate means of assessing wealth and suggest others means such as the Human Development Index. In this same paper, they suggest that a novel approach would encompass considering the subjective well-being and this would involve individuals' capacity to be economically independent. In their view, entrepreneurial economies can empower individuals which will ultimately lead to increased level of subjective well-being.

An exploratory study of Marcketti, Niehm and Fuloria (2006) examined the relationship between lifestyle entrepreneurship and life quality. In this particular research, lifestyle entrepreneurs were characterised by the ownership and operation of businesses "closely aligned with their personal values, interests, and passions". Systems theory perspective was deployed

to examine the role and impact lifestyle entrepreneurship exerts on the quality of life of business owners, their families, and communities. Through 12 descriptive case studies, researchers examined characteristics of lifestyle entrepreneurs, their businesses, and their perceived life quality. Many of the entrepreneurs owned and operated businesses related to family and consumer sciences, including apparel retail, interiors, food service, and hospitality firms. Two common themes were observed: "enhancement of business owners' quality of life as a result of the entrepreneurial venture and a perception of the entrepreneurial venture providing enhanced quality of life to employees, customers, and the community".

Dissatisfaction with society and with life in general also appears to be a strong determinant of entrepreneurship (Hofstede et al., 2004; Tominc & Rebernik, 2007), since individuals are often attracted to entrepreneurship by the expectation that it will provide bigger material and/or nonmaterial benefits, like social status and respect. The topic of the impact on entrepreneurial activity on subjective well-being has become part of the mainstream research on entrepreneurial activity and surveys such as the Global Entrepreneurship Monitor has started providing important insights in their report starting in 2013 (Amoros & Bosma, 2014). Findings in their report clearly demonstrate that entrepreneurs in general valuate their subjective well-being more favourably than individuals not concerned about starting or owning or managing a business (Amoros & Bosma, 2014).

The effects of the entrepreneurial career option can also be negative or destructive, as posited by (Shepherd & Haynie, 2009): the distinctive quality of the entrepreneurial role often leads to a sense of alienation from the sense of belongingness, and, ultimately, this can lead to a decrease in psychological well-being.

2.3.2.2 Entrepreneurship as a solution to resolve unemployment and regional economic disparities.

Fast-paced changes in the world result in a wholly new environment of growing economic disparity and inequality with uncertain future. As a reaction to this volatile and unpredictable work environment, where individuals are compelled to mind their own careers and stable long-term employment is not granted for anyone, educational institutions and educators are urged to address the issues of employability.

As a response to the current challenges, entrepreneurial ecosystems (in other words, complex and inclusive infrastructural environments where all phases and stages of entrepreneurial activity can take place free of obstacles) are designed to accommodate this activity by facilitating a combination of entrepreneurial capital, public approval of

entrepreneurial behaviour, institutional support (including banks, venture capital) and individuals wishing to take the risk of establishing a new company. The creation of entrepreneurial society can only be achieved through the availability of these offerings**.** Education for the entrepreneurial society entails the development of "personal qualities and attitudes as well as formal knowledge and skills: personal qualities and attitudes that increase the probability that a person will see opportunities and act upon them. Further creativity, self-confidence, resourcefulness, willingness to take risks, the ability to see the consequences of one's own actions" (WEF 2009).

The ways in which entrepreneurs and other stakeholders can act in the ecosystem are defined by institutional and environmental conditions. There is an interdependence between institutional rules and environmental conditions allowing for socially and economically viable entrepreneurial opportunities. Innovation and economic growth, both depending on the viability of entrepreneurial activity, require the involvement and engagement of future leaders armed with salient the skills and attitudes (Volkmann et al., 2009; Acs, 2008). Innovative culture is achieved by the training of future leaders trained in formal and informal educational settings.

Entrepreneurship (its education and its implementation as a 'modus vivendi) is very much in demand by people and institutions of diverse nature: students, faculty, university administrators, employers and policy-makers, as well as global initiatives. "The next wave of entrepreneurship will require more creative, innovative and entrepreneurial attitudes, skills and behaviours" (WEF, 2009). Innovation as well as entrepreneurship, commonly perceived engines of economic growth, will be critical foundations of the articulation of adequate policy response.

2.3.2.3 Youth entrepreneurship to tackle rampant unemployment rates.

Many countries suffer from substantial unemployment in the new generation. Despite some indisputable successes, the level of youth unemployment in mature economies remains dramatically high. In Hungary, the aggregate youth unemployment rate in March 2015 was 19.2 % (Eurostat, 2015), in some regions this figure can be as high as 28.9 %. The situation is made more complex by the massive exodus of youth to external labour markets such as the UK, Germany and Austria. This represents a considerable rise since the Global Financial Crisis.

In economies across the globe, this situation appears all the more worrying, as economic recoveries no longer seem to be equate with job creation, especially for mature economies such as the United States. There is a broad consensus among global leaders that the market economy continues to be the best engine to address these trends and to generate wealth and employment.

At the same time there is a growing concern that if the fundamental issues – such as structurally high levels of youth unemployment – go unchecked, the likelihood of a systemic failure increases, endangering the social contract between governments and citizens, and in particular with the young generation.

One year of unemployment during youth can reduce annual earnings at age 42 by up to 21 % (Gregg & Tominey, 2005) and "an extra three months of unemployment prior to the age of 23 results in an extra two months of unemployment, on average, between the ages of 28 and 33" (Gregg, 2001). Sustained unemployment aggravates problems which are then passed on to their children. Another risk factor lies in the unused economic resources lowering economic output and hindering the potential for economic growth (OECD/EU. 2012). Young people are believed to be much more affected by the economic crisis as they are more likely to be engaged in temporary work and the elimination of workplaces prevent them from an eventual first job.

As stated above, self-employment and entrepreneurship are perceived to be present-day solution to fight unemployment and offer a return to the world of work. The question is how active citizenship can or should influence self-employment, or, conversely, how autonomous employment could enhance individuals' engagement in active citizenship behaviours. Both active citizenship and entrepreneurship stand out as singular solutions to contemporary malaise – the first in the operation of the democratic establishment, the second in the proper functioning of the economic machinery.

2.4 Rapprochement: Entrepreneurs as Active Citizens

Rapprochements, for the purpose of this thesis, are attempts to consolidate seemingly distant and distinct threads of thought from distinct disciplines, in view of offering solutions to the persistent economic and socio-political malaise in Hungary. In the first instance, the ways and approaches to the democratic involvement of entrepreneurs will be tackled.

2.4.1 Nomological network of citizenship.

Research on citizenship has begun to focus on citizens' participation in political processes, and now has shifted from this original position to place a strong emphasis on individual 'action' with the 'intent to influence' in the participatory democracy (Verba & Nie, 1972). Citizens' involvement in decision making and deliberative democracy, with people engaged in negotiations over policy development are topical areas wher much research has been done (Mutz, 2006).

European policy making started using the term Active Citizenship to "denote particular forms of participation which should be promoted within Europe in order to ensure the continuation of participatory and representative democracy, to reduce the political distance between citizens and governing institutions and to enhance social cohesion" (Hoskins & Mascherini, 2009). In a European context, Active Citizenship, can be connected to the name of the European Commissioner on Education, Research and Sciences in 1998, Edith Cresson. She referred to Active Citizenship as an option for the citizens of Europe to be both 'the architects and actors of their own lives' (European Commission 1998). She subsequently incorporated Active Citizenship into the European education and training 2010 work programme as part of the wider Lisbon Strategy.

For the purposes of the thesis, the following definition of Active Citizenship:

> "Participation in civil society, community and/or political life, characterised by mutual respect and non-violence and in accordance with human rights and democracy" (Hoskins 2006, p.1).

This definition of Active Citizenship points to the variety of participatory activities, and relate to a range that include actions that hold governments accountable, to representative democracy, such as voting, as well as participation in the everyday life of the communities. Active Citizenship also involves single issue politics and responsible consumption, as well as the more traditional forms of membership in political parties and non-governmental organisations. While Active Citizenship in a first instance relates to individual level action, it also conveys meaning on what these activities contribute to the wider society: the continuation democracy, good governance and social cohesion.

Faulks (2000) has described citizenship as a 'contemporary momentum concept' by which he means that it is a concept whose time has come. It is of vital importance to sensitise citizens to be engaged in modern, formal democracy to "avoid weakening the legitimacy of elected governments as they struggle with falling election turnouts as well as to counter the rise of undemocratic political forces and the growth of 'quiet authoritarianism' and 'presidential' prime ministers within government, especially in Central and Eastern Europe" (Print, 2007). Pertaining to the geopolitical characteristics where this thesis is embedded, it is important to emphasise that the need to 'mend' or 'reinstate' citizenship is felt the most ferociously where community and community organisations – and citizenship altogether- have been the most thoroughly deterioriated, elsewhere entirely wiped out. Citizenship behaviours are necessitated in modern societies and they ensue from the altered nature of driving forces impacting on the society at large (Henrekson, 2005; Fritsch, Kritikos, & Sorgner, 2013; Ross & Dooly, 2010).

2.4.1.1 Facets of active citizenship.

Participation in a democracy may take many forms but it can be identified in terms of three sets of engagement indicators (Print, 2007):

- "Civic indicators – active membership of groups/associations; volunteering; fundraising for charities, community participation/ problem solving.
- Electoral indicators – regular voting; persuading others; contributions to political parties; assisting candidates with campaigns.
- Political engagement indicators – contacting officials; contacting print and broadcast media; protest; written petitions; boycotting and boycotting activists, email petitions and internet engagement".

An example of the explicit expression of the need for greater and more active participation in modern democracy is the report from the Power Commission (Inquiry, 2006) which sought to re-engage citizens with British democracy. The report identified the need to engage people with formal democracy for several reasons, including strengthening the mandate of elected governments whose legitimacy is threatened due to turnouts plummeting at elections; emphasising political equality where whole sections of the community feel estranged from politics; strengthening effective dialogue between the governed and those who govern; and opposing the increasing influence of un-democratic political forces (Inquiry, 2006).

2.4.1.2 Empowerment theory.

Empowerment is a complex, multidimensional concept, and that is described a process rather than an event. The term emerged from social and educational psychology as a 'strategy for individuals to retain control of key aspects of their lives' (Cunningham et al, 1996, p. 144). The UNDP's Human Development Report (1995) argues that to be empowered, people need to participate fully in decisions and processes that shape their lives. 'Empowerment in the political domain is often related to democratization and political participation, as well as the strengthening of grassroots and civil society organizations and the participation.'(p.345). A broader definition of empowerment has been put forward by Kreisberg: "a process through which people and/or communities increase their control or mastery of their own lives and the decisions that affect their lives" (1992, p. 19). Solomon (1976) argued that empowerment was also about increasing people's skills in performing social roles, which meant that teachers needed to develop a style of teaching that allowed students to develop the 'skills and abilities necessary to effectively participate in their social and political worlds' (Kreisberg, 1992, p. 19).

2.4.1.3 Agency theory.

Agency is a subset of empowerment and for the purposes of the thesis, the following definition of agency will be adopted: "personal agency is the sense of personal empowerment involving both knowing and having what it takes to achieve one's goals. More broadly, a well-adapted agentic individual is the origin of his or her actions, has high aspirations, perseveres in the face of obstacles, sees more and varied options for action, learns from failures, and, overall has a greater sense of well-being" (Binder, 2013, p.390). In contrast, a non-agentic individual "can be a pawn to unknown extra-personal influences, has low aspirations, is hindered with problem-solving blinders, often feels helpless, and, overall, has a greater sense of ill-being" (Ryan & Deci, 2000, Diener & Biswas- Diener, 2005).

Sen (2002) defines agency as "what a person is free to do and achieve in pursuit of whatever goals or values he or she regards as important". In his account, agency is intrinsically valued: "Acting freely and being able to choose are, in this view, directly conducive to well-being … ". Agency, a kind of process freedom, is concerned with processes: "For example, it may be thought, reasonably enough, that the procedure of free decision by the person himself (no matter how successful the person is in getting what he would like to achieve) is an important requirement of freedom. Put simply, an agent is "someone who acts and brings about change" (p.585).

2.4.2 Active citizens in the knowledge/entrepreneurial society.

Drucker (1993) proposes that modern societies' *knowledge* is the only meaningful resource and coins the name *Knowledge Society*. In this society, "value is created by productivity and innovation, both applications of knowledge to work. The knowledge society must have at its core the concept of the *educated person,* a universal concept, precisely because the knowledge society is a society of knowledge, and because it is global - in its money, its economics, its careers, its technology, its central issues, and, above all, in its information. Post-capitalist society requires a unifying force, a leadership group which can focus local, particular, separate traditions onto a common and shared commitment to values, onto a common concept of excellence, and onto mutual respect". The universally educated person will be the citizens of the world, in their vision, their horizon and their information, simultaneously drawing "nourishment from their local roots, and, in turn, enrich and nourish their own local culture". The sustained application of the principles of the knowledge economy will result in the formation of a parallel, or complementary economy that Drucker (1993) calls a *skill economy*

– with interpersonal skills, management skills, communication skills, teambuilding skills valued as much as formal knowledge (Humes, 2002) This vision is reflective of employability.

Political and citizenship values and as a consequence, the citizenship values of entrepreneurs in modern societies have become the subject of academic inquiry (Vigoda-Gadot & Grimland, 2008; Svedberg, Leffler, & Botha, 2010; Landström, Harirchi, & Åström, 2012; Schulz, Ainley, & Fraillon, 2011; Hall, Daneke, & Lenox, 2010).

Societal emphasis on citizenship has been created by the effort of implementing the social contract in the volatile societal and business environment of the 21st century. Originally conceived as a normative theory of moral and political obligations determined by an understood contract and incumbent upon members of a society, this theory, has been extended to include not only society and government, but also business.

Rousseau says:

> "The problem is to find a form of association which will defend and protect with the whole common force the person and goods of each associate, and in which each, while uniting himself with all, may still obey himself alone, and remain as free as before. This is the fundamental problem of which the social contract provides the solution" (Jean-Jacques Rousseau, The Social Contract and Discourses, 1988 [1762], p. 78.)

The basic premise of the social contract remains the same in our days: to understand and determine what roles, relationships, and responsibilities each of us has relative to the whole of society and its collective well-being. With the evolution of the social contract, governments increasingly adopt an influential role in motivating corporations toward better local and global citizenship (Waddock, 2005). A civil society is attendant to the preconditions of culture, social morality, and character; further, "citizenship requires that once educated to the pursuit of personal interests, individuals and organizations become tuned to the service of the public good" (Pestritto & West, 2003). The expectation has evolved that in corporate worlds, once public good has been served and good citizenship on behalf of individuals will follow.

Nowadays, a new normative global ethic and social contract is emerging that frames business activities in the global marketplace, includes recognition by businesses of their obligations to communities and citizenship, that acknowledges respect for fundamental human values, and that embraces partnerships with government and civil society (Cragg, 2000; Kathrani, 2010; Waddock, 2005).

Drucker says:

> "Citizenship is the willingness to contribute to one's country. It is the willingness to love for one's country. To restore citizenship is a central need of the post-capitalist society.

> …The nation-state re-invented citizenship and was built on it. What citizenship means in terms of rights and obligations has ever since been a central issue of political theory and political practice. As a legal term, citizenship is a term of identification rather than of action. As a political term citizenship means active commitment, responsibility, making a difference in one's community, one's society, one's country" (Drucker 1993, p.155).

Self-employment is perceived as an activity legitimised in economic freedom: entrepreneurs are economically free persons in the position to decide for themselves their ways of consumption as well as production, including the strive for being engaged in meaningful work (Shiva, 2005). Another important facet of democratic satisfaction has been found to have an impact on happiness. Orviska, Caplanova and Hudson (2012) formulated this thought in a differentiated way: economic, but not political freedom contributes to happiness particularly in poor countries, whilst political freedom contributes to happiness in richer countries.

2.4.2.1 Subjective well-being (SWB) and psychological empowerment theory.

Subjective well-being (SWB) and psychological empowerment are both psychological concepts. Happiness, or subjective well-being, is defined as "the presence of positive experiences and feelings, and/or the absence of negative experiences and feelings, or people's positive evaluations of their loves, including pleasant emotions, fulfilment and life satisfaction. Psychological empowerment represents one facet of SWB – people's belief that they have the resources, energy, and competence to accomplish important goals". Subjective well-being is necessary for the quality of life, but is not sufficient for it. The thesis will use the theoretical model set up by Diener and Biswas-Diener (2005) detailing the following facets of subjective SWB, as presented in Table 2.1: Life satisfaction; Satisfaction in specific domains, such as school, training program, work and health; Low levels of unpleasant affect; High levels of pleasant effect; Meaning and purpose, Engagement, Active participation in Communities/Democratic decision-making/Policy-making; Empowerment; Self-efficacy; Self-confidence; Mastery.

It is in the oeuvre of Sen (Stiglitz, Sen & Fitoussi, 2009; Sen, 2005; 2002) that a *rapprochement* germane to the central tenets of the thesis can be detected. His Capabilities Approcah (CA) lists aptitudes such as political liberties, the freedom of association, the free choice of occupation, and a variety of economic and social rights, also referred to *inter alia* in the human rights movement. While the CA was equally instrumental in the elaboration of the human development paradigm, its impact on the 'entrepreneurial movement' has been significant: governments came to the realisation that the promotion of entrepreneurship as self-

employment yields labour intensity and wage employment, thus creating social security, which, in turn contributes to social justice. These capabilities, together with the freedom of choosing their occupation, will empower individuals to find their psychological well-being.

Table 2.1

Facets of Subjective Well-being (SWB)

Life satisfaction
Satisfaction in specific domains, such as school, training programme, work and health
Low levels of unpleasant affect
High levels of pleasant affect
Meaning and purpose
Engagement, active participation in
Communities
Democratic decision-making
Policy-making
Empowerment
Self-efficacy
Self-confidence
Mastery
Communal efficacy

Note: Adapted from Diener and Biswas-Diener, (2005).

2.4.3 Active citizenship and community involvement of entrepreneurs.

From the educational point of view, the impact of international forces of change have prompted an inquiry into the meaning, representation and delivery of education for global citizenship in school curricula. Osler (2002) writes:

> "We live in an increasingly interdependent world, where the actions of ordinary citizens are likely to have an impact on others' lives across the globe. In turn, our lives, our jobs, the food we eat and the development of our communities are being influenced by global developments. It is important that young people are informed about the world in which they live and are provided with the skills to enable them to be active citizens and to understand how they can shape their own futures and make a difference. Education for

living together in an interdependent world is not an optional extra, but an essential foundation" (p.2.).

A community can be described as "a set of people with some kind of shared element, which can vary from a situation such as living in a particular place, to some kind of interest, beliefs or values" (Obst & White, 2005, p.127). Communities are embedded in a particular space or place and nurture strong ties with the place (Bow & Buys, 2003) and whenever businesses support the local community there is a case of community citizenship (Besser, 2003), corporate philanthropy (Keim, 1978), philanthropic investment (Mescon & Tilson, 1987), and contribution to the public good (Besser, 1998).

Entrepreneurs, by their value creation in economic and also in the societal spheres - are significant pillars of civil societies. In their role as financiers and organisers of communities they portray the active citizen and in their role of community supporters and pillars of society can be seen as role models for ambitious youth (Audretsch & Thurik 2000; Audretsch, 2007).

Community citizenship is a multi-dimensional construct with constituents such as "business commitment to the community, business support for the community, and personal leadership in the community" (Besser, 2003). Small and medium enterprises (SMEs) are embedded in communities of other businesses (Vives, 2006) and together with other businesses help improve their local social and economic environment. On the benefit side, their support reverts to their performance as they become recognised and esteemed members of the communities (Miller & Besser, 2000). Thus, "communities with a pattern of businesses and residents working together for mutual gain (are) more successful" (Miller, Besser, Gaskill, & Sapp, 2003, p. 224).

In fact, Hallak, Brown, & Lindsay (2012) found that "the interaction effect of an entrepreneur's service to the community, reciprocated by community support of the business, is the single most significant determinant of business success" (p.145), demonstrated by a $\beta = .22$, $p < .01$, ($N = 301$). SMEs can often be identified with the values, character, attitudes and identity of the owner (Vives, 2006). By the same token, the contribution of an SME is an image of the owner's motivations and objectives, including the sense of attachment to the community. The reciprocated support of business to their communities positively reverts to business performance (Kilkenny et al., 1999).

Good citizenship means performing altruistic behaviour for others, the community, the society, the state or any sort of organisation, to contribute in any ways to the advancement of the environment. Khalil (2004) and Street and Cossman (2006) describe altruism as "the willingness of individuals to extend themselves for the general welfare without receiving any

direct benefits in return". Bar-Tal (1985/1986) notes that altruistic behaviour must exhibit the following properties: "must benefit another person; must be performed voluntarily; must be performed intentionally; the benefit must be a goal in itself and must be performed without expecting any external reward" (p.5.). Khalil (2004) defines the reason for the need to perform and engage in good citizenship and altruistic behaviour as being bifold: the need to experience what he calls the *warm glow* feeling and an eagerness for socialization or acculturalisation. The *warm glow* is associated with the sensation of pride urging individuals to act in particular way and to realize a goal (Vigoda-Gadot & Grimland, 2008). The eagerness for socialization urges individuals to behave in a certain way such as to "gain the approval, respect, admiration and prestige accorded by one's significant peer group" (Karier, 1984; Mead, 1959). As the inner values are at the origin of both good citizenship of altruistic behaviour the protean behaviour, it is suggested that these attitudes are closely connected (Vigoda-Gadot & Grimland, 2008). In fact, Vigoda-Gadot & Grimland (2008) in their cross-cultural and longitudinal study, involving management students from 7 countries found a positive correlation ($N = 791$; $r = .307$, $p \leq .01$) between altruistic behaviour and protean career approach.2.4.3.1 Rapprochement: entrepreneurs as change agents/drivers of social change.

Owing to the complexity of the meaning of enterprise, it can be understood from a multitude of aspects, offering a range of interpretations. At one end of the spectrum it can be viewed in hard-edged economic terms referring to wealth creation, entrepreneurship, business start-ups, profitability. In the field of education for entrepreneurship, this leads to an emphasis on work experience, generic skills for employability (rather than subject knowledge), the setting up of mini-companies, the qualities needed to manage efficiently. At the other end of the spectrum enterprise is described in much looser terms - e.g. responding to circumstances with imagination, energy and creativity (Humes, 2002). Enterprise skills include seeking information and advice, negotiating successfully, resolving conflict, making decisions and solving problems. From the point of view of dispositional traits, it entails the entrepreneur's inner locus of control, future orientation, and *responsibility for himself and for the wider community, and an engagement in the community's life, with a target of improving it*.

2.4.4 Operational dimensions of active citizenship.

The terminology citizenship or political participation is a term derived from the political science literature. The progress and advancement of research on citizenship focusing on citizens' participation in political processes has resulted in the new notion of 'active citizenship', emphasising the involvement of citizens (Hoskins & Mascherini, 2009). Active citizenship

originates from the domain of education: formal and non-formal education, adult (Holford & van der Veen 2003) and vocational education and training (Preston & Green 2003). The following sections will explain the various dimensions of active citizenship behaviour, building on the various facets and the various types of participation such as political, protest and community participation and democratic values.

2.4.4.1 Protest and social change.

They cover 'action orientated participation', often atypical forms of participation, like "protests, demonstrations, boycotts and political strikes that are an 'established' and necessary voice of influence within modern democracies" (Ogris & Westphal 2006). Protest and social change equally mean "participation or volunteering in activities organised by civil society organisations that work towards government accountability and positive social change" (Hoskins & Mascherini, 2009).

2.4.4.2 Community life.

In communitarian theories of citizenship, the community is a central tenet with a concentration of values of solidarity and participation in the community allowing for the realisation of a 'good society' (Hoskins & Mascherini, 2009). „Community refers to a group of people – a network of relationships in which people have a common interest and cooperate based on this common interest" (Bess et al., 2002). Community life facilitates the participation in informal and unorganised activities and practices.

2.4.4.3 Representative democracy.

The model of representative democracy presupposes a set of values and allows for certain limited conventional modes of political participation such as voting, political party-related activities, contacting elected representatives and governmental officials.

2.4.4.4 Democratic values.

The lens of Active Citizenship not only gives access to the investigation of forms of participation but also to the values that urge individuals to engage in such activities. "The democratic values associated with participatory democracy, civic republicanism or communitarian notion of 'good citizenship' focus on valuing participation itself and civic virtues such as 'solidarity' and 'being socially active for the good of the society'" (Denters et al. 2007, p. 91).

2.4.5 Rapprochement: Business school citizenship education.

2.4.5.1 The university's third mission and social accountability.

Altered expectations regarding the universities' role and function in society have resulted in a 'third task' assigned to universities – i.e. influencing regional innovation and economic growth (Etzkowitz et al., 2000, Johanisova et al., 2012, Inman & Schuetze 2010). Universities in this role are supposed to "support and promote entrepreneurship, engage in spin-off activities, develop university-business-government partnerships and encourage technology transfer and commercialization of knowledge and research". Universities can also motivate and encourage graduates to engage in entrepreneurial activities by setting up facilities for them such as start-up hubs and centers (Etzkowitz et al., 2000; Rinne & Koivula 2009; Lane & Johnstone 2012). These concepts of globalization, social capital and the knowledge (and skill) economy provide an important theoretical backdrop to the political interest in citizenship and enterprise in education. (Humes, 2002).

2.4.5.2 Cultural and educational aspects of active citizenship.

Young people's political participation has been substantially and continually weakened in the past decades, setting an alarm for governments and international organisations alike (Print, 2007). To fight this phenomenon, the European Union launched its Learning for Active Citizenship initiative in 1998, the purpose of which was to create, design and deliver educational programmes for citizenship. Educational systems are the best environment for the delivery of such programs where the principle of participation, in both the organisation of the school as well as the learning can be implemented.

The European Union's initiative states: "Placing learners and learning at the centre of education and training methods and processes is by no means a new idea, but in practice, the established framing of pedagogic practices in most formal contexts has privileged teaching rather than learning. Learners must become proactive and more autonomous, prepared to renew their knowledge continuously and to respond constructively to changing constellations of problems and contexts. The teacher's role becomes one of accompaniment, facilitation, mentoring, support and guidance in the service of learners' own efforts to access, use - and ultimately create - knowledge. This means that learners become active participants in their own learning processes, which they learn to negotiate and co-manage together with their teacher-guides and with their co-learners" (European Commission, 1998, p. 13).

Print (2007, p.330) identified three primary sources of influence on young people's learning about politics and democracy – "the family, through role modelling, discussion, and

media use; the media, mostly television and newspapers; and third, school experience providing knowledge, skills and values from non-partisan educators".

In the framework of active democratic citizenship education, young people should be enabled and supported in their learning how to "use knowledge, skills, values and attitudes that will help them sustain active and democratic citizenship behaviour throughout their lives". To put in other words, it is by incorporating democratic citizenship curriculum in the educational system that citizens, pillars of a democratic society can be raised. Other authors argue that education should be used to engender social change and empower educational actors (Johnson, & Morris 2010). The IEA (International Association for the Evaluation of Educational Achievement) Civic Education Study (Torney-Purta et al., 1999) suggests that citizenship (or 'civics') education should be: "... cross-disciplinary, participative, interactive, related to life, conducted in a non-authoritarian environment, cognizant of the challenges of societal diversity and co-constructed with parents and the community . . . as well as the school" (Torney-Purta et al., 1999, p.30).

Citizenship education extends beyond the boundaries of school where citizenship knowledge, values and attitudes are put into real life practices (Lange et al., 2013). Lange (2013) suggests that "at the end of the formal education students should:

- understand and value basic principles and institutions of democracy
- understand rights and responsibilities of a citizen including political, social, cultural, and economic
- understand and value political decision making processes on local, national, and international levels.
- understand and value all kind of differences (cultural, racial, gender, and religious) that exist in local regional, national, and global context
- understand function and work of voluntary groups and civil society
- understand the role of media in personal and social life
- have an understanding and awareness of public and community issues and current events effecting national and global society
- have knowledge of forms of the participation
- value active participation in the society
- have democratic values and attitudes such as concern for the rights and welfare of others, social responsibility, tolerance and respect for differences and human rights, acceptance of the rule of the law, believing in democracy and peace.

- have an open and critique mind
- have the ability to get information from different sources, evaluate them critically, think critically, make decision based on critical evaluation of information and reasoning, solve problems, and enter into dialogue among others with different perspectives
- act politically by using knowledge, skills, values/attitudes, and commitment to accomplish public purposes such as group problem solving, public speaking, petitioning and protesting, and voting.
- participate actively in their communities and in wider communities through membership in or contributions to organizations working to address an array of cultural, social, political, economic, environmental, and religious interest and beliefs.
- act to handle all kind of differences (cultural, racial, gender, and religious) in a multicultural society and resolve all kind of conflicts in a peaceful way" (Lange & others, 2013)

2.4.5.3 Cultural perception of active citizenship.

Active citizenship is naturally embedded in the cultural and social capital of the nation and thus is essentially conditioned by its value system. There are considerable differences in what notions, concepts or values are conjured by words such as 'citizenship,' 'multiculturalism,' 'democracy,' or 'nation' amongst European citizens. Even in groups of the same histories the meanings may differ. When looking at the official definitions of the word 'citizen' in Hungarian shows four main meanings with overlapping connotations: a) generic (inhabitant of a city); b) sociological (special status in relation to other population groups); c) moral (equivalent to being a good person); and d) political (a subject with rights that grant him or her with the ability to intervene in the governing of the political community (Jover and Naval, 2008).

The perception and the exercise of active citizenship is additionally conditioned by the historic processes taking part in a country. In Hungary, the democratization potential, manifest in the 1980's seems to have been lost over the past two decades. This de-democratisation process is shared with other societies of Central and Eastern Europe currently (still) undergoing a long, cumbersome and controversial learning process. In the process, "political classes became massively eroded and corrupted and consequently lost a great deal of their credit, resulting in a disappointment in politics and thus in an abnegation of active citizenship behaviour" (Miszlivetz, n.d.)

2.4.6 Rationale for including active citizenship as a predictor in the SCCT model.

The growing importance of social justice advocacy in vocational psychology is expressed by authors such as Autin, Duffy, and Allan (2015) calling for an exploration of the development of individuals' interest in and commitment to social justice. One of the facets of active citizenship is social justice. In the absence of research results on active citizenship attitude and involvement as a person input, results referring to the development of social justice commitment can be mentioned here. Few authors (Miller et al., 2009; Miller & Sendrowitz, 2011) apply social cognitive career theory (SCCT; Lent, Brown, & Hackett, 1994), to social justice advocacy and have found the model to be useful in predicting commitment in this domain.

Although empirical studies applying SCCT principles to social justice advocacy are few, the existing research does point to utility of the model in this area. For example, Feather, Woodyatt, and McKee (2012) found that willingness to support an organization aimed at empowering marginalized Indigenous Australians was predicted by positive outcome expectations of doing so. Likewise, Chung and Probert (2011) found that in a sample of African American young adults, positive outcome expectations for the community were related to greater likelihood of volunteering and positive outcome expectations for the individual were related to greater likelihood of intention to engage in political activism. Miller et al. (2009) tested a model with SCCT variables specific to the social justice domain with a sample of 274 undergraduate students. Results showed that, consistent with previous findings, (Lent et al., 2000; Lent, Lopez, Lopez, & Sheu, 2008), social justice self-efficacy and outcome expectations each had a direct effect on social justice interest. Social justice self-efficacy also had an indirect effect on social justice interest as mediated by outcome expectations. Additionally, social justice self-efficacy and interest directly predicted commitment to social justice advocacy. The final model accounted for 56% of the variance in social justice interest and 70% of the variance in commitment to social justice advocacy, demonstrating the utility of SCCT in this domain. Miller and Sendrowitz (2011) found further support for the theory as it applies to social justice in a sample of counselling psychology doctoral trainees.

Akin to other extensions of SCCT in the career domain attempting to identify person inputs, the current thesis will incorporate the construct of active citizenship into the SCCT model to predict interest in the entrepreneurial career path.

2.5 Main Observed Constructs in Entrepreneurial Psychology and their Equivalents in the Social Cognitive Career Theory

2.5.1 Tentative definitions of the entrepreneurial activity.

Despite the dissonance and variety of research backgrounds, perceptions and approaches to the field, there is a common understanding among all involved in Entrepreneurship research: there are as many definitions as researchers. The definition of entrepreneurship has notoriously been problematic (Busenitz et al., 2003). In fact, the only common point that rises from the scholarly debate is that "both the definition of entrepreneurship and the nature of the activities that constitute entrepreneurial behaviour remain elusive" (Chell, 2008; Hisrich, Langan-Fox, & Grant, 2007).

Correspondingly, Kuratko (2007) suggestes that entrepreneurial activity is not limited to within or outside the organisations and the performance of business activities (e.g. social entrepreneurship; Mair & Marti, 2006). The establishment of a business, whilst it is an important aspect of entrepreneurship, it is "neither necessary nor sufficient for entrepreneurship" (McKenzie et al., 2007). Rather, entrepreneurship encompasses a range of diverse activities or behaviours.

Despite of the proliferation of perspectives of entrepreneurial activity/behaviour have been presented, the most current topics in the literature are recognition and exploitation of opportunities, innovation/change, and value creation (Gartner, 1988; Kuratko, 2007; McKenzie et al., 2007; Shane & Venkataraman, 2000). This vision of entrepreneurship believes individuals' personality to be defining entrepreneurial activity (i.e. the recognition and exploitation of opportunities, innovation, and value creation) (Kuratko, 2007; McKenzie et al., 2007).

Entrepreneurship can be defined from several viewpoints, to name just a few:

- by business stages (Shane, 2003)
- types of businesses (Timmons, 2000)
- business goals (Smith & Smith, 2000)
- levels of innovation (Shane, 2000)
- degrees of independence (Bird, 1989)
- management roles (Bird, 1989)

Gartner (1988) offered a simple and empirically useful definition of Entrepreneurship that drove many researchers to restrict their studies to founder-only samples. He suggested that the Entrepreneurs are those who create new independent organisations. Some theorists add that

these independent organisations must have a value creating and profit-making function, otherwise their founders cannot be qualified as Entrepreneurs.

A generally accepted and now popular, process and people oriented definition of Entrepreneurship has emerged from the seminal article by Shane and Ventakaraman (2000) where the authors stipulate that "Entrepreneurship is a *process* that involves the discovery, evaluation and exploitation of opportunities to introduce new products, services, processes, ways of organising, or markets". Acknowledging this definition, researchers are interested in the why, when and how of opportunity discovery and exploitation by individuals. This can be explained by a psychology centred search that focuses on the explanation of individual differences in human behaviour necessary for recognising potential opportunities for successful startup, emergence, and new venture growth. Katz (2003) highlighted the diversity of interpretation of the Shane and Ventakaraman (2000) definition and suggested that subspecialities are introduced to the generic domain of Entrepreneurship. He proposed a 'prairie populist' (the way the public perceives Entrepreneurship) definition of Entrepreneurship as the subject of a collection of academic disciplines, including:

> "new venture creation, Entrepreneurial finance, small business, family business, free enterprise, private enterprise, high-technology business, new product development, microenterprise development, applied economic development, professional practice studies, women's Entrepreneurship, minority Entrepreneurship, and ethnic Entrepreneurship" (p.120).

There is a range of activities and practices going on in a variety of social, economic, political and family spheres that are (or might be) labelled with the term entrepreneurship (Fletcher 2007). Some are critical of the seductive and pervasive societal discourses associated with the term (du Gay 1996, Nodoushani & Nodoushani 1999, Ogbor 2000). Others argue that this evidence reflects the natural, every day and inherently intrinsic (creative) capabilities of human endeavour, implying that entrepreneurial activity is, in fact, a societal phenomenon (Katz and Steyaert, 2004).

The many views on Entrepreneurship can be distilled down to two essential but not fully compatible perspectives: the first equates Entrepreneurship with *independent business* and therefore postulated that the discipline deals with the study of the Entrepreneur as a blood-and-flesh individual (Davidsson, 2006). Entrepreneurs remain an object of research as long as they are in business, manage it, and any trait, emotion, cognition and behaviour, as well as achievement that can be connected to such activities belong to this field of research. The second view holds that Entrepreneurship is the creation of *new economic activity* and Entrepreneurs

are micro-level agents active in bringing change or transformation. In this respect, the Entrepreneur is a change agent whose role is to initiate change, improvement in communities by detecting and identifying opportunities where this change needs to be implemented. The most well-known example of an Entrepreneur keen to change the lives of the community members is Ford, father of the T-model, who, in the 1920's wanted to supply an affordable automobile to the less well-to-do population. He is often quoted to have said: "I will build a motor car for the great multitude.it will be so low in price that no man will be unable to own one" (Henry Ford, 2012). This perspective is centred on the process or the role of the Entrepreneur in the creation process and when the person is no longer involved in the creation of new economic activity, ceases to be called an Entrepreneur, and is no longer the object of investigation (Schumpeter, 1934).

One definition of the entrepreneurial process stands out as generally genuinely encompassing, offered by one of the *doyens* of entrepreneurship research, Davidsson (2006): "All cognitive and behavioural steps from the initial conception of a rough business idea, or first behaviour towards new business action until the process is either terminated or has led to an up-and-running business venture with regular sales (p.147)".

Shaver and Scott (1991) have initiated the psychological angle to the research:

> "Economic circumstances are important, social networks are important, entrepreneurial teams are important. But none of these will, alone, create a new venture. For that we need a person, in whose mind all of the possibilities come together, who believes that innovation is possible, and who has the motivation to persist until the job is done" (p.39).

For the panel studies of entrepreneurial dynamics in the US and other countries, entrepreneurship was considered the process of creating a nascent business venture (Gartner et al., 2004).

Then there is Shane and Venkataraman's (2000) definition of entrepreneurship as "the study of the *sources* of opportunities; the *processes* of discovery, evaluation, and exploitation of opportunities, and the set of *individuals* who discover, evaluate, and exploit them" (p. 218, emphasis in original).

Two features are common to all of these definitions. First, each definition requires that there be some interchange with the environment outside the person. Whether that contact involves resources, business organizing activities or opportunities, the external environment is involved. Surely, external environment is represented cognitively within the entrepreneur, and just as surely, some entrepreneurs fail because their representations are inaccurate. Still, as Shane and Venkataraman (2000) point out, concentrating on the internal cognitions of the

entrepreneur does not eliminate the need to know something about the external world. Second, each definition includes a process that must be accomplished over time (Carter et al., 2003).

2.5.2 Complexities of entrepreneurship research.

While the history of entrepreneurship research goes back to 30-40 years and it cannot be considered an old and well-established filed of inquiry, it came to involve a very large number of scholars.

In the summer of 1998, the workshop held at the Jönköping International Business School (JIBS) where various eminent scholars of the field presented their visions about the future of entrepreneurship research marked the launch of a fervent activity of Entrepreneurship researchers across all continents and institutions. The collection of the papers was published in a subsequent issue of the *Entrepreneurship Theory & Practice*, the most eminent organ of Entrepreneurship research. The subsequent decade, the golden era for turned the field into a vital, dynamic and relevant area in management, economics, regional science and other social sciences. The Entrepreneurship Division of the Academy of Management (AOM) increased its membership by 230 percent – more than any other established division – and with over 2,700 members, and is today one of the largest dicisions in the Academy of Management.

The other milestone towards the legitimisation of the field of Entrepreneurship research was the publication of a single work by David McClelland, *The Achieving Society* (1961). This book succeeded in capturing attention from a wide audience of scholars and introducing Entrepreneurship as a research discipline in its own right. Thirty years of personality research following McClelland's initial work still has not covered many of the areas essential in the understanding the psychology of Entrepreneurship. For example, associations between achievement motivation and choice of Entrepreneurship as a career and between achievement motivation and new venture success in 20 studies yielded significant correlations, but the explained variance was less, than 5 % (Fayolle, 2014.) A new cohort of researchers with psychology background have been working on investigating the individual differences that cause Entrepreneurship and this new cohort is responsible for broadening and deepening our understanding of Entrepreneurial psychology.

Psychology, together with economics and sociology, can be considered a 'parent discipline' for Entrepreneurship with psychology perhaps playing a more important role than the other two disciplines (Fayolle, 2014). However, a growing number of researchers advocate for a more holistic view of the entrepreneurial activity, including the sociological aspect. They claim that entrepreneurship studies have long been dominated by the disciplines of economics

and psychology and have taken for granted the primacy of certain narrow epistemological and ontological principles. As a result of this and the associated emphasis on 'the entrepreneur', too little attention has been paid to the historical, sociological and institutional aspects of entrepreneurial activity, and only limited use has been made of the range of analytical resources available in social sciences other than economics and psychology. The use of these social science resources, together with the recognition of advances in the philosophy of social science [or philosophy for the social sciences as Searle (2008) suggests], has enormous potential to reinvigorate entrepreneurial scholarship and, in particular, to move it away from the reductionist and populist concern with particular types of people called 'entrepreneurs'.

Among sociological concepts applicable to the description of Entrepreneurial activity, one that seems to be most adequate is *situated creativity* (Watson, 2013). This sees members of the human species as continually facing new circumstances in their lives and condition. These circumstances require them to act creatively to survive and flourish, but may equally limit individually. To act entrepreneurially is to innovate, to deal with social and economic circumstances, with those very circumstances constraining as well as enabling the shaping of entrepreneurial actions and their outcomes.

Inspired by the notion of situated creativity, a key concept of 'entrepreneurial action' seems to be practical: the making of adventurous, creative or innovative exchanges (or 'deals') between entrepreneurial actors' home 'enterprises' and other parties with which that enterprise trades. Entrepreneurial actions – the making of innovative or creative exchanges – will occur across the range of organizational functions which make deals with suppliers, employees, journalists, regulatory bodies and so on, making entrepreneuring or 'venturing' occuring beyond the setting up of new ventures in the shape of new organizations (Watson, 2013).

One of the most important meta-analytic reviews on entrepreneurial intentions is Zhao, Seibert, and Lumpkin's (2009) work comprising of the relationship between personality, entrepreneurial intentions and performance. They outline three major research areas in the extant literature as described below.

2.5.2.1 Cognition.

With relation to entrepreneurship, cognition signifies "the knowledge structures that people use to make assessments, judgments or decisions related to evaluating opportunities and creating and growing ventures" (Mitchell et al. 2002, p. 97). Cognition research touches on questions concerning entrepreneurial intentions: "why do some people and not others recognize or create new opportunities; the definition of an entrepreneur: who they are, why they are different from

non-entrepreneurs, and why do some convert ideas into realities; and entrepreneurs' success: why are some entrepreneurs more successful than others" (e.g. Alvarez and Busenitz 2001; Arenius and De Clerq 2005; Baron, 1998).

There has been a gradual shift from the focus of understanding the phenomenon and constituents of cognition to the "entrepreneurial scripts and the impact of cognitions on evaluating opportunities" (Omorede, 2014).

2.5.2.2 Attitudes.

The study of individual intentions toward entrepreneurial behaviour or attitudes has emerged side by side to the inquiry of entrepreneurial cognition. Attitude is considered to be "a positive or negative evaluation of people, objects, events, activities, ideas, or generally one's surrounding environment" (Zimbardo & Gerrig 1999). Entrpreneurial attitude has been investigated from the angle and framework of theories and concepts of psychology.

2.5.2.3 The Self.

Other than focusing on the distinctive features of entrepreneurs and how they vary from managers or non-entrepreneurs through cognitions, emotions, their distinctive personality and their attitudes, recent research threads point to their orientation, meaningful experiences, guidelines for actions, and what distinctive features they accord to themselves.

Note. Adapted from Fayolle Ed (2014) Handbook of Research On Entrepreneurship: What We Know and What We Need to Know. Edward Elgar Publishing

Table 2.2
Development of Entrepreneurship Research

Research dimensions	Take-off phase 1980's	Growth phase 1990's	Search for maturation phase 2000's
Cognitive dimension	Exploration driven	Phenomenon and empirical driven → Fragmentation	Stronger theory orientation → Hierarchy
		Policy orientation	Knowledge orientation
	Practical orientation Pragmatic methodology	Improved empirical methodology	Widening of methodological approaches
Topical areas	Entrepreneur as an individual	Entrepreneurship as a process	Entrepreneurship as cognition
Social dimension	Strong links to society Individualism → Creation of social networks	Strong links to the topics Social infrastructure	Strong links to the domain research groups: -entrepreneurship -disciplinary
	Pioneers	Growth → Migration/mobility	Emerging 'research circles'
Contributions by core scholars	As creators of an interest in Entrepreneurship among: -external actors (policy makers) -internal actors (scholars)	As creators of an infrastructure (chairs, education programs, journals/ conferences/awards/ international research projects)	As creators of a theoretical understanding

Table 2.2 represents the progress in entrepreneurship research from the take-off phase in the early 1980's to the maturation phase in the 2000's, with the mainstream orientations in theoretical foundations and methodological approaches. The overarching aim of this thesis is to contribute to the maturation of autonomous and interdisciplinary entrepreneurship research by contributing to the building of a stronger theoretical understanding of the entrepreneurial processes, supported by a novel methodological approach.

The sections below will provide a critical overview of the literature on the various aspects of entrepreneurial cognition, attitude and representations of the self, side to side with their equivalents in the SCCT. The purpose of the contrastive presentation is to demonstrate the adequacy of SCCT in the current research. SCCT offers an approach and method that allows researchers to tap into those facets of entrepreneurial cognition that entrepreneurship cognition researchers, despite the various callings to further their research, have not been able to deliver.

The psychological character of entrepreneurs strongly affects their behaviour and actions in the entrepreneurial process (Alvarez and Busenitz 2001; Baron 1998; Davidsson and Wiklund 2001; Wiklund et al. 2011). Despite the great number of works on the entrepreneurial process through the psychology lens, there is a scarcity of meta-analyses providing an overview

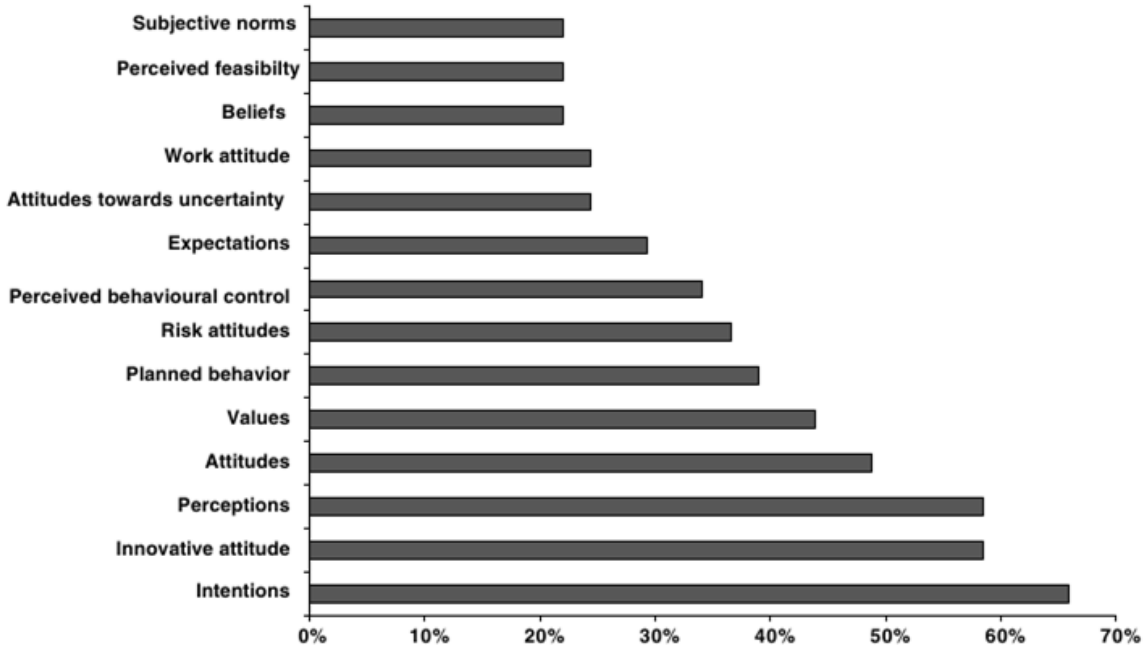

Figure 2.1. Prominent current topics of entrepreneurial attitude research. Adapted from "Entrepreneurship psychology: a review," by A. Omorede, S. Thorgren, and J. Wincent, 2014, International Entrepreneurship and Management Journal, p. 22.

of the frequency and detail of topics investigated within the domain. (Omorede, Thorgren, & Wincent, 2014) provided such an overview and assessed the frequency of prominent keywords within the extant body of literature. Figure 2.1 presents the frequency of keywords.

The topical areas are based on Shaver's 2003 five substantive key areas of entrepreneurship psychology research: personality, cognition, emotion, attitude, and self (Shaver, 2003). These five concepts capture major conceptual areas of psychology in general, and entrepreneurship psychology in particular (Brockhaus and Horwitz 1986). Pertaining to the focus of this thesis, the key area of 'attitude' is singled out and described in more detail.

2.5.2.4 Entrepreneurial intentions (EI).

Entrepreneurial intention is a rapidly evolving field of research, with a growing number of studies using entrepreneurial intention as a powerful theoretical framework. As Krueger (2009, p. 53) states, "The construct of intentions appears to be deeply fundamental to human decision making and, as such, it should afford us multiple fruitful opportunities to explore the connection between intent and a vast array of other theories and models that relate to decision making under risk and uncertainty".

Entrepreneurs' attitudes are germane to individual intentions toward entrepreneurial behaviour. The inquiry on attitude from the entrepreneurship lens operates with theories such as the theory of planned behaviour (TPB) (Ajzen 1991) and the theory of reasoned action (TRA) (Ajzen and Fishbein 1980). These theories postulate that it is possible to forecast individuals' planned behaviours through the impact of attitudes and intentions and that the motivational factors are in fact "determinants of the likelihood of performing a specific behaviour".

Kolvereid and Isaksen (2006), in their study to determine the attitudinal antecedents of self-employment, intentions to become self-employed as well as the actual entry into self-employment and applying the TRA and TPB, came up with the conclusion that the reasons for individuals' intentions to be self-employed (i.e., predictions from TRA), stem from salient beliefs, attitudes, and subjective norm, and not self-efficacy (perceived behavioural control. When Krueger et al. (2000) utilised the TPB and Shapero's model of the entrepreneurial event (EE) to investigate which types of intentions determine individuals' engagement in entrepreneurial activities, they found personal and situational variables to be the main predictors. These variables then have an impact on key attitudes exerting an influence on intentions.

The best predictor of a person's future activity proved to be his propensity toward that activity (Carsrud & Brännback, 2011) and researchers started using Ajzen's (1991) theory of

planned behaviour (TPB) to elaborate alternative models on entrepreneurial intentions. Krueger and Carsrud (1993) advanced an ancillary model using the entrepreneurial event model of Shapero (1982). The common feature of both models is that they are linear and unidirectional and there is no significant difference between them as to forecasting entrepreneurial behaviour (Krueger, Reilly, and Carsrud 2000).

Figure 2.1's frequency results demonstrate how inquiry on entrepreneurial attitudes is embedded in TPB, with 'intentions' (EI) and 'planned behaviour' being the most frequent keywords. 15 % of the respondents qualified their recent research as 'reasoned action', "suggesting that although intentions and planned behaviour continue to attract attention, extending those concepts to reasoned action is not equally popular". A closer look reveals that "attitude research is developing with breadth and specificity by focusing on more than only intentions" (Omorede et al., 2014) and expanding towards capturing 'perceptions'. The meta-analysis also offers suggestions for future research, such as "the interrelationships among personal attitudes, beliefs, perceptions, and value systems".

A number of global opinion and value surveys exist, and some of these track opinions, values, and attitudes that are relevant for entrepreneurship. One of them is the Euro-barometer survey, which has been conducted since 2000 is perceived to be the most extensive, and it has been extended in recent years also to cover entrepreneurial activity. Other sources of entrepreneurial attitudes include the Global Entrepreneurship Monitor (GEM) (also tracking attitudes) (Amoros & Bosma, 2014) and the International Social Survey (ISSP, 1997). Depending on the type of survey, a range of attitudes relating to entrepreneurship are measured, including: preference for being self-employed; reasons for preferring self-employment (or not); attitudes towards entrepreneurs (including success and failure); and self-efficacy perceptions. These constructs offer valuable insight into the feasibility, desirability, and legitimacy of decisions on becoming self-employed. While attitude surveys provide an insight into the opinion climate that prevails in a given country, they tend to suffer from the obvious disassociation from actual activity. Therefore, at best, opinion surveys offer a rough pointer into the potential for self-employment activity that prevails in a given country (Blanchflower et al., 2001). However, attitude surveys convey little information about how opinions and attitudes translate into action within a given con-text, although theory suggests that both feasibility and desirability considerations should play a role.

GEM's theoretical framework enables the study of reactions and preferences about entrepreneurship as a career choice as well as the manifestations of the societal appreciation of the career (Amoros & Bosma, 2014). These perceptions can influence the propensity of

individuals to start the entrepreneurial career as well as instigate other stakeholders such as investors, suppliers, customers and advisors to support entrepreneurs in their efforts.

2.5.3 Tackling unsolved issues in entrepreneurship research: Suggestion to use SCCT.

Social Cognitive Career Theory (Lent, 2013; Lent & Brown, 2013; Lent, Brown, & Hackett, 1994) is one of the most prominent models in vocational theories and research (Blustein et al. 2005), emphasizing "how culture, gender, and life events interact with individual career preferences to determine career aspirations and choice. Unlike psychological theories, which focus on individual attributes like self-concept and role salience, social psychological theories focus on ways that individual attributes are shaped by experiences and surroundings" (Brown & Lent, 2004, p.136).

Bandura's (1997) self-efficacy construct, and the larger social cognitive theory within which it is embedded (Bandura, 1986), have initiated a wave of research on career behaviour over the past 25 years. Bandura's (1986) general social cognitive theory emphasizes the complex ways in which people, their behaviour, and environments mutually influence one another. The theory explains human behaviour as "a product of the interplay of intrapersonal influences, the behaviour individuals engage in, and the environmental forces that impinge upon them" (Bandura 2012, p.11).

Consistent with Bandura's theory, SCCT emphasises people's capacity to direct their own vocational behaviour (human agency) – with equally taking stock of diverse personal and environmental influences (e.g., socio-structural barriers and supports, culture) that "serve to strengthen, weaken, or, in some cases, even override human agency in career development". SCCT taps into the interaction between self-efficacy beliefs, outcome expectations, and personal goals that are necessary for exerting agency in career development. In brief, self-efficacy is "hypothesized to influence the outcomes expected of behaviour; together they predict the interests an individual develops, which predicts intentions for goals; and those in turn predict actions and performance" (Fouad & Guillen, 2006).

SCCT has four different modules:

- career choice;
- development of interests;
- predicting educational and occupational performance; and
- predicting work and life satisfaction (Lent, 2004, Lent & Brown, 2006)

Although not all research on social cognitive factors of career development is directly linked to SCCT, many studies have tested the theory's basic hypotheses (Lent & Brown, 2006)

p.17). SCCT has specific and testable propositions (e.g., self-efficacy beliefs translate to goal actions when perceived barriers are lower and perceived environmental supports are higher) and implications for practice. The target of change for SCCT is the individual, and the change can be external or internal. Figure 2.2 depicts the career choice module of the model.

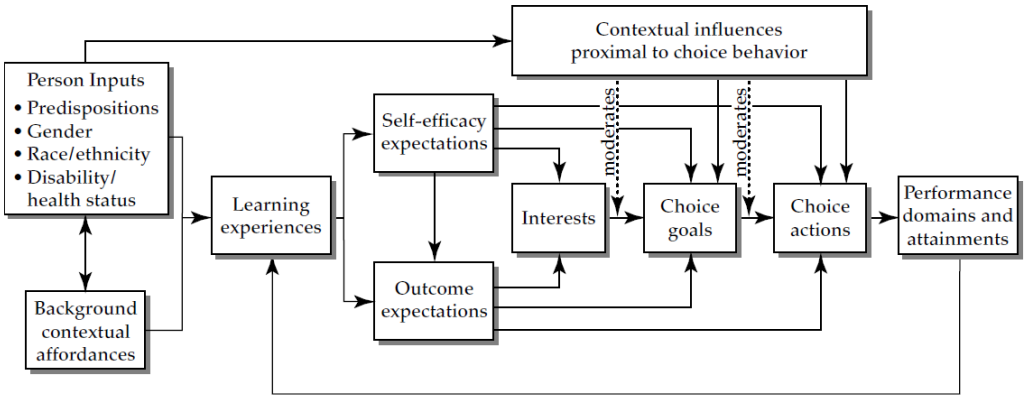

Figure 2.2. Career decision-making module of the SCCT. Adopted from Lent, R. W. & Brown, S. D. (2006). On conceptualizing and assessing social cognitive constructs in career research: A measurement guide. Journal of Career Assessment, 14(1), 12–35. Sage Publications.

The question of independence of constructs has drawn a considerable amount of attention. Lapan and Jingeleski (1992) concluded that the constructs of self-efficacy, interests, and outcome expectations were not sufficiently distinct to be labelled different constructs. Tracey (1997) supported this conclusion, based upon his analysis that showed a similar structure for interests and self-efficacy. In contrast, others including Isaacs, Borgen, Donnay, and Hansen (1997), Donnay and Borgen (1999), Tracey and Hopkins (2001), and Rottinghaus, Lindley, Green, and Borgen (2002) have argued that although interests, skills confidence, and self-rated abilities are related, they are sufficiently distinct to be considered separate constructs.

2.5.4 Self-efficacy in entrepreneurial psychology.

Entrepreneurial self-efficacy is perceived as the belief that one has the necessary skills to succeed in creating a business. It is seen to exert significant influence on the propensity to engage in an entrepreneurial career (Wilson, Kickul, & Marlino, 2007). A main characteristic of self-efficacy is that it is seen to be "context, task and domain specific" (Bandura, 1989, 1992, 1997). Self-efficacy must be distinguished from the concept of 'locus of control', which is a generic construct depicting individuals' "overall belief in the power of their own actions across a variety of situations, while self-efficacy refers to an individual's self-confidence in specific

tasks and situations" (Boyd & Vozikis, 1994). "The more task specific one can make the measurement of self-efficacy, the better the predictive role efficacy is likely to play in research on the task-specific outcomes of interest" (Bandura, 1997).

While it would be more useful for the field of inquiry, scholars argue that a composite measure of self-efficacy cannot offer great predictive power (e.g., Begley & Boyed, 1987; Chen et al., 1998; De Noble et al., 1999; Forbes, 2005; Kolvereid & Isaksen, 2006). There is a common understanding that ESE is best conceptualised as a multi-dimensional construct, yet empirical research has been using "limited-dimensional or even unidimensional measures of ESE" (Arenius & Minniti, 2005; Baum & Locke, 2004; Baum et al., 2001; Kristiansen & Indarti, 2004). There are extreme situations where researchers measure ESE by "simply asking subjects to respond to one or two questions regarding their confidence in starting a new venture" (McGee et al., 2009).

2.5.5 Self-efficacy in SCCT.

It can be stated that career self-efficacy is one area in career literature which has been studied the most frequently (Choi et al., 2012). Career self-efficacy beliefs are regarded as a pivotal aspect of SCCT, which is theoretically presumed to indirectly affect one's career choice and performance via career interests. Consistent with Social Cognitive Career Theory (SCCT), self-efficacy is enhanced by contextual affordances proximal to career decisional behaviour, and recent research calls for a more extensive exploration of these affordances, even from a multidisciplinary approach.

As career self-efficacy research expanded and developed, researchers formulated the requirement to differentiate self-efficacy by different career tasks. Hackett and Betz (1981) introduced two particular domains of career self-efficacy: "*the content and process domains* of career decision making". The content domain of career self-efficacy is used in "specific career fields, such as math, writing, or science; whereas the process domain of career self-efficacy centers on self-efficacy in using the necessary strategies for successfully navigating a decision-making process". This distinction is followed by the understanding that self-efficacy is domain-specific (Betz & Hackett, 2006). Amongst the first studies were the ones which investigated career self-efficacy for various college majors using domain-specific measures (Fouad, Smith, & Zao, 2002; Lent et al., 2008; Lent et al., 2003). Further examples of domain-specific self-efficacy measures are career search activities (Solberg et al., 1994) and career decision-making behaviours (Taylor & Betz, 1983).

The relationship between parallel measures of self-efficacy and interests has been intriguing researchers for long. Interest-confidence correlations are typically in the range of β = .40 to β = .50: for example, β = .53 in the Lent et al. (1994) meta-analysis and β = .46 in the Lent et al. (2006) sample of engineering students. Many researchers (e.g., Lent et al., 1994, 2000) argued that self-efficacy impacts interest development, and Bandura (1997) agreed with it (Betz, 2007).

Additionally, Bandura (1997) "identified several factors that influence the development of self-efficacy belief; among them is enactive mastery (successful performance) and vicarious experience (modelling), and noted that these influences should be considered in relation to the determinants of efficacy that include an assessment of personal and situational resources and constraints. Because self-efficacy belief is inherently an intuitive process, an individual interprets, weighs, and integrates the information to create an evaluative process that produces a judgment concerning capability (i.e., self-efficacy belief) toward subsequent, similar behaviour".

Studies on entrepreneurship as career choice „show that exposure to role models had a positive effect on intention, especially in the context of career decisions. Such exposure may lead to an increase in motivation to start new ventures by facilitating information regarding possible opportunities, by providing specific guidance and support, or by providing a supporting environment that encourages entrepreneurial behaviour" (Allan & Duffy, 2013; Townsend, Busenitz, & Arthurs, 2010; Tyszka, Cie'slik, Domurat, & Macko, 2011) . Educational setting may be such a supporting environment (Oosterbeek, van Praag, & Ijsselstein, 2010; Giacomin et al., 2011; Martin et al., 2013).

Entrepreneurship education programs are seem as exerting a positive effect on students' inclination to become entrepreneurs (Storey & Greene 2010; (Global et al., 2012; Onstenk, 2003; Rauch & Hulsink, 2014; Robinson et al., 2012; St-Jean & Mathieu, 2015; Vigoda-Gadot & Grimland, 2008; Wongnaa & Seyram, 2014). Scholars caution that just teaching entrepreneurship courses is not enough for influencing the propensity of young students to develop their own commercial activity or even to constantly search for value creation and sustainable change (Edwards & Muir, 2012; 2010; Campanella, Della Peruta, & Del Giudice, 2013; Edwards & Muir, 2012; Scuotto & Morellato, 2013; Turker & Selcuk, 2009). More inputs are required to reach such goals and for this reason entrepreneurship education needs to address a great number of intrinsic and extrinsic factors that are likely to predict students' entrepreneurial intentions (Volkmann et al. 2009).

2.5.6 Goal and motivation.

Carter et al. (2003) defined six major reasons or motivations for starting a new venture, namely: self-realization, financial independence, role, innovation, recognition, and independence. These reasons may be conceptualised as outcome expectations from the perspective of SCCT (Carsrud & Brännback, 2011).

2.5.6.1 Self-realization. It refers to the "motivations involved in pursuing self-directed goals" (Carter et al. 2003). This measure taps into Birley and Westhead's (1994) need for personal development and McClelland's (1961) need for achievement. Entrepreneurial activity is most likely to be taken up by individuals with a high level of self-realization as "this provides them with challenges that are associated with goal achievement and personal development " (Carree and Thurik 2005). Consequently, higher levels of self-realization will lead to higher propensity to EI.

2.5.6.2 Financial success is described as "an individual's desire to earn more money and achieve financial security" (Carter et al. 2003). Research results are ambiguous in this field. McQueen and Wallmark (1991) found that "most of the founders of new ventures did not establish their companies to generate wealth, but rather to fulfill their goal of commercializing their technologies. On the other hand, Scheinberg and MacMillan (1988) and Birley and Westhead (1994) both labeled financial success as perceived instrumentality of wealth and found it to be related to EI".

2.5.6.3 Role is the "individual's desire to follow and emulate the example of others" (Birley and Westhead 1994; Carter et al. 2003; Shane, Kolvereid, and Westhead 1991). Role models can help individuals in their further development by learning new tasks and skills and therefore individuals tend to be attracted to role models (Gibson 2004). On top of this attraction, career decision-making is largely influenced by potential role models (Kolvereid 1996; Krueger, 2007).

Several studies have demonstrated and verified the strong impact of individual motivation on students' EI , for example in (Saeed, Yousafzai, Yani-De-Soriano, & Muffatto, 2014) , where perceived desirability of starting a business has been found to significantly impact the formation of EI. Three factors exerted a significant influence on the formation of EI (N = 805): self-realization ($\beta = .37^{*}$, $p < .05$), recognition ($\beta = .65^{**}$, $p < .05$), and role ($\beta = .30^{*}$, $p < .05$) , while no significant impact has been found for financial success innovation, and independence. Formerly, role models' impact has been investigated primarily from the aspect of career choices or general business behaviour, highlighting the salient effects of role models on "specific careers and on general motivation in the pursuit of career objectives" (BarNir et al., 2011)

Pertaining to the EI in particular, role models' direct and indirect effects on intention on the decision to choose an entrepreneurial career have recently been demonstated (BarNir et al., 2011). The findings in these works have been found instrumental in the design of Study 1 and in particular in the establishment of the measure of role models. The entrepreneurial role model can be perceived as part of the social cognition leading to the career decision-making, and will be further discussed below amongst the distal variables determining entrepreneurial intention.

2.5.6.4 Innovation relates to an "individual's desire to accomplish something new" (McClelland 1961). It is perceived as the principal cause driving EI (Mueller and Thomas 2001) and can impact venture performance (Utsch and Rauch 2000). In particular, Feldman and Bolino (2000) found that individuals with a strong potential to use their skills and be creative were especially motivated to become self-employed because they saw this as an opportunity for innovation.

2.5.6.5 Recognition "describes an individual's desire to gain status, approval, and recognition from family, friends, and the community" (Carter et al. 2003). Manolova, Brush, and Edelman (2008) defined recognition as an "individual's position relative to others in a given social situation". Gatewood (1993) defined recognition as a "second-level outcome or reason for desiring to start a new venture".

2.5.6.6 Independence describes an "individual's desire for freedom, control, and flexibility in the use of time" (Birley and Westhead 1994; Carter et al. 2003; Scheinberg and MacMillan 1988). There is a correlation between individuals' level of need for independence and the degree of freedom in the career that they seek for. Individuals that "prefer to make decisions independently, set their own goals, develop their own plans of actions, and control goal achievement themselves" have are prone to opt for the entrepreneurial career (Wilson, Marlino, and Kickul 2004).

In addition to the six major reasons identified by Carter et al. (2003), there is *Entrepreneurial success*. Up to date, there has not been a consistent definition of this concept in the literature, only indication as to the ways of grasping the concept. For guidance, here are the instructions by someauthors: "given that relations between independent variables and entrepreneurial success can depend upon the particular operationalization of success (Murphy, Trailer, & Hill, 1996; Rauch & Frese, 2007), determinants of entrepreneurial success may be best studied considering a variety of success measures at the same time" (see also Delmar, Davidsson, & Gartner, 2003). Among the variety of success outcomes, there are categories such as employment growth, profitability, and liquidity (credit rating) as well as founders' satisfaction, (Obschonka, Silbereisen & Schmitt-Rodermund, 2010).

2.5.7 Entrepreneurial interest/intent in SCCT.

The perceived desirability of establishing a business is seen as an indispensable constituent in the formation of EI. There are three factors 'responsible' for the development of EI: self-realization, recognition, and role whereas financial success, innovation, and independence (Saeed et al., 2014).

As early as 1994, Lent et al. had already reported a moderate relationship between self-efficacy and interests. Rottinghaus et al. (2003) in their meta-analysis comprising of 60 empirical independent samples (N = 39,154) in which relations between self-efficacy and interests found that *age group* may moderate the self-efficacy/interest linkage. Collapsing across the domains, the relationship was strongest for working adults (r = .62) followed by college students (r = .57) and adolescents (r = .50). They instigate in their paper more studies emphasizing the nature of the linkages between self-efficacy and interests. Some other authors (Nauta et al., 2002; Tracey, 2002) have addressed the possibility that self-efficacy and interests have *reciprocal effects* upon each other.

2.5.8 Outcome expectations in SCCT.

Outcome expectations, as classified by Bandura (2001), "are not the characteristics of agentive acts; they are the consequences of them" (p. 6). That is, outcome expectations are "the results or desired outcomes of intentional actions in which individuals choose to engage" (Bandura, 2001). Bandura (1986) stated that outcome expectations are "derived from observing situations and events in the individual's environment as well as actual outcomes resulting from actions the individual has taken". Bandura (1997) described three varieties of outcome expectations, (a) physical outcomes that follow behaviour, (b) social reactions that can be positive, including approval, recognition, monetary reward, and power; and negative, including "disapproval, feeling shamed, social rejection, and being deprived of privileges or having penalties imposed. The third form of outcomes is self-evaluations, both positive and negative, that accompany actions".

While self-efficacy beliefs are believed to be the stronger predictor of behaviour and have been more extensively researched, outcome expectations are theorized to provide a unique contribution to the likelihood of attempting a given behaviour (e.g., Gore & Leuwerke, 2000). Outcome expectations are hypothesized to directly affect interests, intentions, and activities.

Using the lens of SCCT entrepreneurship is perceived to be rather a process and cannot be grasped in a point in time. Therefore, the consequential entrepreneurial behaviour is defined as follows: "An entrepreneurial act or process is an attempt to respond to, and thereby change, a

set of circumstances (perceived in a positive or negative light) with a view to creating a desired outcome" (Chell, 2000).

2.5.8.1 Relationship between self-efficacy and outcome expectations.

One of the most encompassing meta-analytical works on the SCCT constructs was conducted by Choi et al., 2012. They inspected 34 articles with a total sample size of 18,388 focusing on the Career Decision Self-Efficacy Scale (CDSES; Taylor & Betz, 1983), a measure of process-domain self-efficacy, and they found that the effect size for the relationship between CDSE and vocational outcome expectation was moderate. This confirmed the SCCT proposition that career self-efficacy predicts career outcome expectations (Lent et al., 1994), especially having regard to the stipulation of the Social cognitive theory according to which "the influence of self-efficacy on outcome expectations is greater for tasks where performance quality is crucial for achieving desired outcomes" (Bandura, 1989). The authors are satisfied with this moderate effect size as the result of the relationship between CDSE and career outcome expectations.

Sheu et al. (2010) point out that since the introduction of social cognitive theory to the field of vocational psychology, more empirical attention has been given to self-efficacy than to outcome expectations. This differential focus may reflect the relative weight given to the two constructs within Bandura's broader social cognitive theory. Therefore, Fouad and Guillén (2006, p. 331), "pointed to the lack of attention given to outcome expectations in the vocational literature and the need to further attend to the operational definition of outcome expectations, their precursors, and their role in SCCT".

Not all researchers end up with the same prorogation of the relationship between self-efficacy and outcome expectations. (Mercedes Inda-Caro & Pena-Calvo, 2015) for example, it their analysis of the variables to technological interests in a sample (N = 2,364) of 10th-grade Spanish students found that technological self-efficacy contributed to technological interests ($\beta = .06^{***}$, $p < .001$) and technological outcome expectations ($\beta = .16^{***}$, $p < .001$). Perceived social support and perceived social barriers were related to technological self-efficacy, ($\beta = .48^{***}$, $p < .001$; $\beta = .-.10^{***}$, $p < .001$) technological outcome expectations ($\beta = .08^{*}$, $p < .05$; $\beta = .-.02^{***}$, $p < .001$), and technological interests ($\beta = .64^{***}$, $p < .001$; $\beta = .-.16^{***}$, $p < .001$). Contrary to what would have been expectable from the SCCT model, their results did not support the hypothesis that outcome expectations contribute to interests.

2.6 Distal Variables in the Entrepreneurial Psychology Intention Models: Prototypical Descriptors of the Entrepreneurial Role; Knowledge, Skills, Abilities and Other Characteristics (KSAOs)

Apart from investigating the direct effects of motivation on proactive career behaviours, it is also important to consider the more distal antecedents of proactive motivation (Hirschi et al., 2013). Role models can be perceived as one of the distal variables exerting a positive effect on proactive career behaviours. As sources of vicarious learning, they can provide encouragement and support (Bandura, 1986). Transposed into the entrepreneurial career decision-making scenario, "entrepreneurial role models can also increase perceptions of ESE by providing examples of enactive mastery and vicarious learning that are associated with entrepreneurial learning through observing others' behaviours or being exposed to their successes and failures". In other instances, role model theory proved to be useful to explain - inter alia – the transfer of the entrepreneurial career from generation to generation (Buunk et al., 2007; Minniti & Bygrave, 2001; Rivera et al., 2007).

Role model perception is essential in the shaping of motivation in the pursuit of career objectives (Gibson, 2003). Individuals can make use role models to assess their own abilities, motives, and possible actions, and in this way, they enact social comparison. Their potential future image of what they can achieve is thus shaped by this comparison (Blanton et al., 2001; Buunk et al., 2007). Role model comparison can increase efficacy beliefs by providing concrete and efficient solutions of how to manage risks and challenges, implemented by successful entrepreneurs (Zhao et al., 2005).

Self-employment, as discussed before in the section on the emerging career models, is a type of career self-management requiring a wider set of knowledge, skills, abilities, and other characteristics (KSAOs). Propensity of being self-employed can change across physical boundaries and time space and is affected by variables such as variations in the socio-demographic characteristics of the population (age, gender, and education), economic environment and changing attitudes toward entrepreneurship.

KSAOs can be interpreted as distal dispositions, including "non-cognitive and non-ability dispositions that affect behaviour and performance indirectly. Such traits include biological determinants (such as temperament), broad personality factors (such as the Big Five), motives (such as achievement motive), and generalized attitudes and beliefs (such as generalized self-efficacy)". Thus, this study uses the term personality traits generally to describe the distal dispositions of entrepreneurs.

Personality traits are distal variables that are predictors of entrepreneurial behaviour (Rauch & Frese, 2000). Personality traits are defined as "dispositions to exhibit a certain kind of response across various situations (Caprana & Cervone, 2000); personality traits are also enduring and show a high degree of stability across time" (Roccas, Sagiv, Schwartz, & Knafo,

2002). Such traits include "biological determinants (such as temperament), broad personality factors (such as the Big Five), motives (such as achievement motive), and generalized attitudes and beliefs (such as generalized self-efficacy). Different propensities to act will facilitate or impede future entrepreneurs' actions and behaviours".

This research will merge the multifaceted qualities and roles that entrepreneurs display while preparing, setting up or managing an already established company in order to harmonise it with SCCT's distal disposition constituents. The new construct will be temporarily named: Prototypical descriptors of the Entrepreneurial Role and will be investigated, along with other constructs, in Study 1.

2.6.1 Entrepreneurship and subjective well-being (flourishing).

The well-being impacts of self-employment is an area of inquiry that has been gaining attention and terrain in the past few years (Binder, 2013; Tang, Siu, & Cheung, 2014) . Although subjective well-being has been discussed in relation to work factors (Blustein, 2008), well-being itself is a complex subject of research, relating to optimal experience and functioning (Ryan & Deci, 2001). Psychological inquiry into well-being is, in part, a reaction to the field's historical emphasis on pathology and maladaptive functioning. Myers and Diener's (1995) model includes leading a life characterized by purpose and having a quality connection to other people. There are two prevalent approaches to conceptualizing well-being. The first being hedonic well-being, which involves pleasure and positive affect. The second is eudemonic well-being, referring to the fulfilment of human potential and the derivation of meaning and purpose from life pursuits (Ryan & Deci, 2001). Subjective well-being, which is one area of research in the domain of well-being, comprises of "emotional responses, domain satisfactions, and global judgments of life satisfaction" (Diener, Suh, Lucas, & Smith, 1999, p. 277). This means of framing subjective well-being takes into account both hedonic and eudemonic dimensions of well-being, and provides a template for empirical examination of the dimensions of well-being. Samman's (2007) proposed that well-being can be examined by measuring four concepts that tap into both hedonic and eudemonic dimensions of well-being: meaning in life, relatedness, life satisfaction, and happiness (Doenges, 2011).

Most recent attempts to grasp all the facets of subjective well-being and operationalise it into a single construct call for an extended version of it and call it 'flourishing'. Huppert and colleagues advocate a multi-dimensional construct comprising of positive aspects of mental functioning: competence, emotional stability, engagement, meaning, optimism, positive

emotion, positive relationship, resilience, self-esteem, and vitality (Huppert & So, 2013; Huppert & So, 2009).

The significance of the area of inquiry is demonstrated by the fact that one of the most encompassing surveys on the intensity and regulatory framework- as well as societal conditions of entrepreneurial activity, GEM 2014's version consecrated a separate section to the topic. The contributors' findings reveal initial evidence that "involvement in entrepreneurial activities, both in the early-stage and established phases, is related to personal evaluation of higher subjective well-being, and this holds true for all countries regardless of their stage of economic development (factor-, efficiency- or innovation-driven economies)" (Doenges, 2011; Landström et al., 2012).

2.6.2 SCCT: Interest and satisfaction.

SCCT's (Lent, Brown, & Hackett, 1994), relationship between individual differences, environmental factors, and behaviours, explaining occupational interests and goals entails two chief mediating variables. They are self-efficacy and outcome expectations, which are predictive of personal interests, personal goals, and, ultimately, career success (Lent et al., 1994; Tokar, Thompson, Plaufcan, & Williams, 2007). The extension of SCCT to work satisfaction (Lent & Brown, 2006) affirmed "that affective states and experiences are one important type of individual input in SCCT that can directly shape self-efficacy and indirectly shape career expectations" (Conklin, Dahling, & Garcia, 2013). Lent and Brown (2006) suggested that individuals' satisfaction is a function of their levels of self-efficacy: that is, the higher level of self-efficacy, the more likely that they can achieve in work or school environments. Authors have recently started calling for additional research to identify if, students' high affective commitment and fit perceptions predispose them to acquire better learning experiences and if there is a mediated link between commitment, self-efficacy, and outcome expectations (Conklin et al., 2013). This thesis will therefore contribute to this line of inquiry by exploring the link between the constituents of SCCT's triad complemented by calling as a facet of self-commitment and it will investigate how all these constituents contribute to the interest-satisfaction (flourishing) axis.

2.6.3 Perceived desirability: Individual motivations.

Individual perceptions (especially, self-efficacy and role model) are perceived to be most significant precursors of entrepreneurial intention (Krueger et al. 2000; Linan, 2011). The reasons of entrepreneurs to start-up will influence on their engagement in the activities relating to the preparation of the actual start-up, in other word, in their EI (Ajzen 1991; Kolvereid 1992; Krueger and Brazeal 1994; Krueger and Carsrud 1993). In the TPB, these reasons are "salient beliefs, which determine individuals' attitudes toward self-employment". Word of caution: the study of particular motives related to EI have shown mixed results. Scheinberg and MacMillan (1988) reported that "the need for approval, the perceived instrumentality of wealth, the degree of community, the need for personal development, the need for independence, and the need for escape are factors which have led individuals toward new firm formation".

Decisive attributes of entrepreneurs are generic rather than specialised: they have to have good people's skills enabling them to attract resources, to be creative to develop ideas and to be autonomous, independent and persistent to follow a vision (Lautenschlager & Haase, 2011).

Simpson, Tuck, & Bellamy (2004) established 4 substantive categories of entrepreneurs based on their approach to the entrepreneurial role and to success in particular: 'The Empire Builder', The Happiness Seeker', The Vision Developer' and 'The Challenge Achiever'.

2.6.3.1 'The Empire Builder'. This entrepreneur's work philosophy is centered on growth, profitability and teamwork. Everyonein his team is strongly and permanently motivated to achieve results, ans step up from one level of targets to the next one. Team members' vision is that by their standard values – which is commonly to be the best company in the market – they achieve cohesion and cooperation that will facilitate their work.

2.6.3.2 'The Happiness Seeker'. For this entrepreneur, the main recipe for success is to make team members happy which sentiment they can then transfer to the customers. Self-fulfilment, attained by the belief that they have done the best they could in the job is much more important than the pecuniar benefits gained from the work. Work enjoyment, sharing and being honest with themselves and others are the key aspirations. Business growth is not desirable at the detriment of the work enjoyment and the positive ambiance at the workplace.

2.6.3.3 'The Vision Developer'. For this entrepreneur, "vision, commitment and enthusiasm are described as personal success characteristics success is seen as the collective sense of achievement within the firm and recognition from others in the marketplace". The organisation can organically develop, supported and nurtured by shared values, vision, creativity and building on strengths (see Hodgetts and Kuratko, 1992; Gadenne, 1998; O'Gorman, 2001; Nandram, 2002).

2.6.3.4 'The Challenge Achiever'. This entrepreneur regards achievement and recognition as critical success factors and is driven by the challenges. Serial entrepreneurs tend to be those entrepreneurs, who, the initial challenges accomplished, are eager to rush to the next, more complex and demanding challenges (Linan, 2013).

It is a shared criticism among entrepreneurial psychology scholars that the widely-used models of entrepreneurial intention discussed above do not fully explain societal embeddedness and do not explore additional attributes that distinguish entrepreneurs from non-entrepreneurs (Fayolle et al. 2014; Liñán et al. 2011, Fayolle and Liñán 2014, Carsrud and Brännback 2011). In addition, there are a number of relevant gaps in knowledge concerning the role, which values and motivation play in entrepreneurship. In particular, the articulation of values and motivations within the entrepreneurial process perspective and the widely used entrepreneurial intention models could be very promising (Fayolle et al. 2008; Liñán et al. 2011, Carsrud and Brännback 2011) in a more holistic understanding of entrepreneurial processes.

2.6.4 Suggested future research directions in entrepreneurship psychology research.

In their research on parallel predictors of EI, authors neglected the boundary conditions for competing theories. While the direct relationships between EI and its determinants have continued to be extensively researched, little has been found out about how "beliefs, attitudes, and perceptions influence each other and cause individuals to hold more positive intentions toward starting a business" (Schlaegel & Koenig, 2013). Recent calls (Carsrud & Brännback, 2011; Moriano, Gorgievski, Laguna, Stephan, & Zarafshani, 2012;) therefore suggest an exploration of contextual factors and their potential moderating effects in order to understand the direct effects of determinants.

Proximal constructs, namely, "processes related to personality such as cognitive or self-regulatory processes leading to even stronger relationships" are also not fully explored, with their research starting as late as the early 2000's (Baum et al., 2001; Chen et al, 1998; Baron 2004). Rauch and Frese (2005) demonstrated higher relationships between specific traits with business creation and success than the broader traits. *Broad personality traits* are highly aggregated across time and situations and therefore do not predict specific behaviours in specific situations. Therefore, there is only a weak although significant relationship between broad personality traits and Entrepreneurial success. A similar effect of specificity was found for employee performance as well (Tett, Steele, & Beaurgard, 2003).

Most studies of the personality approach to Entrepreneurship ignore the *level of specificity* issue. Global traits as aggregated characteristics are likely to be related to aggregate classes of

behaviour but not to specific behaviours (Epstein & O'Brien, 1985). Thus, independent and dependent variables should be at the same level of generality to produce high and meaningful relationships. In the TPB, (Theory of Planned Behaviour or TPB; Ajzen 1991; Krueger et al. 2000; Liñán and Chen 2009; Moriano et al. 2012; van Gelderen et al. 2008) for example, Perceived behavioural control (PBC) refers to people's perceptions of their ability to perform that behaviour. Indeed, the construct self-efficacy has replaced PBC in numerous studies on entrepreneurial intentions (Kolvereid and Isaksen 2006; Krueger et al. 2000; Moriano et al. 2012; van Gelderen et al. 2008). It is at this conceptual juncture that vocational psychology literature will be called upon, not only because that discipline's raison d'etre is occupational choice but also because a core theory of vocational psychology addresses the construct of self-efficacy more than any other theory.

2.6.5 Suggested research avenues for the development of the SCCT model.

Existing social cognitive research on process aspects of career development (e.g., decision making) often focuses on self-efficacy, while overlooking other theory-based predictors of career behavior. Inclusion of outcome expectations, goals, environmental supports and barriers, and personality variables may clarify the processes underlying adaptive career behaviour (Lent & Brown, 2013).

Some studies have investigated the *temporal ordering* of self-efficacy, outcome expectations, interests, and goals as well as the bidirectional relations of certain variables to one another over time (Lent et al., 2008). For instance, Lent, Larkin, and Brown (1989) suggested that, by motivating task practice, interests provide the opportunity for additional personal and vicarious learning experiences, which can yield subsequent changes in task-related self-efficacy. It is also possible that increases or decreases in outcome expectations associated with a particular task affect one's interest in the task, which, in turn, affect task practice and self-efficacy. Moreover, it has been hypothesized that progress (or lack thereof) in pursuing one's goals (one way to index personal performance accomplishments) can raise (or lower) self-efficacy (Lent & Brown, 2006).

Another useful direction for the extension of research on SCCT's choice model would be to include at least three measurement points which would be necessary to adequately test hypothesized mediator relationships (e.g., interest as a partial mediator of the relations of self-efficacy and outcome expectations to goals) (Lent & Brown, 2013).

2.6.6 Cross-cultural implications.

Since its publication, SCCT has stimulated a considerable body of empirical research. Despite the increasing popular focus on the cross-cultural validity of SCCT, insufficient studies have been performed from a cross-cultural perspective. So far, verification of the model has been restricted to samples of American college and high school students. and some international studies found support for the potential usefulness of SCCT with Portuguese (Lent, Paixao, Da Silva, & Leitao, 2010) and Italian high school students (Lent, Brown, Nota, & Soresi, 2003), as well as Taiwanese students (Liu, Jack, & Chiu, 2008) and Korean students (Shin-ye Kim & Fouad, 2015). This thesis attempts to bridge the cross-cultural gap by exploring the predictive utility of SCCT for explaining entrepreneurial interest in a Central and Eastern European setting, which is Hungary. In this respect, it will be a pioneer study as no research has been done in this area in this geographical location.

2.6.7 New extended model of entrepreneurial interest.

The response to explaining entrepreneurial activities' environmental variables, societal embeddedness and connectedness to the world of work lies in the wider theoretical framework of the Psychology of Work (Blustein, 2006) and the Emancipatory Communitarian Approach (EC, Blustein, McWirther and Perry, 2005) and in the Social Cognitive Career Theory (SCCT; Lent et al., 2002).

In their recommendations on how to adopt and implement the EC approach, Blustein and colleagues suggest that "vocational psychologists incorporate social advocacy and activism into their notions of research and practice" (Blustein et al., 2005, p.168). The EC perspective is relevant to entrepreneurship education because it implies empowerment, both at the level of individual, communities, and society-at-large. Given the originating context of this research—the economic malaise of Hungary—it is important to state that EC, active citizenship, and entrepreneurship are not incompatible. Active citizenship and entrepreneurship are taken as vehicles for improving social and economic well-being.

Blustein and colleagues (2008) also encouraged counselling psychologists and those in related fields to support clients in overcoming barriers to higher order needs not only through individual counselling but also through social justice advocacy at a societal level. A more complete understanding of mediators in the link between perceiving a calling and living a calling has the potential to advance advocacy by helping to uncover the reasons why those who have a calling are actually able to engage in meaningful, other-oriented work (Duffy & Autin, 2013).

Fouad et al. (2006) recommend further exploration of "hypothesized paths among self-efficacy, outcome expectancies, interests, and choice in additional areas of career decision-making, including a wide range of subject matters and populations". Thus, in this study the aim is to explore SCCT's core hypotheses that self-efficacy and outcome expectations predict occupational interest and that self-efficacy as the primary motivational factor also predicts outcome expectations. In addition, the design of the thesis draws on authors' suggestion that it would be valuable to examine fuller versions of the choice model (e.g., including contextual supports and barriers) in future research (Lent et al., 2008).

The section below will focus on the rationale for including the construct of calling in the extended model of entrepreneurial career decision-making. As calling is one of the most important constructs to be tested in the extended model, a critical review of the literature will be followed by further elaboration of the rationale.

2.7 Calling

2.7.1 Rapprochement: Calling in the protean career development.

The protean approach captures career as embodying calling, a term defined by Weber (1958), depicting it as a duty in professional activity and a "devotion to a higher ideal" (Goldman, 1988, p. 110). Hall (2004) equated work with calling providing the individual lives it as a calling and when the community is served by this work. Hall and Chandler (2005, p. 162) claim that "a calling involves a protean career orientation and having a strong sense of purpose". Specifically, a protean career is driven by the need for self-fulfilment and purpose that extends beyond the boundaries of the self. Those belonging to this career type favour sustained learning, search for new learning cycles in the sequence of jobs they hold (Hall & Mirvis, 1996).

Hall (2004) claims that protean career adherents must possess two 'metacompetencies' – adaptability and self-awareness. Employees who are resilient and have self-awareness can develop new skills by understanding their own past positive and negative experiences (Briscoe and Hall, 1997). People can fall into to trap of missing out on their career path and imitating someone else's when they are very compliant without focusing on their personal motivations. By the same token, people with sufficient self-awareness but not resilient enough can forgo taking action. People with little self-awareness and not compliant enough are riveted and are prone to obeying orders (Hall, 2004). Calling has been perceived to be "decisive form of subjective career success and as an important promoter of career meta-competencies, such as identity, adaptability and career decidedness" (Hagmaier & Abele, 2012)

2.7.2 Expanding the nomological network around calling.

Recent research has made attempts to refine and expand the nomological network around this relatively new construct. While there is a plethora of definitions of the construct, owing to the increased interest in its research over the past 10 years, the pressing conceptual question is, "how to characterize the key facets of a calling and how to distinguish it from separate, but similar, constructs" (Hall & Chandler, 2005, p.161). The section below will follow a chronological development path of the construct detecting significant differences in its conceptualisation.

It is generally accepted that calling is equated with a job having a personal meaning/purpose that is embodied in serving others (Dik & Duffy, 2009). The source of people's calling is explained in diverse ways. Historically, *calling* was a term used in a religious context implicating that God or a higher power 'called' the individual to accomplish work resulting in the fulfilment of a larger purpose (Hardy, 1990). Calling source conceptualizations today embrace a range of concepts such as "calling arising from a sense of destiny (e.g., what one is meant to do) or a perfect fit (e.g., a career that is an ideal match for one's skills, interests, and values)" (Bunderson & Thompson, 2009; Dobrow & Tosti-Kharas, 2011). Dik and Duffy (2009) depict calling as a "career that arises from an external source (e.g., God, societal need, family legacy), contributing to a sense of meaning/purpose and that is used to serve others in some capacity". In this definition, it ensues from the external summons feature that calling is essentially distinguished from the notion of vocation. The investigation of the relation of calling and career development variables supported by longitudinal research has only begun (Dobrow, in press; Dobrow & Tosti-Kharas, 2011; Duffy, Manuel, Borges, & Bott, 2011) and commonly reported positive relations.

2.7.3 Historical overview of calling in work.

While the topic of calling in work is a new phenomenon in the management literature, the concept is deeply rooted and has been having long Western cultural and religious traditions. To the ancient Greeks, work was a chore obstructing humankind from pursuing more sublime activities of the mind and spirit, and this view persisted in the philosophical and religious teachings in the Middle Ages (Arendt, 1958; Hardy, 1990). The Protestant Reformation modified and elevated this this negative view when Martin Luther started referring to calling as "any station that one might occupy in the world of productive work and suggested that through faithful execution of one's duties in that station, one both pleased God and contributed to the general welfare of humankind" (Bunderson & Thompson, 2009). Luther's concept of calling

exerted a deep impact on the assessment of work by "transforming it from a necessary evil into a divine offering". John Calvin and his followers believed that this offering was uniquely personal and that it was made possible by drawing on individuals' God-given gifts and talents (Bunderson & Thompson, 2009).

Based on the results of his survey using cluster analysis to identify essential and optional components of a presence of calling among 407 German undergraduate students from different majors, Hirschi (2011) proposes that calling could, following Hall and Chandler (2005, p. 160), be given a new definition as "work that a person perceives as her or his purpose in life", allowing for an adequate differentiation of calling from similar constructs such as vocational identity achievement or career decidedness. Hirschi purposefully omits references to external summons or pro-social intentions which do not need to be present among people with a sense of calling. Contradicting Dik & Duffy's (2009) definition, Hall and Chandler (2005) and Elangovan, Pinder, and McLean (2010) specify that intense self-reflection can also be at the origin of a calling. Others say that other-directed and pro-social values are equally important in one's calling (Dik & Duffy, 2009; Elangovan et al., 2010), yet others do not think that these values have any role to play (Hall & Chandler, 2005).

As the construct of calling is central to the model to be developed, a systematic literature review of all significant research publications on the topic of *calling* from 1997 to 2015 was conducted and the findings presented in Table 2.3. The categories within are publication, sample size, geographical setting of the sample, category of research approach (theoretical or empirical), constructs addressed, together with findings. The findings described in this meta-analytic review are germane to the present research to the extent that they may clarify the role calling plays in the preparation of career decisions and thereby reinforce the model specifications.

Table 2.3

Systematic Literature Review of the Construct of Calling

Year	Authors	Paper	Sample	Country	*N*	Re-search design	Observed constructs, other than calling	Findings in relation to calling (C)
2015	Riza and Heller	JAP	Amateur high school musicians	USA	450	L	perceived ability, music career pursuit (degree earned)	The experience of stronger early callings led to greater perceived ability that was not reflected in greater actual ability. Perceived ability, rather than objective ability, led to subsequent career pursuit.
2015	Douglas and Duffy	JVB	Undergrad uate students.	USA	330	E	Career decision self-efficacy, Career adaptability	Calling weakly to moderately correlated with the four components of adaptability — concern, control, curiosity, and confidence.
2014	Goodin, Duffy, Borges, Ulman, D'Brot, and Manuel	PME	Medical students years 1–4	USA	152	E	Speciality commitment, General SE	The relation of calling to speciality commitment was stronger for students at lower levels of SE. Presence of calling and SE beliefs were significantly related to speciality commitment. Presence of calling was more prevalent among those more interested in generalist specialities. The interaction of calling and SE significantly predicted speciality commitment, explaining a significant proportion of speciality commitment variance. SE moderated the relation between calling and speciality commitment. Students with a high presence of calling may have high speciality commitment, despite low SE.
2014	Duffy, Autin, Allan, and Douglass	JCA	adult	USA	897	E	job satisfaction	The CVQ (Calling and Vocation Questionnaire) was the next best predictor of having a calling. All calling instruments moderately to strongly predicted work meaning, career commitment, and job satisfaction at baseline and 3 months later.
2013	Hirschi, Herrmann	JVB	Undergra-duate students	Germany	846	L	Career preparation	Calling predicted a subsequent increase in planning and self-efficacy; Planning and decidedness predicted an increase in the presence of a calling.
2013	Duffy, and Autin	JCP	working adults	USA	542	E	Living a calling, work volition, Perceived organizational support.	Work volition partially mediated the perceiving and living a calling relation.
2013	Duffy, Allan, Autin, and Bott	JCP	working adults	USA	553	E	Life Satisfaction, Life Meaning, Work Meaning, Career Commitment	The relation of living a calling to life satisfaction was partially mediated by job satisfaction and life meaning, and the link between living a calling and job satisfaction was mediated by work meaning and career commitment. The link of living a calling to life meaning was mediated by work meaning.
2012	Steger, Dik, and Duffy	JCA	university employees	USA	370	E	Meaningful Work, Meaning in Life	

Year	Authors	Paper	Sample	Country	*N*	Re-search design	Observed constructs, other than calling	Findings in relation to calling (C)
2012	Dik, Eldridge, Steger, and Duffy	JCA	Undergra-duate students	USA	456	L	Relevance of calling, Career decision self-efficacy. Intrinsic and extrinsic work motivation. Life satisfaction.	Results supported the construct validity of both CVQ and BCS scores; calling is a process in which people experience, maintain, and seek their callings on a continuous and ongoing basis; calling is an *ongoing process* rather than a one-time event. Scale development and validation.
2012	Hirschi and Hermann	JCP	employees	Germany	529	E	Work engagement, work meaningfulness, occupational identity	Calling to work engagement was mediated by work meaningfulness, occupational identity, and occupational self-efficacy—and this mediation did not depend on the degree of perceived person–job fit. .
2012	Hagmaier and Abele	JVB	working adults	Germany USA	220	E	Meaning & Value-driven Behaviour	Construct of calling is multidimensional, acting pro-socially promotes Sense and Meaning & Value-driven Behaviour, people with a university degree, self-employed people and people working in the public sector experienced more sense and meaning and value-driven behaviour.
2012	Domene	JCA	Undergra-duate students	Canada	855	E	self-efficacy, career outcome expectations,	Self-efficacy partially mediated the relation between purposeful work and outcome expectations, and fully mediated the relation for the calling dimensions of search for purposeful work, presence of transcendent summons, and presence of a prosocial orientation.
2012	Dik, Duffy, and Steger	JCA				C	social justice, prosocial values,	Direct and indirect means of enhancing societal well-being.
2011	Dobrow and Tosti-Kharas	PP	Undergra-duate and graduate students from vari-ousunivers ities, managers	USA	150 0	L	Clarity of Professional Identity, Career Insight, Career-Related Self-Efficacy	Calling was a solid predictor of outcomes after several years, it appeared to be trait-like. Calling was negatively related to age for the professional managers. Four waves of longitudinal data in Sample 1 showed that change in calling occurred and should therefore be viewed as a state-like construct. Calling is a secular construct.
011	Bunderson and Thompson	SQ	zookee-pers	USA	91	l	Occupational identification, work meaningfulness, neoclassical calling , moral duty , and perceived organizational duty, occupational importance, willingness to sacrifice	Hypothesized mediators to these models significantly increased the explanatory power of each model while decreasing the magnitude of the coefficient for calling, consistent with mediation. Positive and significant relationships ($p < .001$) between calling and both occupational identification (model 1) and moral duty (model 2).

Year	Authors	Paper	Sample	Country	*N*	Re-search design	Observed constructs, other than calling	Findings in relation to calling (C)
2011	Doenges	DT	student military veterans	USA		E	Vocation. Meaningful work.	Calling, meaningful work and social support were significantly associated with the components of well-being. Social support moderated the relationship between meaningful work and negative affect. Social support moderated the relationship between calling and the components of well-being. Presence of calling was a significantly positive predictor of meaning in life (β=.706***, positive affect β=.561***, positive relationships β=.372**, and life satisfaction β=.423***. Search for calling is a significant negative predictor of life satisfaction.
2011	Duffy, Dik, and Steger	JCB	university employees	USA	370	E	Career commitment, Job satisfaction	Career commitment fully mediated the calling–job satisfaction relation, partially mediates the calling–organizational commitment relation, and acted as a suppressor in the relation between calling and withdrawal intentions;
2011	Hirschi	JCB	undergraduate students	Germany	407	E	Vocational identity; Work values; Core self-evaluations; Work centrality	Calling can stem from within the individual and does not need to originate beyond oneself. Three types of calling merged: "negative career self-centred", "pro-social religious", and "positive varied work orientation". People with a sense of calling have successfully gained a vocational identity.
2010	Duffy and Sedlacek	CDQ	incoming 1st-year students	USA	5,523	L	Presence of a calling; Search for a calling; Educational aspirations; Religiousness; Life meaning; Life satisfaction.	Calling weakly correlated with religiousness and life satisfaction and moderately correlated with life meaning. Search for a calling weakly, negatively correlates with life meaning and life satisfaction and positively correlates with the search for life meaning. Small, almost non-existent relation between the presence of a career calling and religiousness.
2010	Elangovan, Pinder, and McLean	JVB				C	Self-identity; Meaning; Careers; Motivation; Vocation; Work; Occu-pation	Definition of calling that emphasizes action, a convergence of selves, and a pro-social intention.
2009	Steger and Dik	APHW				C	meaningful work, work purpose, mission, leadership	

Year	Authors	Paper	Sample	Country	*N*	Re-search design	Observed constructs, other than calling	Findings in relation to calling (C)
2009	Dik and Duffy	CP				C	vocation, counselling	Calling and vocation as they relate to classes of variables such as spirituality and religiousness; motivational characteristics; personality traits; and traditional variables of interest within vocational psychology such as vocational interests, typology), needs/ values, abilities, self-efficacy beliefs, self-concept clarity (i.e., vocational identity), career adaptability, decision comfort, and occupational choice, aspirations, and expectations. Levels of calling or vocation also may correlate with a number of criterion (i.e., "outcome") variables related to working including job satisfaction, job performance work commitment, work engagement, organizational citizenship behaviour, and tenure. (especially "meta-competencies"; levels of calling and vocation may link to a number of higher order variables, such as life satisfaction, life purpose, meaning in life, and social connectedness, which may be related directly to calling and vocation or may be mediated or moderated by other variables.
2009	Dik, Duffy, and Eldridge	PPRP				C	vocation, meaningful work,	Empirical and conceptual work on the constructs of calling and vocation and how these concepts can be integrated into counselling, promote prosocial values to incorporate social fit, those engaged in pursuing their calling may value the resulting sense of fulfilment and the opportunity to make a *difference in society*
2005	Hall and Chandler	JOB				C		
2004	Goossen	JBIB				C	entrepreneurship, meaning of life	Proposes a Spirituality Model of Entrepreneurship with calling embedded in Christian faith
1998	Hugen	CSW				C	career choice, religious faith, social work	Calling was embedded in religious faith connecting public and private spheres, and linking the individual with the community.
1997	Wrzesniewski, McCauley, Rozin, and Schwartz	JRP	employees	USA	196	E	Job, Career.	Highest life and work satisfaction for respondents who see their work as a Calling, Calling is related to better health. People with a calling tend not to differentiate between work-life and non-work-life

2.7.4 Essential and optional dimensions of calling.

The fact that calling as it is the reflection of one's identity and connection with work could prove to be useful when applied to explain a number of work-related behaviors (see Dik & Duffy, 2009; Hall & Chandler, 2005). Recent studies on callings has collectively emphasised that "the motivation, satisfaction, career self-assessment and development of people with a sense of calling tends to be different from those who view their daily work merely as a job" (Elangovan, Pinder, & McLean, 2010)

Dobrow and Heller (2015) explored career-pursuit decisions of people in situations with a potential clash of career's intrinsic and extrinsic opportunities. They found the sense of calling to be a key factor in resolving this dilemma and furthermore, they found that the sense of calling equals to the intrinsic side of the career, a "consuming, meaningful passion people experience toward the domain". Their findings indicate an interesting and contradictory pattern: stronger early callings that would normally increment perceived ability did not actually result in enhanced ability. Some authors suggest that it is the perceived ability, instead of objective ability, that can lead to subsequent career pursuit (Dobrow Riza & Heller, 2015) as reported in the case of awards won in music competitions. Calling is perceived to be "subjective and internal, continuous rather than binary (i.e., it exists in degrees, rather than 'having' or 'not having' a calling) and is relatively stable over time" (correlations ranging from .83 to .86 over 6 weeks to .38 over 7 years in Dobrow & Tosti-Kharas, 2011).

Dobrow (2004) distinguishes seven components of calling: "Compassion, identification, experiencing meaning, urgency to fulfil one's work, longevity, engulfing one's consciousness and domain specific self-esteem". Elangovan et al. (2010) suggest a distinction between three different facets of calling: "(a) the experience of being called to do something (action), (b) a convergence of different aspects of the person and a complete identification with the performed action and (c) a pro-social intention". Other authors stress the social component of calling, i.e., the work called people fulfill is of social value and does not aim at material benefits or an upward career (Wrzesniewski et al., 1997).

Hirschi (2011) suggests that the definition of calling should not include the features such as : "(a) a high centrality of work, (b) a high centrality of religion, (c) specific work value orientations (e.g., pro-social, self-enhancement), and (d) positive self-evaluations", but rather, focus on "(a) a state of vocational identity achievement, (b) a high degree of career engagement, and (c) a high level of career confidence" (Hirschi, 2011, p. 71).

Calling is also positively associated with career constructs, such as "career-related self-efficacy, clarity of professional identity, career insight (Dobrow & Tosti-Kharas, 2011), and a number of career development variables (e.g., decidedness, comfort, self-clarity, and choice-work salience" in Duffy & Sedlacek, 2007; Hunter, Dik, & Banning, 2010). Calling is a distinctly associated construct, both empirically and conceptually, from Wrzesniewski et al.'s (1997) career orientation measure (rs=.22, .31, .28, and .43 in Samples 1 through 4; Dobrow & Tosti-Kharas, 2011), capturing the meaning of work derived from "power or prestige and from the challenge of the work itself" (Bellah, Madsen, Sullivan, Swidler, & Tipton, 1985; Wrzesniewski et al., 1997).

2.7.5 Calling in the SCCT model.

In their 11-year five-wave longitudinal study capturing a critical phase in young musicians' career decision making , Dobrow Riza and Heller (2015) found that in time 2, participants with stronger early calling assessed their music abilities as being enhanced. This perceived ability enabled them to pursue musical career regardless of their factual abilities. These findings allowed the authors to affirm that it was the perceived ability in the phase of emerging adulthood that "mediated the relationship between calling during adolescence and career pursuit during adulthood". In summary, calling was found to affect people's cognitions, by prioritizing their own perceptions of their perceived capabilities, even despite of objective external information about the same issue.

2.7.5.1 Calling and contextual variables.

Individual career agency can be enhanced or obstructed by a variety of contextual forces, that is, any socio-economic, demographic, economic, or socio-political trend (Drucker, 1993). The way people live their calling and the consequences they experience are particularly affected by modern career environment that is prone to rapid technological change and altered social arrangements (family size, number of people living alone, divorce rate) (Hall & Chandler, 2005). An example for this is when a recession obstructs inter-organizational or intra-organizational expansion opportunities, it simultaneously deprives individuals from thriving even if they made all the efforts in goals setting, obtaining recognition from social circles such as friends and family or co-workers.

Individuals' socio-economic background is seen as the major contextual factor in their career choice process. This signifies the "degree of privilege and resources that are available to inform and support one's choices" (Drucker, 1993; Hall & Chandler, 2005).

2.7.5.2 Calling and life satisfaction, contradictory findings.

Research has found the link between calling and life satisfaction invariable (Duffy, Allan, Bott, & Dik, 2012), regardless of how one identifies the source of their calling (external summons, sense of destiny, or perfect fit).

Hirschi and Hermann (2012) in their study of 269 German college students from different majors found that core self-evaluations (CSEs) were significantly related to the presence of calling, vocational identity achievement, and life satisfaction. This might mean that the students' positive evaluations of themselves bear an impact their calling, and the emergence of a calling in a career could be facilitated by having a positive self-view. It was confirmed that calling predicts greater vocational identity achievement and this seems to support theoretical suppositions by U.S. authors that there is a strong correlation between a higher degree of career decidedness, self-awareness, and goal clarity and the presence of a calling in one's career (Duffy & Sedlacek, 2007; Hall & Chandler, 2005; Steger et al., 2010).

In the academic field, for example, calling has been found avccountable for a higher level of career maturity and satisfaction (Duffy, Allan, & Dik, 2011; Duffy & Sedlacek, 2007), and adults with a sense of calling demonstrate enhanced career commitment, work meaning, and job satisfaction (Duffy, Bott, et al., 2012; Duffy, Dik, & Steger, 2011).

While Dik and Duffy (2009) hypothesise that the cross-cultural construct of calling is expressed in different ways across cultures (e.g., "more emphasis on meaningfulness in individualist cultures vs. more emphasis on social contributions in collectivist cultures"), there has not been a satisfactory number of evidence accumulated in the field to confirm this.

The prevalence of contradictory results issuing from research in different cultures (e.g., Germany and USA) signifies that the association of calling and life satisfaction is not obvious and may be more convoluted than it has previously been estimated. In studies involving U.S. undergraduates (Duffy, Allan, et al., 2012; Duffy, Manuel, et al., 2011; Duffy & Sedlacek, 2010; Steger et al., 2010) and U.S. working adults (McGee et al., 2009; Wrzesniewski et al., 1997) calling was not directly related to life satisfaction. Contradictory findings can result from the diverse cultural contexts meaning that calling does not necessarily mean and imply the same thing across cultural contexts. Looking from another angle, college students, who are not yet working, may feel differently about calling inasmuch as it does not impact their lives as much as it does in the case of working adults (Hirschi & Herrmann, 2012). These authors also concluded that eventually, "vocational interests and work values act as a moderator of the link between calling and life satisfaction" (Hirschi & Herrmann, 2012, p.316).

Another instance of the contradictory nature of calling is that despite Dik and Duffy's (2009) prosocial orientation in calling, Hirschi (2011) found that this did not apply in his research involving German students, "it is conceivable that the presence of calling shows different relations to life satisfaction for students with a prosocial motivation compared to students with different career orientations" (p. 254).

Hirschi and Hermann (2012) also found that after removing vocational identity achievement calling might be negatively related to life satisfaction. This may mean that students may experience lessening of life satisfaction when they are not progressing in their vocational identity despite the existence of their calling. It is therefore possible to experience calling without the juxtaposition of a clear sense of personal values and goals. This in fact may be related to the concept which Duffy and Sedlacek (2007) name 'search for calling', negatively associated to to self-clarity, career decidedness, and career choice comfort. The quest for one's calling might possibly be an ongoing process involving a constant search or reinforcement, enhancement of one's sense of calling (Duffy & Sedlacek, 2007). The same principle might apply for the "presence of and the search for meaning in life more generally" (Steger, Frazier, Oishi, & Kaler, 2006).

Studies found the development and/or confirmation of a sense of calling to be a function of career preparedness and planning. This effect reverts on the career preparation and can guide individuals through compounded career development tasks (Hirschi & Herrmann, 2013).

2.7.5.3 Calling and outcome expectations.

Social Cognitive Career Theory (SCCT) framework seems to be a suitable tool to investigate associations between calling and career outcome expectations. This theory presents and explores outcome expectations in the most extensive way within the vocational psychology literature (Fouad & Guillen, 2006; Lent, Brown, & Hackett, 1994). In the work of authors adopting this theory, there is a palpable link between self-efficacy and calling, and the confirmed links between self-efficacy and outcome expectations (Bandura, 2001; Betz & Hackett, 2006). Some authors articulate that part of the influence of calling on career outcome expectations may perhaps partially occur through the mediating effect of self-efficacy (Domene, 2012)

This latter paper's findings also point out that despite the sparse evidence of empirical research on predictors of career outcome expectations (Fouad & Guillen, 2006), "identity and social support contribute to the development of outcome expectations related to future careers" (Domene, 2012). Domene (2012) found the sense of a calling to be impacting under-graduate

students' expectations for a successful future career outcome in a weak, but significant way, manifest in the presence of a sense of purpose and meaning in one's career. In summary, students' sense of purposeful work was both directly related to their expectations, and was partially mediated by their sense of occupational self-efficacy. These findings are complementary with the results of Duffy and colleagues' (2011) assessment of the relation between calling and academic satisfaction, where they found that the influence of calling was also fully mediated by self-efficacy and work hope as suggested by Domene (2012).

Work by authors investigating the correlation between calling and self-efficacy point to the direction of the conclusion that "at least some dimensions of calling are related to self-efficacy, particularly efficacy for making career decisions" (Dik, Sargent, and Steger, 2008; Duffy et al., 2011).

2.7.6 Gaps and suggested future research directions in the calling literature.

The section below will desribe some of the most frequently suggested research directions. Duffy, Allan, Autin, and Bott (2012) suggest that future studies on the relationship between living a calling should consider additional aspects of the relationship such as the existence of barriers that "might prevent individuals from living out their calling and reaping the benefits of increased well-being" (p.42), and how they manifest in different populations; how individuals fulfill callings outside of work (e.g., through raising children; Oates, Hall, & Anderson, 2005); how calling in different life roles relates to well-being outcomes; and they posit that additional variables impact the mediation of the link between calling and life satisfaction.

Duffy, Dik and Steger (2011) in their paper propose an investigation into what predicts levels of calling for adults, such as religion/spirituality, work values, personality, and educational attainment; theoretically grounded mediators (using the multiple mediator approach) such as perceptions of meaning in life, the extent to which work is perceived as central to one's identity, flow experiences, and work ethic; the relation of calling to positive work outcomes as mediated collectively by such variables as career commitment, meaning in life, and flow. They also suggest a global-level investigation on the predictive relationship between calling and work-related outcome model to more of well-being in order to capture if, and why, calling might be related to life satisfaction and psychological well-being.

Duffy at al. (2011) also advise the exploration of the moderating mechanisms at play in the calling and wellbeing relation, on working adults actually living their calling or who are religious/spiritual. They perceive equally important the understanding of the cultural formulation of calling and how this may relate to a host of work and well-being outcomes, as

most of the extant studies on calling have been done using samples from the United States, and more specifically from White/Caucasian background. There is a need for studies on population samples from a variety of socio-economic and ethnic backgrounds and they urge work to be carried out outside US boundaries to have grounds for international comparison.

Research evidence linking callings with actual career pursuit remains limited up to date. There is a scarcity of studies relating to the outcomes of calling or the connection between calling and outcomes (e.g., Bunderson & Thompson, 2009; Dik & Duffy, 2009; Dobrow, 2013). An additional setback lies in the conventional cross-sectional methodologies used in the calling research (e.g., Berg, Grant, & Johnson, 2010; Bunderson & Thompson, 2009; Duffy, Allan, & Dik, 2011), not allowing for the prospection of occupational choice directed by calling or vice versa by the means of reducing cognitive dissonance (Vroom, 1966) or fostering retrospective rationalization (London, 1983; Dobrow Riza & Heller; 2015)

2.7.7 Concluding remarks on Chapter 2 rapprochements

The objective of the presentation and discussion of a great number of concepts from various disciplines has been to demonstrate how complex the skein of the central tenet of the study is. The technique of the *rapprochement* has been conjured to comb threads of thoughts from seemingly distant and distinct disciplines such as career development (career decision-making, self-efficacy, outcome expectations); entrepreneurial psychology (entrepreneurial intention); political science (active citizenship behaviour); and social psychology (flourishing). In the next sections and by the three consecutive studies an attempt will be made to merge these concepts into a workable and dynamic model to demonstrate how the interplay of the various distal and proximal variables affect entrepreneurial decision-making having regard to formerly unexplored concepts such as active citizenship behaviour and calling for the entrepreneurial career.

Chapter 2 demonstrated and discussed the following rapprochements which are instrumental in the development of the predictive models:

- Entrepreneurs, beyond their function as economic agents can fulfil the role of active citizens; change agents/drivers of social change in their respective communities.
- Business school citizenship education is vital for supplying graduates with the necessary skills and competencies enabling self-employment.
- Active citizenship/entrepreneurship skills to support self-employability.
- Calling is a constituent of the protean career development.

- Entrepreneurial self-employment is a freedom that can contribute to individuals' subjective well-being and economic independence.

Chapter 3 will outline the theoretical foundations of the study design and provide a detailed and in-depth presentation of the methods by which the thesis studies have been designed and carried out.

Chapter 3

Research Design and Methodology

This chapter reviews choices of research design and methodology and their strengths and weaknesses, respectively. Considering the nature of this research which aims to identify path relationships between variables, the research design and methodology is primarily quantitative, in particular structural equation modelling. Data analysis is conducted using SPLS version 2 and 3.

Owing to the nature of quantitative research which is theory-driven and conducted in a deductive manner, it is paramount that the research constructs models and hypotheses are based on strong conceptual and theoretical foundations. To fulfil this imperative, extensive literature review on all theoretical dimensions relating to the current research has been conducted and reported in Chapter 2.

The purpose of this chapter is to report the research design and methodology for undertaking the empirical phase of this research, together with sampling procedure, data collection methods, survey instrument development and questionnaire administration. Chapters 4, 5, and 6 will present the Measurement Models and Structural Models, of Studies 1, 2 and 3, respectively.

3.1 Research Philosophy/Paradigm

The future of entrepreneurship as a field of inquiry lies in the capacity of its researchers to modify and renew their approach and adopt a transdisciplinary approach (Chell, 2000).

A paradigm is a "set of assumptions and perceptual orientations shared by members of a research community" (Donmoyer 2008). Paradigms were historically designed to capture phenomena in the physical sciences, and today they provide a framework for the members of research communities for their aspect on both the phenomena and the research methods deployed for the study of those particular phenomena.

Paradigm can also be defined as "the basic belief systems or worldview that guides the investigator" (Guba & Lincoln, 1994, p. 105). A research paradigm can assist researchers in the identification of methodology to be used and to "reflect their primary assumptions concerning the world and the foundation of knowledge" (Guba & Lincoln, 1994). There are three major research paradigms—positivism, constructivism and critical theory.

A positivist research paradigm involves a quantitative research approach with the assumption that there is "one true reality that can be discovered by means of rigorous empirical study" (Creswell, 2009). Researchers' position is that of neutral observers who can disregard

their values, beliefs and biases when assessing the results or outcomes of research (Guba & Lincoln, 1994). Objectivity during data collection and analysis is achieved by researchers distancing themselves from the research subject (Bryman & Bell, 2007).

The study of cognition as proposed by this study as well as social sciences are "constantly evolving concepts that cannot be regarded as the absolute truth". However, the quantitative research approach based on empirical observation and measurement offers evidence that its inferences are probable (Creswell 2009; Neuman 2006; Perry 2008) enabling the application of an empirical platform for the interpretation of results and further critical studies. The post-positivist framework defines probable causal relationships enabling an objective research approach.

A constructivist paradigm assumes the development of subjective meanings from individuals' experiences in order to understand a certain phenomenon such is the case of researchers (Creswell, 2009). The research approach of this paradigm is generally qualitative, and there is the establishment of direct contact between researchers and the subjects of their research enabled interpretations.

The third paradign is critical theory which postulates that reality is shaped by social, political, cultural, economic, ethnic and gender values (Guba & Lincoln, 1994). Here, the researcher's main objective is to obtain a single unambiguous reality, shaped by social values and by influences from other forces. Table 3.1 below offers an inventory of the various aspects of research paradigms from the standpoint of Positivism, Constructivism and Critical Theory.

For this study, a post-positivist paradigm will be used to identify factors affecting the adoption of the entrepreneurial career, mainly because it enables the testing of the proposed theoretical model, the explanation of the causal relationships between its constructs following the collection of a wide range of quantitative data from the sample population. It is also intended that the study, appropriately grounded in the paradigm will result in the further enrichment of critical and interpretive studies by offering meaningful interpretative and critical approaches to social sciences.

The post-positivist stance perceives the world as being ambiguous, infinitely complex, variable and thus open to alternate possibilities of interpretation. It is affiliated with complexity theory, postulating that the modern world is so complex that there are no clean-cut paradigms or phenomena. While it may appear that prediction as a method is antagonistic to the very tenets of post-positivism, its complexity character allows for the discovering of new knowledge every time the model is tested. Depending on the point of time and circumstances of testing, the same predictive model may lead to entirely different results and conclusions. Post-modernist

epistemology also preconises the overlapping of conditions meaning the swift change or alteration in the conditions within infinitesimal time lapses. Given these considerations, predictive modeling can solely rely on the 'if → then' premises, supposing that every single testing of the model will yield different results.

The thesis reflects the post-positivist paradigm for its inherent approaches, such as:

- the importance of multiple measures and observations
- the need to use triangulation
- ongoing reflexivity on the part of the researcher
- construction of new meanings and knowledges as understood by individuals and groups

amalgamation of theory and practice

Table 3.1

Comparison of Research Paradigms

Criteria	Positivism	Constructivism	Critical Theory
Theory building/ Theory testing	Postulate theories that can be tested in order to confirm or reject Test theories in a controlled setting, empirically supporting or falsifying hypotheses through a process experimentation.	Theories are constructed from multiple realities. Theory is shaped by social and cultural contexts.	Theories are built from analysing power relationships (deconstructing the world).
Role of researcher	Uncover reality Scientifically explain, describe and predict phenomena	Study social, cultural and mental phenomena to reveal why people behave in certain ways Describe the multiple realities	Political emancipation and increasing critical consciousness
Nature of reality	Objective, true reality exists by the unchangeable natural cause-effect laws Reality is generalized Researchers and reality are independent	Reality is constructed, interpreted and experienced by people in their interactions with each other and wider social systems	Reality is shaped by social, political, cultural, economic, ethnic and gender values
Nature of Knowledge	Knowledge is based on verified hypotheses	Knowledge is based on subjective beliefs, values, reasons and understanding	Knowledge is constituted by the live experience and the social relations that structure these experiences

Note: Adapted from: "Business research methods" by A. Bryman and E. Bell, 2007. (2nd ed.). New York Oxford University Press Inc.

3.2 Research Methodology

Research methodology can be defined as the combination of quantitative or qualitative designs guiding the procedures in a research approach (Creswell, 2009). The selection of methodology has major impact on the conduct of the research generally and on the quality of research results in particular (Creswell, 2009).

For the purposes of the research, the post-positivist epistemology framework will be adopted, with special attention towards: (a) quantification in data collection and analysis and (b) testing the relationships between theory and research (theory testing) (Bryman & Bell, 2007) and the relationships among variables, using statistical procedures (Creswell, 2009). The methodology will include latent modelling of archival data and testing of psychometric measures of constructs. It is posited that there is a need for a new scale development that incorporates the construct of active citizenship in entrepreneurial calling. Hypothesis testing and new scale development will be carried out in three steps, drawing on research results of 3 distinct studies, two of which archival studies, and the third one scale development and theory testing.

3.2.1 Quantitative research method.

Creswell (2009) proposes three criteria for selecting a research approach: "a) the match between the problem and the approach, b) personal experience and c) intended audience". Social sciences research is distributed into three types depending on the purposes of the research: exploratory, descriptive and causal, out of which the qualitative and quantitative are the most common (Zikmund, Babin, Carr and Griffin, 2009).

The research was conducted as a quantitative cross-sectional research study, implying observation at a single point in time (Neuman, 2006) using quantitative methods. This type of research may be descriptive, explanatory or exploratory but is unable to capture processes. Observation at a particular point in time is deemed fit in this case as the scope of this research does not allow for the investigation of paradigms or process shifts. The cross-sectional nature of the enquiry required the adoption of survey method (Creswell, 2009).

3.2.2 Research in vocational psychology.

Research presented in this thesis has been conducted from the perspective of vocational psychology. Vocational psychology is defined as the "application of psychological principles to the problems of vocational choice, selection and training" (Merriam-Webster, 2012). The field is embedded within the discipline of counselling psychology. Vocational psychologists study work decisions across the age spectrum, and help people make work-related decisions from how to choose an initial career, to managing career or work changes, to planning for retirement. Vocational psychologists are interested in how individuals make decisions or adjust to a work environment, with the emphasis on the individual rather than on the organizational level. Industrial and organizational psychologists study work from the perspective of the organization. This includes the study of how to motivate workers, how to appraise performance, how to select workers, and how to develop paths for workers to advance through the organization. However, a weakness and a threat is that the long history of research and knowledge accrued about individuals' work decisions is not widely known outside of counselling psychology or vocational psychology.

Drawing on an impressive cross-disciplinary literature basis for its rationale, Richardson's (2012) framework has proposed to shift the role of vocational psychology from career development to helping people construct valued and meaningful lives through work and relationship. This focus on work and career development makes counselling psychology unique among other specialties in professional psychology (Richardson, 2012).

3.2.3 Emancipatory communitarian approach.

The response to explaining entrepreneurial activities' environmental variables, societal embeddedness and connectedness to the world of work lies in the wider theoretical framework of the Psychology of Work (Blustein, 2006) and the Emancipatory Communitarian Approach (EC, Blustein, McWirther and Perry, 2005) and in the Social Cognitive Career Theory (SCCT; Lent et al., 2000).

Prilleltensky (1997) suggested a categorization of the practice of psychology into four broad approaches: traditional, empowering, postmodern, and emancipatory communitarian (EC). He described each approach with respect to five values, assumptions, and aspects of practice: self-determination, caring and compassion, collaboration and democratic participation, human diversity, and distributive justice. An EC approach defines the self primarily from an interpersonal and socio-political frame of reference. As such, the targets of intervention are both individual problems as well as problems residing in social systems

(Blustein et al., 2005, p.152). The EC approach to vocational psychology is a vision of values and assumptions to guide people's thinking and to critique and enhance their work. In their recommendations on how to adopt and implement the EC approach, Blustein and colleagues suggest that vocational psychologists "incorporate social advocacy and activism into their notions of research and practice" (Blustein et al., 2005, p.168). The EC perspective is relevant to entrepreneurship education because it implies empowerment, both at the level of individual, communities, and society-at-large. Given the originating context of this research—the economic malaise of Hungary—it is important to state that EC, active citizenship, and entrepreneurship are not incompatible. Active citizenship and entrepreneurship are taken as a vehicle for improving social and economic well-being.

3.2.4 Psychometric theory.

Psychometrics is a sub-discipline of the social sciences riveting the techniques to measure psychological constructs, with the constructs defined as "an idea or concept, carefully developed (or constructed) in an informed imagination" (Guion, 2004, p.56). For the SCCT construct scales to be considered psychometric instruments, they must exhibit reliability and validity properties. Nunnally (1978) suggests that "measuring, as defined by psychometrics, means developing rules that enable researchers to assign numbers to objects and represent quantities of attributes".

Psychometric measures must also be standardised, meaning that the "administration process has been fixed enabling scores collected at different times and from different places to be compared" (Cronbach, 1984). Standardising a test must also display maximum levels of reliability and validity (Cronbach, 1984). These concepts are discreetly discussed further down in this chapter.

It is one of the central tenets of classical test theory that all psychometrics' composite true score comprises the observed score (or raw score) plus errors of measurement (Bartram, 1990). The element of error should be minimised by applying a series of rigorous statistical procedures throughout the development of the measure. There are various types of responses in a psychometric test such as judgements, with a definite right or wrong or sentiments, in the form of interests, attitudes or values (Nunnally, 1978) such as in the SCCT model. The construct being measured defines the type of questions and their responses. The response scale included in the test can also vary. Nunnally (1978) suggests that "graphical scales with numbers and verbal labels are the clearest to use and help to eliminate measurement error".

3.2.5 General and specific measures in career development research.

It is the objective of researchers and career counseling practitioners to assess the degree of career management generally, without addressing particular differences between distinct behaviors (e.g., between planning and networking). These general constructs have gained recognition in organizational psychology as "exemplified in the notions of core confidence (Stajkovic, 2006) or core self-evaluations" (Judge, Erez, Bono, & Thoresen, 2003). The advantage of general measures is that they enable more parsimonious assessment versus specific construct assessment and can forecast "work-related outcomes above the variance explained by its more specific indicators" (Judge et al., 2003).

The benefit of applying specific measures is that they facilitate the testing specific theories. However, the particular benefits of general measures is that (Judge & Kammeyer-Mueller, 2012): "They are particularly useful (a) if the theory to be tested is more context-general (e.g., the effects of proactive career management on career development); (b) if the criterion of interest is general (e.g., career success, life satisfaction), or (c) to consider general and specific measures together to evaluate the unique variance of the specific measure beyond a more general construct (e.g., the unique effects of networking on promotions above the general engagement in different career behaviors)". Still, one can find a scarcity of validated measures exhibiting career behaviors on a general level. This obstructs empirical evaluation of career development theories. Also, current career management scales have been essentially tested for employees and not so frequently for students while it would be essential to engage students in emerging adulthood in proactive career management. This career phase, when they transit form studies to work is a particularly critical for both theory and practice (Super, 1990).

3.2.6 Conducting cross-cultural research.

Research in social sciences stems from unsolved issues and problems in society, or from rethinking and reframing existing theories and processes. As it is a prerequisite of any research to be replicable, the expression of ideas and concepts as well as processes must reflect a universal language that is intelligible across research communities across cultures.

As there is no precedence of the current research in the Hungarian cultural setting, it was important to prepare the research design and approach following the guidelines of international methodology pertaining to cross-cultural research. Although the following list comprises of guidelines following (Brown & Lent, 2004), originally devised for multicultural settings, it was used for the current research, that is cross-cultural.

- “Understand the cultural contexts within which career and vocational problems emerge (e.g., families, workplaces, communities; Leong & Hartung, 1997).
- Recognize and assess the potential influences of culture on perceptions toward assessment and on testing processes and outcomes (Leong & Hartung, 1997).
- Engage in assessment of the cultural background and characteristics of each client (Leung, 1996).
- Select career assessment instruments that are specific to the needs of the client and appropriate for use with members of the client’s racial-ethnic, cultural, or linguistic groups (Leung, 1996).
- Actively seek alternative interpretations of the results and interpret their meaning from the cultural context of the test taker (Leong & Hartung, 1997).
- Consider alternatives to testing when cultural factors may impede attainment of the desired outcome (e.g., qualitative assessments, foregoing testing altogether; Subich, 1996).
- Understand and address the potential cultural dynamics that can occur during the communication of test results (Leung, 1996; Leong & Hartung, 1997)”.

3.2.7 Translation issues.

Throughout this translation and adaptation process, the overarching aim was to create high-quality instruments that were internationally comparable yet also appropriate to the Hungarian national context and education system. Recommendations by Vijver and Leung (1997) were followed to ensure a robust approach. This included the effort to ensure the comparability of samples, questionnaire translation, timing, and process of data collection. In Study 3 in particular, a calling scale validated in Germany (**The Multidimensional Calling Measure (MCM); (**(Hagmaier & Abele, 2012)) was selected in an effort to establish cross-country homogeneity of samples. In order to reduce the number of other influences than culture, samples from the same population (university level business students) were selected in both countries, Germany (location of the model survey and Hungary). Student samples help to isolate the effects of cultural dimensions on career attitudes by holding some demographic variables such as socio-economic status and age constant. The questionnaire was first worded in English and conducted in the official language in Germany. Following the recommendations in the literature (Harzing, 2005), the English questionnaire was translated and back-translated into English to ensure linguistic as well as conceptual equivalence (Brislin, 1986; Hui & Triandis, 1985).

Some of the inconsistencies pertaining to the equivalency of career development and assessment found in the national contexts were the consequence of translation difficulties, given that the national contexts information had to be translated into Hungarian. Therefore, a process of review and refinement by national experts was initiated and subsequently found crucial in ensuring both the completeness and consistency of the research instrument in Study 3. 5 experts with career development and/or business development undertook cultural adaptation by means of reviewing the research instrument and providing a feedback on the equivalency and applicability of the terms that had been formerly translated from English. The reason for the non-equivalency situation is that vocational psychology in general and career development in particular in Hungary have not progressed in the same way that is typical in the Anglo-Saxon cultural setting.

The primary task of the translation verifiers was to evaluate the accuracy and comparability of the Hungarian version of the Entrepreneurial Calling instruments. The instructions given to verifiers emphasized the importance of maintaining the meaning and difficulty level of each test and questionnaire item. Specifically, verifiers had to ensure the following:

- The translation had not affected the meaning or reading level of the text;
- No information had been omitted from or added to the translated text;
- The test items had not been made easier or more difficult;
- The instruments contained all of the correct items and response options, in the same order as in the international version;

All Hungarian adaptations implemented in the instruments were duly documented and the research instrument created in this manner achieved international comparability. This procedure was chosen because it ensures authenticity, connotation and comprehensibility, which frequently compromised when incorporating a back-translation approach (Vijver & Leung, 1997)

In the specific area of civics and citizenship, a number of modifications were required and allowed beyond those necessitated by translation into Hungarian language. It was important that the cognitive items not be simplified, clarified, or adapted in such a way as to provide students with a hint or definition of a term that was not given in the international English version. For example, if an item required students to define or identify a particular aspect of democracy, it was essential that the term “democracy” not be translated in such a way as to provide the definition or aspect of democracy in question.

3.3 Research Strategy of Enquiry: Survey Research

Survey research has been deemed the most appropriate prime vehicle of this research. It provides the researcher an inclusive coverage of the phenomenon to be observed and investigated ad to capture it in the form of a 'snapshot' (Denscombe, 2003). The survey method is versatile enough to be used in various settings.

Very often, the terms 'survey' and 'questionnaire' despite their very different origin are used interchangeably and this leads to confusion when discussing any particular research (Creswell, 2009; Leedy & Ormrod, 2005). The term 'survey' literally means to "look at or to see over or beyond; or, in other words, to observe" (Powell & Connaway, 2004, p. 83). During the last decades, this type of highly accurate research has gained momentum and its usage has become wides-spread in social sciences. To be specific, in this study, the term 'survey research' refers to the method of obtaining information from one or more groups of people (Leedy & Ormrod, 2005).

Survey research is characterised by a structured or systemic set of data: the choice of the survey research allows the access of "large and geographically dispersed populations, data collection in an unobtrusive way, decreasing bias when not using interviews and reducing the time requirements when well designed" (Sapsford, 2007).

The versatility of the survey design makes it possible to deploy several data collection methods, such as interviews, observations, and questionnaires (Leedy & Ormrod, 2005). Questionnaire technique covers self-administered questionnaires and protocols used in the interviews (Neuman, 2006). In this study the term survey questionnaire will consistently refer to the self-administered research instruments deployed for the purpose of data collection from the targeted population.

3.3.1 Unit of analysis.

It is the main entity about which data are gathered (Bailey & Pearson, 1983). Yin (1994) set out the guidelines how to determine the unit of analysis by "reflecting on how the research questions are defined or stated". In this study, the research questions refer to understanding business students' perceptions about the entrepreneurial career model, and their propensity to start an enterprise. Therefore, the unit of analysis in this study is business students in general.

3.3.2 Data collection method.

Partial testing and elaboration of models have been conducted in Studies 1 and 2 by using archival datasets whereas the survey research of Study 3 required fresh data collection. Questionnaire method was used to collect data from the sample population.

3.3.3 Working with archival data.

At the completion of the literature review phase of the research, and the subsequent formulation and reformulation of the hypotheses, the question arises: "How can I best formulate my research questions and hypotheses?" Depending on the research design and the instruments proposed, data collection very often entails collecting new data, or elsewhere, data is already available. This latter method entails the retrieval and deployment or archival datasets.

Use of existing or archival data sets can be beneficial to the researcher for methodological reasons. It is an effective in reducing fallacies in to internal validity like experimenter bias (Schultz et al, 2005). Finally, the convergence of findings obtained from wholly different databases offers valid support for construct validity. This aspect of convergence of findings will be used in the elaboration of scales to be incorporated in the model constructs. Table 3.2 depicts the advantages and disadvantages of using archival datasets.

It has been laid down at the onset of the research that it will adopt a three-step research design, with 3 studies in its core. The studies and their research instruments were designed and conducted based on findings of the previous ones. The first two studies used archival data, the author's own research and data collection, and a survey including international datasets. From this dataset, the Hungarian national dataset has been selected for analysis. The design, data analysis and resulting model of the three studies are autonomous, each representing a stage leading to the elaboration of the final model capturing entrepreneurial calling. In this way, despite their autonomous character, they are concomitantly complementary to each other. Study 1, owing to its exploratory character, the number of constructs that it uses, and the fact that it was embedded in a different conceptual framework, can be perceived as a pilot study leading to the subsequent formulation of the research design.

The reason for this sequential research design was the attempt to (a) demonstrate the necessity of a model measuring entrepreneurial calling (b) build up the final model by partial testing (c) describe and discuss the findings of the different phases of the model construction thus better understand the final model (d) test the viability of the final model by observing (e) discuss its quality parameters including validity and reliability. SEM and PLS were deemed appropriate for the purposes of working with models as its versatile mechanism allows for experimentation.

Owing to the special research design of sequential model building, the use archival datasets for the data analysis and model building was deemed appropriate.

Table 3.2

Advantages and Disadvantages of Performing Secondary Analysis on Archival Data

Potential advantages	Potential disadvantages
Resources savings	Appropriateness/adequacy of data
Circumvent data collection woes	Discrepancy of psychometric properties
Usually SPSS or SAS ready	Completeness of documentation
Relative ease of data transfer and storage	Detecting errors/sources often difficult if not impossible
Use as pilot data/exploratory study	Overall quality of data
Typically, much larger and often national/international samples; as a result, can perform newer and more powerful statistics	Stagnation of theory
Availability of longitudinal data	
Availability of international/cross-cultural data	Unique statistical skills required
Organisations may be more open to using existing data versus collecting new data	Illusion of quick and easy research
	Convincing reviewers that data analysis is not duplication of existing research
	Ease of accessibility threatens the development of skills required in planning and conducting data collection

Note. Adapted from *"Using Archival Data for I-O Research: Advantages, Pitfalls, Sources, and Examples*" by K.S. Shultz, C.C. Hoffman, and R. Reiter-Palmon, 2005, UNOMAHA, Psychology Faculty Publications. Paper 5, p. 342.

3.3.4 Retrofitting technique.

Retrofitting can be described as the addition of a new technology or feature to an older system (Gierl & Ying Cui, 2008). In the present thesis this technique confers the application of a new statistical or psychometric model, such as a SCCT, to student response data from an existing testing system that uses traditional test development procedures and practices. It is sought that conducting cognitive diagnostic assessment through retrofitting will yield few successful applications, precisely because of the SCCT's unique requirements, as outlined by the section on SCCT in the Literature Review

Confirmatory analyses require that the data structure be specified *a priori*. Often, this requirement means that a substantive theory or set of hypotheses is needed to specify the structure of the data in order to direct the psychometric analysis. In a first step, a cognitive model is designed to specify the knowledge and skills tested and in the second step, corresponding items devised. The psychometric analysis, conducted in a confirmatory mode in SCCT, would follow using the cognitive model as a guide and using data collected on the purposefully designed diagnostic items. This order of events—identify cognitive model, develop diagnostic items, conduct confirmatory analysis—provides the analyst with control over how to operationalize the construct, what the underlying data structure should look like, and how the test scores should be interpreted (Gierl & Ying Cui, 2008).

These steps cannot be followed with a retrofitting approach because there are neither cognitive model development nor test construction activities. Instead, some type of implicit substantive model is generated post hoc by reviewing the existing items, and then these existing items are coded. Despite the convenience afforded by a retrofitting approach, it is severely limited because there is no guarantee that either an appropriate cognitive model can be identified or an adequate number of items can be located to measure the skills in the cognitive model (Gierl & Ying Cui, 2008). Yet, these serious limitations should be expected whenever test development proceeds without an explicit model of test performance, because most educational achievement tests are not intended to promote diagnostic inferences about students' cognitive skills. Consequently, the cognitive analysis of any career decision-making test using retrofitting procedures will invariably produce a tenuous fit between the cognitive model and the test data, because the tests were not designed from an explicit cognitive framework, which ultimately leads to inferior data in terms of the psychometric analysis.

Nevertheless, owing to the peculiarity of the research design, in particular the three-step approach of hypothesis testing, retrofitting was deemed to be the most adequate method.

3.3.5 Research sampling.

Research sampling is an essential phase of the research process as the selection of the sample and its size are paramount to the answering of the research questions and achieving the study objectives. Sampling is defined as an activity that "… involves any procedure that draws conclusions based on measurements of a portion of the population" (Zikmund et al., p.68.)

With the help of sampling, researchers can make sure that there is a representative number of subjects selected from a larger population of interest allowing the test of theories and hypotheses. The sample's characteristics can be generalized to depict the entirety of the population (Sekaran, 2003). Sample designs have two types: *probability* sampling and *non-probability* sampling. The first type includes simple random sampling, stratified random sampling, proportional stratified sampling, cluster sampling and systematic sampling, whereas the second type means convenience sampling, quota sampling and purpose sampling (Al-Sabawy, 2013). The sampling in this research design is convenience sampling as it has been deemed most practical and appropriate to 'hand-pick' subjects in populations bearing traits that are investigated. Thus, the population that was the population of business students in Hungary.

The study population in the present thesis satisfying this trait requirement is all the business students in Hungary, but, owing to time and resources limitations, just two business schools have been selected. There are some justifications in adopting these business schools (Budapest Business School, Faculty of Commerce and Tourism and Corvinus University of Budapest, Faculty of Business Studies):

- These two business schools are believed to be the eminent schools in Hungary
- Corvinus University of Budapest is ranked high among the most performant business schools in Europe
- The researcher had several years of teaching experience in the Budapest Business School and had access to information required for this study as well as was able to conduct research prior to her commencement of the PhD program at USQ that is used as archival data in Study 1

The sampling procedure have been carried out in the following stages for Studies 1, 2 and 3, respectively:

Study 1.

- Ethical approval of the Budapest Business School, Faculty of Commerce, Tourism and Hospitality had been sought to conduct research in the Faculty.

- Permission of the Program Director of BA in Retail Communication, Tourism Management and Hospitality Management had been sought to conduct research among students attending these undergraduate programmes.
- Lecturers had been approached to find out which years and classes would be most appropriate to be targeted as respondents to the questionnaires.

Study 2.

- The study relied on an archival dataset derived from the Global University Student Entrepreneurial Spirit Survey (wave 2011).

Study 3.

- Ethical approval of the University of Southern Queensland Human Research Ethics Committee had been sought
- At the second stage, the authorisation of the Rector's Council of the Corvinus University Faculty of Business was sought. This authorisation allowed the researcher to contact students majoring in Business.

The above sampling procedures belong to the category of convenience sampling. Zikmund et al (2009, p. 396.) call convenience sampling the "procedure of obtaining those people or units that are the most conveniently available". A convenience sample can be explored when potential respondents are promptly available and accessible without any obstruction. The research design framework implemented in this thesis did not necessitate the use of a control group for either of the studies.

3.3.6 **Limitations of sampling strategy.**

The limitations of this study can be summarised as such:

a) The level of generalisation: results cannot be generalised on the total population level, but on the specific subset of the population. "Online surveys are conducive to purposeful sampling if carefully directed" (Malhotra, 2007; Babbie, 2004; Kaye & Johnson, 1999).
b) Selecting a single site for the purposes of Studies 1 and 3. Despite the contended nature of this sampling method, it was accepted for various reasons. First, as extensive data collection was required, the fact that the location of the research sampling was a single institution enhanced the homogeneity of the study design. This in turn allowed for valid conclusions, supported by the track record of successful single site studies (e.g., Shane & Stuart, 2002; Zhang, 2009).
c) Non-representative sampling. As a representative sample of the entirety of the population was not accessible, a subset had to be designated. Purposive sampling seems

to be the solution for such cases when subsets are designated and data collected from their members (Kaye & Johnson 1999; Malhotra 2007).

3.3.7 Ethical considerations.

Ethical considerations are crucial elements in research (Neuman, 2007). Ethics is defined by Malhotra at al. as "The process of evaluating and addressing whether a particular action is right or wrong, good or bad" (2002, p. 27). To be complyant with the ethical standards throughout all research phases, a number of precautionary measures were taken.

First, ethical guidelines as set out in the university regulations and policies as monitored by the Human Research Ethics Committee (HREC) of the University of Southern Queensland (USQ 2015) were incorporated into the research design. The ethical approval for this study was granted under the no. H14REA214 from the University of Southern Queensland's Human Research Ethics Committee. The approval letter is included in Appendix C.

Participants in this study were duly informed about the objectives and procedures. Participation in the survey was voluntarily and the accompanying information sheet (Appendix E) explained both the research project and the significant role that the respondents play in bringing the project to a success. Because this research project takes place in an educational setting, and its original reason was the *plight* of students, it was deemed instrumental to benefit the community it stemmed from. As a benefit of the students also as a partial solution to their dire situation they have been offered further information about the findings. Without any imposition, this option has been offered to those students who were willing to benefit from a summary of findings: "It is expected that this project will not directly benefit you, but by accessing the summary of findings of the survey you may gain some insight into how your age group and peers feel about the entrepreneurial career. This may be helpful for you if you are considering becoming a start-up owner yourself."

It has been a sensitive issue in the design of questionnaire administration to ensure that there is no social risk involved in the response or the non-response of the student respondents. The data collection design therefore, having considered various options for the optimisation of the administration and in Study 3 selected the University intranet mailing system where a promotional mail was sent to the students advertising the opportunity for participating in the research project. Students were allowed to download the questionnaires, respond and return the questionnaires to the department administration at their discretion, without any repercussions by the management.

University of Southern Queensland Human Ethics Guidelines stipulate for the strict adherence to the regulations and policies as defined by the Committee in a way ensuring that researchers' behaviour during the research phases does not interfere or harm the rights and interests of participants. Researchers are requested to submit a report following the completion of the project. In line with the Committee's Guidelines, ethical considerations related to "voluntary participation, anonymity, confidentiality, deception and accuracy of reporting" (Zikmund 2003) were observed and duly managed. Data was treated confidentially and stored securely.

Furthermore, upon my application to a PhD as USQ I was provided permission to analyse the data gathered in Study 1 as part of the degree.

3.4 Data Analysis: Structural Equation Modelling (SEM)

Structural equation modelling is a second-generation multivariate statistical technique for testing structural theory that has become universally accepted in social sciences research developed to overcome the weaknesses of first-generation methods. Hair et al. define SEM as "Multivariate technique combining aspects of factor analysis and multiple regression that enables the researcher to simultaneously examine a series of interrelated dependence relationships among the measured variables and latent constructs (variates) as well as between several latent constructs" (2010, p. 634).

The methodology takes a confirmatory (i.e. hypothesis-testing), as contrasted to exploratory approach to data analysis. It conventionally displays 'causal' processes generating observations on multiple variables (Byrne, 1998). The term structural equation modelling "conveys two important aspects of the procedure (a) that the causal processes under study are represented by a series pf structural (i.e. regression) equations; and (b) these structural equations can be modelled by means of images to enable a clearer conceptualisation of the theory underpinning the study" (Wang, 2003).

SEM has the primary task of determining the goodness of fit between the hypothesised model and the sample data by imposing the structure of the former on the latter and testing how well the observed data fit into this restricted structure (Byrne, 1998). It tests the hypothesised model statistically to determine the extent to which the proposed model is consistent with the sample data. If the goodness-of-fit is adequate, the model demonstrates the plausibility of postulated relations between variables; in case of inadequacy, such relations are refuted (Byrne, 1998).

Traditionally SEM estimates model parameters using “maximum likelihood approaches that attempt to reproduce the observed covariance matrix constrained by the specified theoretical model. The discrepancy between the observed and reproduced covariance matrices is the basis for a number of model fit indices – how well the observed data fit the theoretical model. SEM algorithms solve a series of simultaneous equations in n-dimensional space to estimate model parameters such as path coefficients and latent variable variance. Such algorithms require that the number of parameters estimated cannot exceed the number of elements in the covariance matrix. Statistical significance is calculated by dividing the parameter estimate by its standard error which takes into account the dataset n (Hair Jr et al., 2013)” .

3.4.1 Components of SEM.

SEM has two main sub-models: the measurement model; and the structural model (Byrne, 2010). Hair et al. define the measurement model as a “Sub-model in SEM that (a) specifies the indicators for each constructs, and (2) assesses the reliability of each construct for estimating the causal relationships” (1998, p. 581). “The latent variables cannot be measured directly because they are a theoretical construct, therefore, the observed or indicator variables should be identified” (Zulu, 2007). Latent variables can be measured and the significance of each indicator analysed. The measurement model is depicted by the Confirmatory Factor Analysis (CFA) (Byrne, 2010).

3.4.2 PLS-SEM.

Partial least squares structural equation modelling (PLS-SEM) has become an increasingly widespread methodological approach in social sciences research across a variety of disciplines, albeit it is most visible in the business and more specifically, marketing discipline (Hair et al., 2012c; Hair et al., 2012a; Ringle et al., 2012). In addition, Long Range Planning, one of the leading journals in the strategic management field, by consecrating three special issues to the method (Hair et al., 2012b, 2013; Sarstedt et al., 2014), established a raison d’etre of the approach among research practitioners.

As is the case with new developments in research, the method’s advantages and disadvantages result in heated debates by proponents and critics (e.g., Goodhue et al., 2012; Marcoulides et al., 2012; Henseler et al., 2014), however, critical studies on the method provide a balanced and constructive perspective on its capabilities and limitations (e.g., Jöreskog and Wold 1982).

Early on it was recognised that the method's major strength lied in its prediction orientation (Jöreskog and Wold, 1982). Latent variable scores can accurately be predicted by the extraction of latent variable scores, explaining a significant percentage of the variance in the indicator variables (Anderson and Gerbing, 1988). A simulation study by Reinartz et al. demonstrated PLSSEM's high predictive power (2009, p. 340). In this particular study, the authors affirm that "PLS is preferable to ML-based CBSEM when the research focus lies in identifying relationships (i.e., prediction and theory development) instead of confirming them."

Jöreskog and Sörbom's (1974) software (LISREL III) was used to run the SEM algorithm. Ten years later, the first PLS software was published (Lohmöller, 1987), but it was not before 2003 that a user-friendly software program was developed. Temme, Kreis, and Hildebrandt (2006) explained the hesitation to use PLS in the fields of marketing, strategic management, and management information systems by the non-availability of a user-friendly PLS software. There is even a slower adoption of PLS in differential psychology.

Experts in the field often make comparisons between PLS and SEM to distinguish their specific and salient features and to determine which method in preferable in which situation. The first selection criteria are definitely the research objective. Theory testing and confirmation would necessitate the use of CB-SEM, while in prediction and theory development, PLS-SEM would be more appropriate. PLS-SEM is comparable with multiple regression analysis in terms of concept and practicality. It focuses on the maximisation of explained variance in the dependent constructs and the additional evaluation of the data quality, based on measurement model characteristics. PLS-SEM's range of addressing problems is wider than that of CB-SEM: it can manage larger and wider sample sizes and intricate models, and it is more permissive about data assumptions. An additional feature of PLS-SEM is that contrarily to CB-SEM, which has a threshold of minimum number of items loading on constructs to constitute a valid model, the minimum number of constructs is one or two.

As a rule of thumb, and as depicted in Table 3.3, when the focus is on exploration rather than confirmation, or alternatively, when the use of CB-SEM is resticted owing to measurement or model features, PLS-SEM is a practical alternative. While PLS-SEM offers a versatile applicability suiting a wider range of situations, it is paramount to pay special attention to the interpretation of the results, especially the ways they are associated with the constructs' measurement properties. PLS-SEM "estimates loadings of the indicator variables for the exogenous constructs based on their prediction of the endogenous constructs, not their shared variance among indicator variables on the same construct" (Hair et al, 2011). Thus, the loadings define the path coefficients.

Table 3.3

Rules of Thumb for Selecting CB-SEM or PLS-SEM

Criteria to be evaluated	CB-SEM	PLS-SEM
Research goal		
Predicting key target constructs		x
Theory testing, theory confirmation or comparison of alternative theories	x	
Exploration of an extension of an existing structural theory		x
Measurement model specification		
If formative constructs are part of the structural model		x
If error terms require additional specification such as co-variation	x	
Structural model		
If a structural model is complex		x
If a structural model is non-recursive	x	
Data characteristics and algorithm		
Data meet distributional assumptions	x	
Data did not meet distributional assumptions		x
Small sample size consideration		x
Large sample size consideration[1]	x	x
Non-normal distribution		x
Normal distribution[2]	x	x
Model evaluation		
Use latent variable scores in subsequent analyses		x
Requires global goodness of fit criterion	x	
Need to test for measurement model invariance	x	

Note: Adapted from Hair Jr, Hult, Ringle, & Sarstedt (2013). x indicates methodological fitness.

[1] With large data sets, CB-SEM and PLS-SEM results are similar provided that a large number of indicator variables are used to measure the latent construct (consistency at large) (Hair et al., 2011)

[2] Under normal data conditions, CB-SEM and PLS-SEM results are highly similar, with CB-SEM providing slightly more precise model estimates (Hair et al., 2011).

3.4.2.1 Scaling.

"A good Likert scale has to present symmetry of Likert items about a middle category that have clearly defined linguistic qualifiers for each category. In such symmetric scaling, equidistant attributes will typically be more clearly observed or, at least, inferred. When a Likert scale is perceived as symmetric and equidistant, then it will behave more like an interval scale. So while a Likert scale is ordinal, if it is well presented, then it is likely the Likert scale can approximate an interval-level measurement, and the corresponding variables can be used in SEM" (Hair Jr et al., 2013).

3.4.2.2 Data distribution.

In SEM, it is paramount to distinguish normal from non-normal distributions and normal distributions are preferred, especially in CB-SEM. In contrast, PLS-SEM generally makes no assumptions about the data distributions. However, for reasons discussed in later chapters, it is nevertheless worthwhile to consider the distribution when working with PLS-SEM. To assess whether the data are normal, researchers can revert to statistical tests such as the Kolmogorov-Smirnov test and Shapiro-Wilk test (Mooi & Sarstedt, 2011). In addition, researchers can examine two measures of distributions-skewness and kurtosis assessing to what extent the data deviate from normality (Hair et al., 2010).

3.4.2.3 Measurement theory.

Measurement theory specifies how the latent variables (constructs) are measured. Generally, there are two different ways to measure unobservable variables. One approach is referred to as reflective measurement, and the other is a formative measurement. In a formative measurement model, directional arrows are pointing from the indicator variables (x1 to x3 for Y1 and x4 to x6 for Y2) to the construct, indicating a causal (predictive) relationship in that direction. With multiple reflective indicators, the direction of the arrows is from the construct to the indicator variables, signifying that the construct causes the measurement (more precisely, the covariation) of the indicator variables. Y4 is measured using a single item rather than multi-item measures. The approach to modelling constructs (i.e., formative vs. reflective and multi-items vs. single items) is an important consideration in developing path models.

3.4.2.4 Structural theory.

Structural theory is the demonstration of the correlation between latent variables (i.e., it shows the constructs and the path relationships between them in the structural model). The location and sequence of the constructs are based on theory or the researcher's experience and accumulated knowledge. When path models are developed, the sequence is from left to right.

The variables on the left side of the path model are independent variables, and any variable on the right side is the dependent variable (Hair Jr et al., 2013). Moreover, variables on the left are shown as sequentially preceding and predicting the variables on the right. However, variables may also serve as both the independent and dependent variable.

When latent variables serve only as independent variables, they are called exogenous latent variables. When latent variables serve only as dependent variables or as both independent and dependent variables, they are called endogenous latent variables. Any latent variable that has only single-headed arrows going out of it is an exogenous latent variable. In contrast, endogenous latent variables can have either single-headed arrows going both into and out of them or only going into them. Exogenous latent variables do not have error terms since these constructs are the entities (independent variables) that are explaining the dependent variables in the path model.

3.4.2.5 The PLS-SEM algorithm.

In PLS, "model parameters (i.e., path coefficients and indicator weights or loadings) are estimated using a sequence of ordinary least squares regressions and weighted sums, carried out over a multi-stage algorithm. As in multivariate regression, the ordinary least squares operation seeks to minimize the variance unexplained for all latent variables predicted in the model" (Hair, Ringle, & Sarstedt, 2011) . PLS estimates parameters using ordinary least squares with a partial-iterative approach, and in this way it is different from CB-SEM. In the followings, the stages of the process are desctibed as defined by Hair Jr et al., (2013)

"Stage 1: First, all indicators are standardized to a mean of 0 and standard deviation of 1, with latent variable scores calculated as equal-weighted linear sums of their indicators (i.e., latent variable scores = sum of the standardized indicators). This result is called the 'outer proxy', where 'outer' refers to the measurement model. Latent variables are referred to as 'constructs'. Second, an inner proxy – where 'inner' refers to the structural model – is calculated for each construct as follows: (a) weights are calculated for the paths connecting any two constructs—the weighting is a measure of correspondence between the two constructs and (b) the product of the weights and the outer model proxy are calculated. These products are then summed to generate the inner proxies for each construct. Note here that each construct will have an outer proxy and an inner proxy for each participant in the dataset. The weightings are fixed across the dataset. Third, the algorithm then returns to the indicator (i.e., outer) weights. Each inner proxy is then used to predict weights for each indicator in a given block.

The algorithm cycles through these Stage 1 steps repeatedly until proxy updating converges (i.e., the sum of all updating of weights in the model is less than a user specified level, commonly $1x10^{7}$). The results of Stage 1 are construct scores, estimated for each participant in the dataset. The weights from Stage 1 are discarded.

Stage 2: In Stage 2, path coefficients, weights, and loadings are calculated via ordinary least squares regression using the latent construct scores computed during Stage 1 and the indicator values.

Stage 3: In Stage 3, standardization is 'reversed', that is, values for latent variables are calculated again using the original unstandardized indicator values and the weights and loadings from Stage 2. The final scores are expressed in the original metric of the observed variables. As a separate procedure, statistical significance is calculated using bootstrapping (i.e., random sampling with replacement generates a distribution from which a standard error is calculated). Statistical significance is computed for all estimates, including path coefficients, indicator loadings, and indicator weights, construct scores, and a number of other parameters".

3.4.2.6 Treatment of measurement error.

Measurement model difficulties are one of the major obstacles to obtaining a solution with CB-SEM. For instance, estimation of complex models with many latent variables and/or indicators is often impossible with CB-SEM. In contrast, PLS-SEM can be used in such situations since it is not constrained by identification and other technical issues.

The goal of predictive modelling used in the research has been to define a model that is both theoretically grounded and has high predictive power, and it differentiates itself from traditional CB-SEM modelling viewed as explanatory and confirmatory tools (Sarstedt, Ringle, Henseler, & Hair, 2014). Prediction is a particular case when the forecast of some relevant outcome is lead by theory (Bagozzi & Yi, 2012), its concept stemming from an econometric perspective and is defined as "the estimate of an outcome obtained by plugging specific values of the explanatory variables into an estimated model" (p. 842). The coefficient of determination (r^2) is used to assess the predictive power of constructs (Hair, Ringle, & Sarstedt, 2011; Hair et al., 2012; Henseler et al., 2014; Sarstedt, Ringle, & Hair, 2014; Sarstedt et al, 2013; Sarstedt et al, 2014).

For the estimation of the extended Entrepreneurial Calling model with empirical data, PLS path modelling method (Hair, Sarstedt, Ringle, & Mena, 2012) and the SmartPLS 2.0 software application (Ringle et al., 2010) have been used. To analyse and evaluate the PLS path modelling results, recommendations by Henseler, Ringle, and Sinkovics (2009) and Hair et al.

(2012) will be consistently followed. All multi-item scales must exhibit composite reliability (rc) values well above the commonly suggested thresholds of .70 for rc and in particular cases there is argument for the acceptance of less than .50 for the AVE average variance extracted (AVE) (set threshold) values for discriminant validity (Chin, 2010; Bagozzi).

3.4.3 Evaluating measurement and structural models using partial least square.

The reliability and validity of the reflective construct measures will be evidenced by the measurement model parameter estimates and diagnostics. Evaluation of the prediction-oriented PLS path modelling method's results for the structural model centres on the values. The key

Table 3.4

Rules of Thumb for Model Evaluation

Reflective Measurement Models
• Internal consistency reliability: Composite reliability (ρ_c) should be higher than 0.70 (in exploratory research, 0.60 to 0.70 is considered acceptable). • Indicator reliability: Indicator loadings should be higher than 0.70.3 • Convergent validity: The average variance extracted (AVE) should be higher than 0.50. • Discriminant validity: – The AVE of each latent construct should higher than the construct's highest squared correlation with any other latent construct (Fornell–Larcker criterion). – An indicator's outer loadings on a construct should be higher than all of its cross loadings with other constructs.

[3] In social sciences studies, especially when newly developed scales are used, researchers often observe weaker outer loadings (Hair et al, 2014). Instead of automatically removing all indicators with their outer loading below .70, it is advised to examine the effects of removal on the average variance extracted (AVE) and composite reliability (ρ_c). A weak indicator can also be retained based on its contribution to content validity.

Structural Model

- r^2 values of 0.75, 0.50, or 0.25 for endogenous latent variables in the structural model can be described as substantial, moderate, or weak, respectively.
- Path coefficients' significance is assessed by the bootstrapping procedure. The minimum number of bootstrap samples is 5,000, and the number of cases should be equal to the number of observations in the original sample. Critical t-values for a two-tailed test are 1.65 (significance level = 10 percent), 1.96 (significance level = 5 percent), and 2.58 (significance level = 1 percent).
- In order to obtain cross-validated redundancy (Q^2) measures for each construct, predictive relevance is assessed by the blindfolding technique. The number of valid observations must not be a multiple integer number of the omission distance d. Values of d between are set between 5 and 10. Resulting Q^2 values of larger than zero indicate that the exogenous constructs have predictive relevance for the endogenous construct under consideration. Predictive relevance effect q^2 values allow for the assessing the relative impact of one construct.
- The effect size f^2 allows the assessment of an exogenous construct's contribution to an endogenous latent variable's r^2 value. The f^2 values of .02, .15, and .35 indicate an exogenous construct's small' medium, or large effect, respectively, on an endogenous construct.
- Heterogeneity: If theory supports the existence of alternative groups of data, carry out PLS-SEM multigroup or moderator analyses. If no theory or information about the underlying groups of data is available, an assessment of unobserved heterogeneity's existence must be conducted by means of the FIMIX-PLS method, which is available in the SmartPLS software package.

target constructs should exhibit high r^2 values. Table 3.4 enumerates the most important guidelines when conducting measurement and structural model evaluation based on two of the most important compilations on PLS-SEM guidance, Hair et al., (2011), and Hair et al., (2014).

3.5 PLS-SEM Application Considerations

Owing to the relative novelty of applying the PLS-SEM technique to career development research and in order to avoid pitfalls and inconsistencies, a stringent and consistent methodology was required. It was assured by the guidelines emanating from a short review of

the most common reporting errors and omissions as investigated by Hair et al. (2012), in their article published in the Journal of the Academy of Marketing Science (40/3, pp.414-433).

The authors reviewed 204 PLS- SEM applications published in a 30-year period (1981 to 2010) in the 30 top ranked marketing journals. This critical analysis addressed six key methodological issues in PLS-SEM: "(1) reasons for using PLS- SEM; (2) data characteristics; (3) model characteristics; (4) outer model evaluation; (5) inner model evaluation; and (6) reporting" (Hair et al. 2012). The authors argue that the inappropriate use of PLS-SEM can have severe consequences, namely improper findings, interpretations, and conclusions. Their review demonstrates without fail how misunderstanding PLS-SEM's methodological properties, misapplication of measures, as well as the omission of model assessment options is can be detected even in top tier journals. The underlying purpose of including this section is to demonstrate by the means of examples how to avoid common pitfalls in using PLS-SEM. These guidelines were used by the author of this thesis.

3.5.1 Reasons for using PLS-SEM.

The primary research objective of 57 studies' (27.94%), was to explain the variance of the endogenous constructs, in conjunction with the exploratory nature and theory development purpose which 35 studies (17.16%) mentioned. These reasons indeed are adequate as PLS-SEM's original purpose is prediction with rich data and weak theory (Wold 1985).

Pertaining to the debate on sample size, Reinartz et al. (2009) showed that PLS-SEM achieves high levels of statistical power in situations when sample size is relatively small (i.e., 100 observations).

3.5.2 Data characteristics.

The PLS-SEM algorithm generally requires metric data for the measurement model indicators. But the method also works well with ordinal scales with equidistant data points (i.e., quasi-metric scales; Mooi & Sarstedt, 2011) and with binary coded data.

While PLS- SEM is accepted as a robust solution in situations with extremely non-normal data distribution (e.g., Cassel et al. 1999; Reinartz et al. 2009), it is a contentious issue for researchers. Highly skewed data can cause inflation of bootstrap standard errors (Chernick, 2008) and "thus reduce statistical power, which is especially problematic given PLS-SEM's tendency to underestimate inner model relationships" (Wold 1982). Despite this word of caution, only 19 studies (9.31%) report the on the non-normality of data.

Missing values should be dealt with when using PLS-SEM. For less than 5% values missing per indicator, missing value treatment options such as mean replacement, EM

(expectation-maximization algorithm), and nearest neighbor (e.g., Hair et al., 2010) generally result in only slightly different PLS-SEM estimations. Deleting all observations with missing values decreases variation in the data and may introduce biases when certain groups of observations have been deleted systematically.

3.5.3 Model characteristics.

In PLS-SEM, three types of models (i.e., focused, unfocused, and balanced) can be distinguished, based on model structure and characteristics. Focused models are characterised by a combination of a small number of endogenous latent variables and a large number of exogenous latent variables with explanatory power. An unfocused model comprises of several endogenous latent variables and mediating effects, and a comparatively smaller number of exogenous latent variables. Focused and balanced models comply with PLS-SEM's prediction orientation, while unfocused models can be more suitably explained by CB-SEM. Out of the 57 studies, only 11 used purposefully PLS-SEM for prediction with a focused model. In contrast, 23 of 57 predictive models ended up using an unfocused model. This means that authors are not aware of the relationship between PLS-SEM's prediction objective and the adequate type of model to be applied in their research design.

3.5.4 Outer model evaluation.

Outer model assessment consists of the test for "individual indicator reliabilities, the reliabilities for each construct's composite of measures (i.e., internal consistency reliability), as well as the measures' convergent and discriminant validities (Hair Jr. et al, 2013). The distinction between reflective and formative measurement approach is purposeful to eveluate "how well constructs are measured by their indicator variables, individually or jointly" (e.g., Diamantopoulos et al. 2008). Constructs' measurement modes can be best tested empirically by a confirmatory tetrad analysis technique for PLS-SEM (CTA-PLS) (Bollen and Ting 2000).

3.5.5 Reflective outer models.

Assessment of reflective outer models involves "determining indicator reliability (squared standardized outer loadings), internal consistency reliability (composite reliability), convergent validity (average variance extracted, AVE), and discriminant validity" (Fornell-Larcker criterion, cross-loadings) as described by, for example, Henseler et al. (2009) and Hair et al. (2011). In the study mentioned, 311 models (81.67%) were identified as reflective. Not all models reported reliability measures. Precisely, 157 of 254 models (61.81%) reported outer loadings, indirectly pertaining to indicator reliability, with only 19 models directly reporting on

the item. Indicator reliability was reported more consistently in earlier models than in more recent ones.

177 models (69.69%) indicated and discussed internal consistency reliability, with Cronbach's alpha. However, "Cronbach's alpha is limited by the assumption that all indicators are equally reliable (tau-equivalence), and efforts to maximize it can seriously compromise reliability" (Raykov 2007). In contrast, composite reliability does not assume tau-equivalence, making it more suitable for PLS-SEM, which prioritizes indicators according to their individual reliability".

3.5.6 S**amples sizes in PLS modelling.**

One of the fundamental considerations in SEM is sample size. While thereare general guidelines to the adequate use of sample size, there is a growth of the sample size in time illustrated by the 1990 example of Breckler (1990) reviewing 72 articles and finding a median of sample size to be was 198 to the 2004 example of Schumacker and Lomax describing the sample size to be between 250 and 500 subjects.

Barrett (2007) has strict views on the topic: "SEM analyses based upon samples of less than 200 should simply be rejected outright for publication unless the population from which a sample is hypothesized to be drawn is itself small or restricted in size" (p. 820). Bagozzi and Yi (2012) considered "200 cases as a typical sample size in SEM and recommended that sample size should be above 100, and preferably above 200. However, a sample of less than 100 leads to the model becoming untenable unless the model is very simple".

Below, there is an enumeration of Hair et al.'s (2010) guidelines on sample size based on model complexity and characteristics of the measurement model:

- "Minimum sample size 100: models should contain five or less constructs. Each construct should have more than three observed variables. The communalities of each observed variable should be ≥ .6.
- Minimum sample size 150: models should include seven constructs or fewer. Modest communalities (.5) is accepted, and no under-identified constructs.
- Minimum sample size 300: models contain seven or fewer constructs, lower communalities (below 0.45). The multiple under-identified constructs should be less than three.
- Minimum sample size 300: models have a large numbers of constructs. The communalities of some factors can be lower, and/or having fewer than three measured items".

These recommendations are further refined by Hair et al. (2014), who explicitly stipulate the '10 times rule', that is: the sample size must contain observations which are minimum 10 times more than the "largest number of structural paths directed at a particular construct in the structural model". In other words, the sample size must exceed by "10 times the maximum number of arrowheads pointing at a latent variable in the PLS path model". Other than this rule, researchers must also observe other model and data characteristics.

Table 3.5

Minimum Sample Size Requirements Based on Statistical Power

	Significance level											
Maximum number	1 %				5 %				10 %			
of arrows pointing at	Minimum r^2				Minimum r^2				Minimum r^2			
a construct	.10	.20	.50	.75	.10	.20	.50	.75	.10	.20	.50	.75
	Number of observations											
2	158	75	47	38	110	52	33	26	88	41	26	21
3	176	84	53	42	124	59	38	30	100	48	30	25
4	191	91	58	46	137	65	42	33	111	53	34	27
5	205	98	62	50	147	70	45	36	120	58	37	30
6	217	103	66	53	157	75	48	39	128	62	40	32
7	228	109	69	56	166	80	51	41	136	66	42	35
8	238	114	73	59	174	84	54	44	143	69	45	37
9	247	119	76	62	181	88	57	46	150	73	47	39
10	256	123	79	64	189	91	59	48	156	76	49	41

Note: Adapted from Hair et al. 2014, p. 21.

The above table is interpreted in the following way: for example, at a significance level of 5 %, a construct having 5 observed variables, with a minimum r^2 of .25, the model should contain 70 observations in order to achieve the commonly used statistical power of 80 %. These criteria were fulfilled in all the 3 studies as illustrated below:

Table 3.6

Number of Constructs, Variables, Sample Sizes and Significance Levels in Studies 1, 2 and 3

Studies	No. of constructs	Max. observed variables per construct	Required sample size for $r^2 \geq .10$, $p = .01$	Required sample size for $r^2 \geq .10$, $p = .05$	Actual sample size	Achieved signifi-cance level *p*
Study 1	4	7	228	166	197	5 %
Study 2	4	13	273	209	5560	1 %
Study 3	8	6	217	157	334	1 %

3.5.7 Recent advances in the PLS-SEM application.

A recent phenomenon in PLS-SEM application is its exponential expansion in marketing research and practice and entry into other social sciences domains such as vocational psychology (see Ali, Ryu, & Hussain, 2015; Willaby, Costa, Burns, MacCann, & Roberts, 2015). Authors have come to recognise that PLS-SEM's is an alternative to the more popular CB-SEM approaches (Henseler et al. 2009). PLS-SEM as a method has undergone substantial improvements in recent years, including "(1) confirmatory tetrad analysis for PLS-SEM to empirically test a construct's measurement mode (Gudergan et al. 2008); (2) impact-performance matrix analysis (IPM); (3) response-based segmentation techniques, such as finite mixture partial least squares (FIMIX-PLS; Hahn et al. 2002; Sarstedt et al. 2011a); (4) guidelines for analyzing moderating effects (Henseler and Chin 2010; Henseler and Fassott 2010); (5) non-linear effects (Rigdon et al. 2010); and (6) hierarchical component models" (Lohmöller 1989; Wetzels et al. 2009). This thesis will also rely on the upgraded version of existing analysis techniques such as PLS-MGA, or multiple-group analysis, developed for comparing PLS model estimates across groups of data, and the Importance-Performance Matrix Analysis (IPMA) contrasting total effects and the average values of the latent variable scores in the structural models.

3.6 Researcher Reflections and Axiology

Axiology is the recently adopted term used to cover the philosophy of values. It was introduced a century or so ago by the French philosopher Paul Lapie and derives from the Greek axios, corresponding to the Latin valere, meaning 'to be strong' or 'to be worthy' (Creswell, 2009). It is thought to exert a direct bearing on the ethical context of research, offers an important basis

for making explicit the assumptions of different paradigms of research, and provides the foundation for understanding not only the context of research, but also its findings.

Teaching on all levels supposes or entails a certain degree of responsibility. Responsibility to deal with the students beyond the curricula and the classroom environment. In the framework of constructive classroom teaching, responsible educators get ample chances to observe and understand the circumstances and problems of students and provide immediate or delayed response. These responses can vary from comments and suggestions to actual support in helping students get organised or have access to the needed services or goods. Sometimes it is just a matter of tone of speech and students become appreciative of the educator's attention and feedback.

My personal journey that lead to the writing of this thesis stems from this 'responsible observation' and a quasi-instinctive intent to respond to the needs of my classes. I found very early on that my students lack 'spirit' or 'mindset' that did not seem to be absent from my youth. This is the spirit of vested interest in the 'operational' environment, autonomy, future-orientation, in other words: entrepreneurialism. I was baffled at the very different attitude of my student classes and blamed changing times and technological innovations and a general spleen or decadence.

Additionally, I was both surprised and concerned by students' disinterest in adopting proactive behaviours regarding their career development. This meant that the majority of students were hoping for a well-paid employment in (preferably) a multinational company. Having regard to unemployment rates, especially in the cohort of fresh graduates, this disregard of realities and lack of engagement in searching for alternatives of self-employment was more than alerting. This impassivity was evident in their attitude towards involvement and engagement in democratic institutions. Although the phenomenon of youth being disappointed in politics is observed on a global scale, one cannot disregard the responsibility of educational institutions in providing skills and competencies that enable youth to cope with both social and economic hardships of continually changing times. Young adults' voices should be heard by policy-makers so that their needs and ideas are integrated in various policies. Indifferent youth will not shape the future.

Then an idea occurred to me: if half of the classes wish to leave the country because there are no jobs available, if youth unemployment is at a record level, if democracy is only a slogan because political parties lost credibility and became detached from their electorates, who is going to stay in the face of hardships and most of all, who is going to be available when the foundations for the future will be laid?

My career path as an educator, albeit short at the prominent business school where I was teaching management subjects, would not have been successful had I not started a serious, time-consuming and passionately involving journey inquiring the nature of the non-existence of the 'spirit' and subsequently attempting to offer some sort of a solution, be it temporary or transient. This passion originated from my calling as a responsible educator coupled with my patriotic concerns for the role youth plays in shaping the future of my country.

My personal contribution with this research would therefore be the assessment of the interconnectedness of Active Citizenship and Entrepreneurial Self-Efficacy in higher education settings. By inquiring into the dissatisfaction of my own students and designing a pedagogical assessment tool to evaluate class-room perceptions and attitudes, instinctively, I laid out the foundations of this research. Mapping out existing data and a few mind-maps helped visualise latent connections and relationships between feedback items. A thematic analysis of what themes kept emerging then became a 'conceptual itch' that I deemed important to explore further? Following this 'itch' of the interplay between active citizens and entrepreneurs I was able to formulate a question that could be honed into a research question. Once I found this basic research question, I was then able to move towards reading: what research is being or has been done on this one issue, what methodologies and what theory are the authors doing this research using? I worked my way through this 'retrofitting' technique until I finally settled with a proper research design.

While initially, my focus was universities' third role in assuring societal sustainability, and empowerment by education, I found myself gradually shifting towards a distinct and seemingly distant discipline in which to embed both active citizenship behaviour and entrepreneurial career decisions, and this was career development.

I felt particularly satisfied when I found the Emancipatory Communitarian Approach (EC, Blustein, McWirther and Perry, 2005) and attempted to incorporate it in the design of the thesis. I hold it as a deep conviction that young generations' attitude to work in general and their engagement in autonomous self-employment can be facilitated and enhanced by adequate and appropriate training. I believe that tertiary education across all disciplines should comprise of training in and for active citizenship (to reinforce democratic participation) and entrepreneurship (to provide a foundation and guidance for youth to become economically independent). Such an approach would solve both the prevailing de-democratisation process and the economic troubles that contemporary Hungarian society is suffering from.

The resulting personal journey came to be many-folded: not only did I shift from one discipline to an entirely new one but a similar shift occurred when I shifted from the traditional

SEM method to a new one better serving the predictive purposes that I devised in my research. This new technique is called PLS-SEM. My researcher journey was further refined when, from using the previous version of the PLS-SEM software I upgraded to the new version, version 3 enabling more sophisticated and varied analysis techniques.

While the PhD journey itself started when still in the home country, a scholarship to Queensland provided the institutional setting and background that facilitated a novel framing of my research ideas. The cultural shift and its implications were an additional aspect of the personal journey.

Finally, I must say that as a good patriot, I feel responsible for my country, and with this thesis I envisage a cooperation with the educational authorities in Hungary. I hope to be able to provide for my community by presenting my findings to so that they can benefit from them in policy and practice. This will be contribution to the amelioration of the life of youth in Hungary.

Chapter 3 enumerated the research methods to be used in Studies 1, 2 and 3. Beyond the detailed description of the PLS-SEM analysis, it also provided an overview of the most commonly committed errors when using PLS-SEM analytical tools and presenting results. This thesis follows stringent guidelines that have become the rules for the users of the software which, despite its wide-spread application in some of the disciplines, such as marketing and strategic management, has just recently reached psychology. The chapter also explained the author's axiology and personal journey, as the engagement in the PhD journey was the result of the experience acquired while teaching at the Budapest Business School.

Chapter 4

Study 1, Budapest Business School, 2013

4.1 Introduction

At the time of data collection for Study 1, undertaken prior to the commencement of the doctoral studies at the University of Southern Queensland, the focus of the research and therefore the theoretical framework was more oriented toward social sustainability and the third mission of universities in empowering future generations. This particular research was essentially focusing on entrepreneurial intentions and attitudes of students in an educational setting, having attended entrepreneurial courses, oriented towards their perception of prototypical entrepreneurial qualities (PEQ's). Constructs were therefore derived from empirical research on entrepreneurial intentions of university students, their items not corresponding to SCCT's constructs to be introduced in Studies 2 and 3. Between Studies 1 and 2, there was a paradigm shift that was induced by the study findings and the realization of the research gap.

It is generally accepted that universities and other tertiary educational institutions are instrumental in their guidance and support for students to identify, understand and interiorise entrepreneurial traits and inclinations, understood to be essential in starting a business venture. Various authors have demonstrated the significant role of entrepreneurial education (EE) and entrepreneurial support as the most important influence on students' ability to become entrepreneurs (Peterman and Kennedy 2003; Saeed et al., 2014).

An important aspect of career education programmes is direct experience of work. Students in the Budapest Business School must have at least 6 months of work experience in their final year of compulsory schooling. These experiences are enhanced by in-school work simulations in which students' experience work tasks within the school environment without taking on the full identity of a worker. These programmes are often used to enhance academic subjects, or for personal and social education purposes, as well as for career education. All, to be effective, require support from career education programmes, to provide the preparation and the reflective follow-up which help to convert experience into learning (Watts, 2001) .

4.2 Theoretical Underpinnings of Study 1

Trani and Holsworth (2010) begin their book on tertiary education's new role explaining universities are undergoing a paradigm shift that reshape their role and relationship with the communities they are embedded in. Colleges and universities are serving as developers of social capital, providers of health care and as partners of regional development to engage their

communities. This affiliation, coupled with the global movement toward a knowledge economy, formulates the indispensable university that has "an ethical obligation to contribute to the common good" (Cuthill 2010).

Universities' new societal requirement and responsibility is to educate and train generations of active citizens especially in societies with unsatisfactory or entirely missing democratic participation (Varblane, Mets 2010). Entrepreneurship education can serve as an enhancer of the active citizenship education as it can be deployed as a "tool and method to introduce and spread proactive and autonomous behaviour, future orientation and abandon passivity, so frequent in societies with democratic deficit" (Othman, Hashim & Wahid 2012; Jones, Miller, Jones, Peckham & Pickernell 2011; Chen, Weng & Hsu 2010). "Proactivity involves taking the initiative to address problems in one's service domain and a commitment to excellence in one's domain of expertise" (TEFI White Paper 2008, p.16).

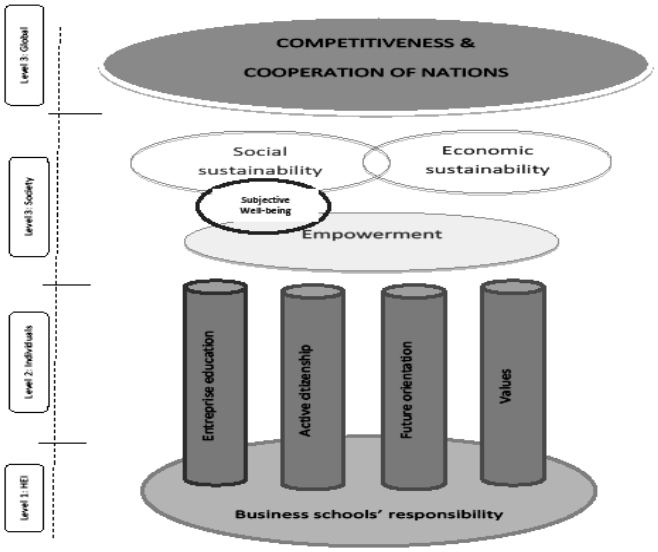

Figure 4.1. Factors and processes leading to student empowerment, as elaborated for the original purposes of Study 1.

4.3 Original Research Questions for Study 1

The list of research questions emanating from the above theoretical underpinnings are summarized as follows:

- Can the social accountability of Business Schools – that is: empowering youth by educating and training them to become autonomous individuals, actively involved in

democratic processes be fulfilled by blending entrepreneurship education in to the curricula?

- Can the satisfaction of students be increased by a curriculum that is based on blended learning of entrepreneurship and active citizenship?
- What is the students' assessment of the empowering processes?
- Are there more variables to these processes than those posited in the theoretical model?
- Can Business Schools use this measurement tool to effectively assess their empowerment capabilities and can they base their efforts in improving it on this tool?
- Does the students' assessment of the community role of the entrepreneur impact their intention/readiness/preparedness to start up?
- Does the students' perception of the value the entrepreneur creates impact their intention/readiness/preparedness to start up?
- Can the constructs derived from theoretical underpinnings be brought together and captured in a single model to represent students' intentions and readiness to start up?

Despite the wide scope of the original study's research aim and research scope, Study 1 only targeted the focal area of entrepreneurial behavior, that is, the readiness of the students to start up. This intention to start up was assigned the dependent variable of the analysis. It was hypothesized that a number of other variables can be identified as accountable for the intention to start up in a tertiary education setting, such as the institutions' efficiency and the value orientation and assessment of the students regarding the entrepreneurial role. The institutions' efficiency can be assessed by the way the students are satisfied with the training they received. It was also hypothesized that the degree of students' involvement with citizen engagement has a direct effect on their preparedness to start up.

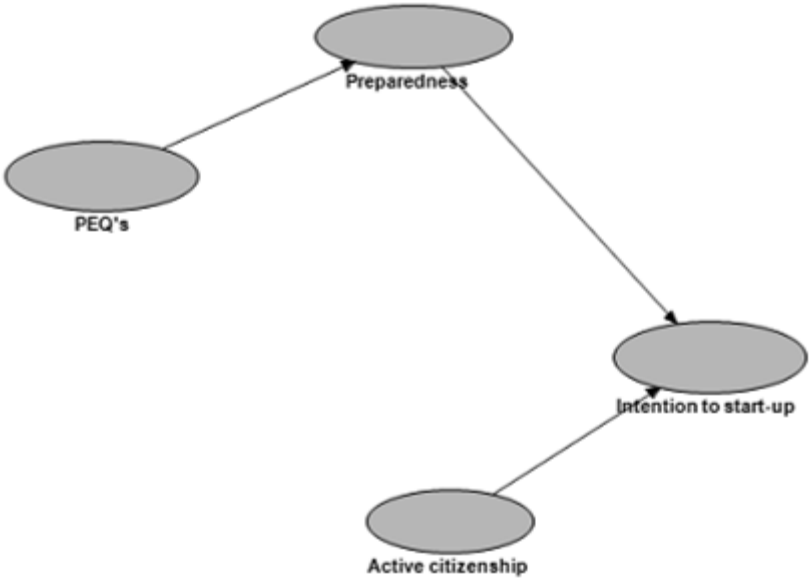

Figure 4.2. Student Entrepreneurial Intention Model. PEQ's = Prototypical Entrepreneurial Qualities

Based on the above conceptual model, the following Hypotheses described in Table 4.1 were formulated for Study 1:

Table 4.1

Summary of Hypotheses of the Student Entrepreneurial Intention Model

No	Description	Path
1.	Student Entrepreneurial Intention can be modelled incorporating 3 predictive constructs	-
2.	Entrepreneurial preparedness positively influences Entrepreneurial intention	EP → EI
3.	Intention is positively influenced by Active citizenship behaviour	AC → EI
4.	Entrepreneurial preparedness is positively influenced by Entrepreneurial PEQ's	PEQ → EP

Note. PEQ's = Prototypical Entrepreneurial Qualities

4.4 Method

4.4.1 Participants.

Respondents originated from a single business school, the Budapest Business School, Faculty of Tourism, Hospitality and Commerce, in Hungary. Selecting a single site is appropriate for various reasons. First, as extensive data collection is needed at different levels, a single site (institution in this case) enhances homogeneity in the study design, enabling valid conclusions. Third, single site studies have been successfully applied by other scholars (e.g., Shane & Stuart, 2002; Zhang, 2009). Moreover, Budapest Business School is a tertiary education institution with long tradition and history of commerce and retail management education, with the active contribution of some of the outstanding Hungarian practitioners of the trades. Ethical clearance had been obtained and the survey authorised by senior management of the school in the first half of 2013.

Study 1A archival used paper-based questionnaires (Appendix B) designed and developed by the author and distributed among a convenience sample of Budapest Business students having attended Entrepreneurship courses where the author had been a course examiner. Responses were optional and the response rate was 100 % of those attending at the time when the questionnaires were distributed, signifying 85 % of the sample population. Data collection yielded 197 valid responses, 35 & males, 65 % females, age ranging between 21-34.

4.4.2 Measures used in study 1.

Preparedness to engage in startup activity (self-employability) has been conceptualised as the students' assessment of their self-employability based on the practical knowledge, skills, competencies and experience that they accumulated at the business school setting. It has been measured by a combination of the Entrepreneurial self-efficacy scale by Linán et al. (2011): asking for the assessment of the statement "I am prepared to start a viable firm", and the University empowerment scale developed by Horvath (2011). This latter inquired into students' perception of how the university conveys and transfers values empowering them in their future career and personal lives. *Preparedness* has been measured by Section 15 of the questionnaire, item being: "I feel that I am ready to start a new business.", (response on a 4-degree Likert scale ranging from 1= not at all agree, to 4 = fully agree); and Section 18, where the question was: "How satisfied are you with your Uni regarding the transfer of: entrepreneurial competencies, values understood by Generation Y, and practical knowledge derived from their compulsory industrial practice (practicum)". The rationale behind inquiring about students' satisfaction of the practicum was that Pittaway et al. (2009) found that assessment of practice was a gap in the

field of the entrepreneurship literature. Students' response option was to indicate their level of satisfaction on a scale from 0-100, 100 being full satisfaction.

Active citizenship behaviour has been measured by items derived from the Critical Consciousness Scale by Diemer et al. (2014) and having an internal consistency of Cronbach α = .87. Using a four-point scale (ranging from 1 = not at all likely to 4 = wholly likely), participants rated their agreement with statements like: "As an active citizen, I would stand up for my citizen's rights."

Prototypical Entrepreneurial Qualities (PEQ's) or roles are those attributes that entrepreneurs are perceived to have in their everyday activities from the start-up phase to the management of the established company. These attributes help entrepreneurs to seek for and grasp opportunities and turn them into actions while also caring for the greater ecosystem they are embedded in. This scale has been established by incorporating elements from literature on roles, and in particular on (Saeed et al., 2014) and (Liñán, Santos, & Fernández, 2011) .Typical questions include: "Please indicate your level of agreement with the following statements about the typical entrepreneurial roles. An entrepreneur creates value." Response options were offered on a 4-degree Likert scale ranging from 1 = not at all agree, to 4 = fully agree.

Intention to start up has been conceptualised as the intent to start a business and has been derived from the scale of Zhao et al. (2005), reporting internal consistencies of .85 in time 1 and .88 in time 2. Section 15 of the questionnaire gave the students the option of choosing between a time range of starting a business immediately after graduation (within 1 year) or a longer range of 5 and 10 years following their graduation. Respondents were requested to "Please indicate your level of agreement with the following statements about your career choice intentions... ", typical answers being: "I want to start a business in the next 5 years." Students had to provide a response on a 4-degree Likert scale ranging from 1 = not at all agree, to 4 = fully agree.

Control variables, such as sociodemographic background variables potentially impacting participants' experience of a calling, their perceived and actual ability, and ultimately career pursuit were introduced. Because individuals' sociodemographic differences could affect calling and, particularly, career outcomes (Judge, Cable, Boudreau, & Bretz, 1995; Ng et al., 2005; Saks & Shore, 2005), control variables included gender (1 = male, 2 = female), age (in years), as well as family socioeconomic status, such as both parents' highest level of educational attainment (primary 1, vocational 2, secondary 3, tertiary 4, postgrad 5, PhD 6), birthplace and place of secondary education for settlement size (Capital city; city over 1 000 000 inhabitants; 500 000 - 1 000 000 city; 100 000 - 1 000 000 city; 50 000 - 100 000. town; 10 000 - 49 000

town; 5 000 - 9 000 town; 1 000 - 5 000 town; ≤ 1 000 village. This latter variable was included in conjunction with the regional studies research orientation.

4.5 Results

4.5.1 First stage: Measurement model.

The relation of each observed variable to their construct is demonstrated by the setting up and testing of the measurement model, which also allows for the testing of reliability and validity indicators (Guo et al., 2011). Hair et al. (2014) suggested that the factor loading of items ≥ .70 should be acceptable, except in cases when the effects of removal on the average variance extracted (AVE) and composite reliability (ρc) would cause AVE to drop to under .50. A weak indicator can also be retained based on its contribution to content validity.

For the estimation of the Student Entrepreneurial Intent model with empirical data, the PLS path modelling method (Hair, Sarstedt, Ringle, & Mena, 2012) and the SmartPLS 2.0 software application (Ringle et al., 2012) were used. The first iteration of the model showed that all the items load on their respective constructs with a value more than .60 (Table 4.2), except for the item named 'Volunteer work', which has been retained to provide a diversified construct structure. Standardized loadings of the scale items on their respective constructs were significant (all $p < .001$), ranging from .554 to .901.

Table 4.2

Factor Loading of the Items of the Constructs of the Student Entrepreneurial Intent Model

Items	Active citizenship	PEQ's	Preparedness	Intention to start-up
Charity work	**.735**	.105	.024	.083
Cooperation	.014	**.850**	.255	.114
Entrepreneurial self-efficacy	.065	.261	**.637**	.419
Innovation	.048	**.900**	.346	.148
Locus of control	.091	**.856**	.291	.161
NGO's work	**.636**	-.021	.035	.056
Openness	.076	**.825**	.274	.131
Responsibility	.098	**.836**	.306	.093
Risk propensity	.045	**.878**	.288	.147
Self-representation	**.729**	.157	.118	.101

Items	Active citizenship	PEQ's	Preparedness	Intention to start-up
Students' union work	**.716**	-.031	.109	.111
Success orientation	.111	**.856**	.301	.228
Uni: Gen Y values	.119	.246	**.814**	.124
Uni: Practicum	.109	.240	**.777**	.077
Uni: Start-up training	.063	.265	**.802**	.169
Volunteer work	**.553**	-.048	-.007	-.005
Start up in 1 yr	-.081	-.024	.231	**.627**
Start up in 10 yrs	.148	.208	.269	**.794**
Start up in 5 yrs	.180	.148	.205	**.771**

Note. Factor loadings > .55 are in boldface. PEQ's = Prototypical Entrepreneurial Qualities

To analyse and evaluate the PLS path modelling results, recommendations by Henseler, Ringle, and Sinkovics (2009) and Hair et al. (2012) were followed. Measurement model allowed for the diagnostics of the reliability and validity of the reflective construct measures.

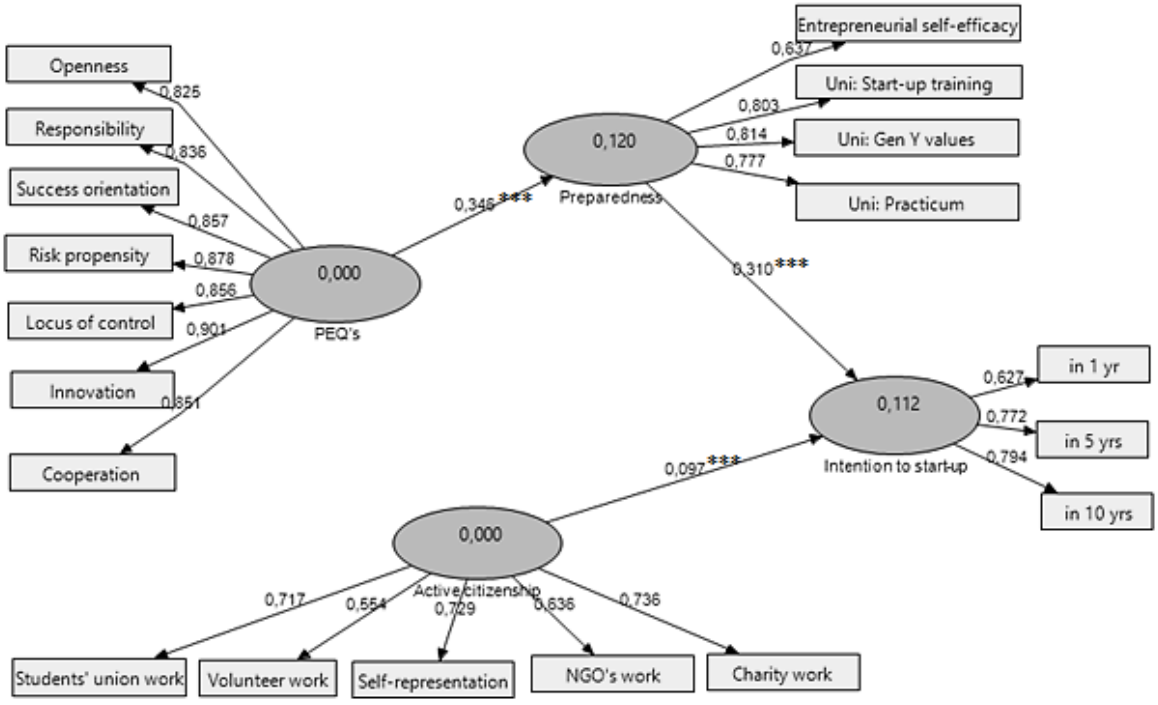

Figure 4.3. Structural model of the Student Entrepreneurial Intent. PEQ's = Prototypical Entrepreneurial Qualities. Model shows item loadings onto the constructs as well the significance of the predictive paths between the constructs.

All multi-item scales exhibit composite reliability (Rc) values well above the commonly suggested thresholds of .70 for Rc and there is argument for the acceptance of less than .50 for the AVE average variance extracted (AVE) values for discriminant validity (Chin, 2010).

In order to evaluate measurements models, outer loadings, CR, average variance extracted (AVE), convergent validity, and discriminant validity were examined. First, the measurement model was tested for convergent validity through factor loadings, CR and AVE (Hair, Black, Babin, Anderson, & Tatham, 2006). Table 4.3 shows that all item loadings exceeded the recommended value of .6 (Chin, 1998). CR values exceeded the recommended value of .7 (Hair et al., 2006) while AVE, or the expression of total variance in the indicators in the latent construct, was above the threshold value of .5 (Hair et al., 2006).

Table 4.3

Reliability Indicators of the Model

Construct names	Cronbachs α	Composite Reliability ρ_c	AVE
Active citizenship	.748	.807	**.460**
PEQ's	.940	.951	**.736**
Intention to start-up	.577	.776	**.540**
Preparedness	.775	.845	**.579**

Note. PEQ's = Prototypical Entrepreneurial Qualities. AVE = Average variance extracted.

When testing the reliability of internal consistency, Cronbach's alpha is accepted be a key test. The cut off level of this indicator is .70, however, in exploratory phases of research, values in the proximity of .60 are accepted, if the values of other reliability indicators justify it (Hair et al., 2014). All the constructs in the model exceeded the acceptable level as shown in Table 4.3.

Internal consistency of the measurement is tested additionally by the composite reliability of the constructs, with an acceptable level of .70. All the constructs exceeded the level of .77, indicating a high reliability according to Hair et al. (2014). Consequently, the 4 constructs in this study achieved a high level of reliability based on the composite reliability indicator.

Average variance extracted (AVE) is the third measure of reliability and all 4 constructs exceeded or approached the cut-off level of .5. Again, the 'Active citizenship' construct, despite

its lower value (.460) was retained as it was deemed an important construct and because the other reliability measures justified the model validity, was retained.

Two types of validity were tested in this study: convergent validity and discriminant validity. Gefen and Straub state that "convergent validity is shown when each measurement item correlates strongly with its assumed theoretical construct, while discriminant validity is shown when each measurement item correlates weakly with all other construct except for the one which it is theoretically associated" (2005, p. 92).

Three criteria are diagnosed in convergent validity: "(1) significant factor loading and value more than .70; (2) the value of average value extracted should be more than .50; and (3) composite reliability of each item should exceed .80" (Guo et al., 2011). There are various views on the threshold values of these indicators. Factor loadings are allowed to be .40 (Chin, 1998) and .50 (Hulland, 1999) and composite reliability above .70 (Hair et al., 2006).

Next, discriminant validity was assessed and its indictors are displayed in Table 4.4 with "the square root of the AVE (diagonal values) of each construct is larger than its corresponding correlation coefficients, indicating adequate discriminant validity" (Fornell & Larcker, 1981).

Table 4.4

Discriminant Validity of the Model Using the Fornell-Larcker Criterion

Constructs	Active citizenship	PEQ's	Intention to start-up
Active citizenship	.459		
PEQ's	.006	.736	
Intention to start-up	.017	.029	.39
Preparedness	.012	.119	.02

Note. PEQ's = Prototypical Entrepreneurial Qualities.

Moreover, a comparison of the loadings across the columns in Table 4.4 also indicates that each indicator's loadings on its own construct are, in all cases, higher than all cross loadings with other constructs. Thus, the results indicate discriminant validity between all constructs based on the cross-loadings criterion. The square root of average variance extracted of every multi-item construct is shown on the main diagonal.

4.5.2 Second stage: Structural model.

This stage tests paths between the constructs of the study model and deciding their relevance in relation to the hypotheses. Before the testing phase can begin, it is necessary to validate the measure model by Cross-validated communality (H^2) and determine its quality by using the Cross-validated redundancy index (otherwise called Predicative relevance or (Q^2). The results of these two indicators of model validity are depicted in Table 4.5.

In a second step following the evaluation of the magnitude of the r^2 values as a criterion of predictive accuracy, Stone-Geisser's Q^2 value (Geisser, 1974; Stone, 1974) has been applied. This value assesses the model's predictive relevance, in other words, PLS-SEM "accurately predicts the data points of indicators in reflective measurement models of endogenous constructs and endogenous single-item constructs (the procedure does not apply for formative endogenous constructs). In the structural model, Q2 values larger than zero for a certain reflective endogenous latent variable indicate the path model's predictive relevance for this particular construct. The Q^2 value is obtained by using the blindfolding procedure for the omission distance D=7. Blindfolding is a sample reuse technique that omits every 7th data point in the endogenous construct's indicators and estimates the parameters with the remaining data points (Chin, 1998; Henseler et al., 2009; Tenenhaus et al., 2005). The omitted data points are considered missing values and treated accordingly when running the PLS-SEM algorithm (e.g., by using mean value replacement)".

The blindfolding procedure can compare the original values with the predicted values. If the prediction is close to the original value (i.e., there is a small prediction error), the path model

Table 4.5

Indicators of Validation of the Structural Model

Constructs	Cross-validated Communality H^2	Cross-validated Redundancy Q^2
Active citizenship	.166	-
PEQ's	.731	-
Intention to start-up	.547	.608
Preparedness	.639	.776

Note. PEQ's = Prototypical Entrepreneurial Qualities.

has a high predictive accuracy. The prediction errors (calculated as the difference between the true values [i.e., the omitted values] and the predicted values), along with a trivial prediction error (defined as the mean of the remaining data), are then used to estimate the Q^2 value (Chin, 1998). Q^2 values larger than 0 suggest that the model has predictive relevance for a certain endogenous construct. In contrast, values of 0 and below indicate a lack of predictive relevance (Hair Jr et al., 2013).

Cross-validated communality H^2 levels of all the 4 constructs and both of the target constructs tested for predictive relevance Q^2 were well above the threshold level of zero, indicating that the structural model has a large predictive relevance.

4.5.2.1 Coefficient of determination and path analysis.

Two main indicators were used to evaluate the relationships between the paths in the PLS structural model: r^2 (Coefficient of determination) values, and standardized path coefficient. There were two target constructs in the model: Preparedness and Intention to start up, and they scored an r^2 of .12 and .11, respectively. Regarding measuring the power of r^2, three levels were suggested: .670 substantial; .333 moderate; and .190 weak (Chin, 1998), thus, the two constructs are considered rather weak. Nevertheless, these two constructs add up to 23 % explanatory power of the Student Entrepreneurial Intention Model

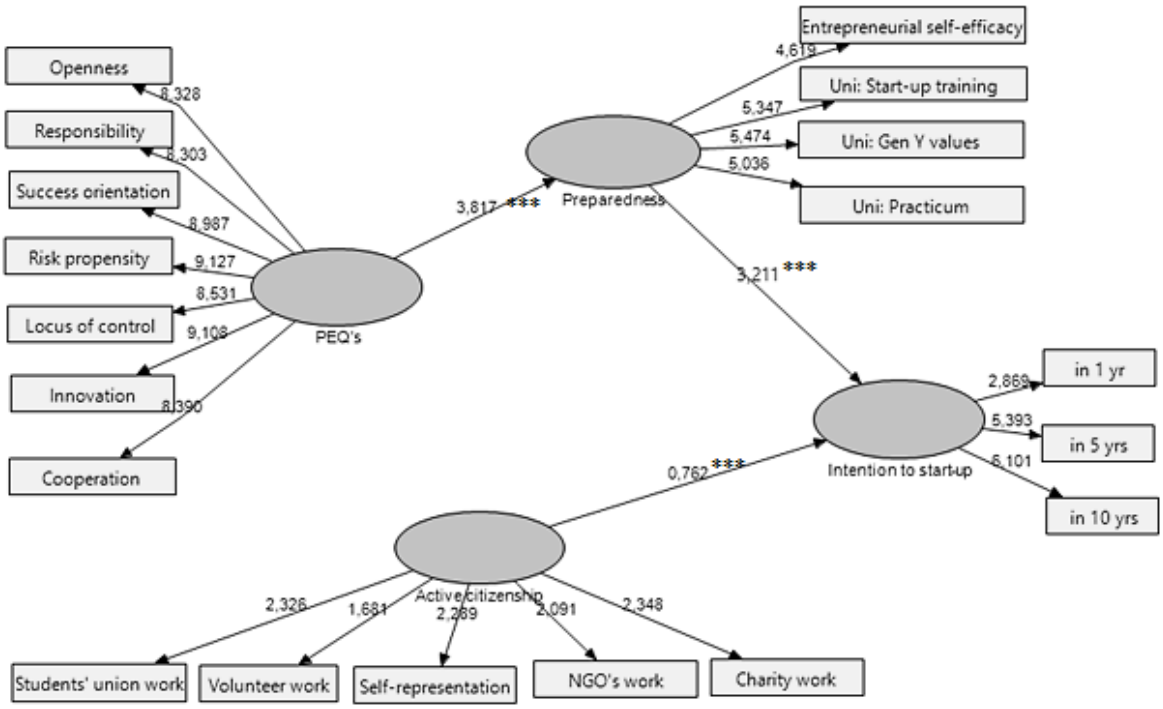

Figure 4.4. Path significance of the Student Entrepreneurial Intent model as verified by the bootstrapping method. PEQ's = Prototypical Entrepreneurial Qualities

The significance of paths in he model was diagnosed by bootstrapping method. Hair et al. (2014) suggested bootstrapping conducted with 5000 samples. Figure 4.4 depicts path significance between the various constructs of the Student Entrepreneurial Intent model.

Three levels of cut-off were adopted to assess the strength of path coefficient: .2 weak; value between .2 and .5 is moderate; and more than .5 is strong (Cohen, 1988; Sridharan et al., 2010). The table below reveals that out of the three endogenous paths, two demonstrate moderate (Preparedness to Intention to start up; Entrepreneurial role and values to Preparedness) and one (Active citizenship to Intention to start-up) weak predictive relationship.

Table 4.6

Inner (Endogenous) Path Analysis and Statistical Significance

Construct relationships	Path coefficient	Strength	T statistics
Active citizenship -> Intention to start-up	.097	weak	**6.485*** **
PEQ's -> Preparedness	.346	moderate	**19.403*** **
Preparedness -> Intention to start-up	.310	moderate	**21.684*** **

Note. PEQ's = Prototypical Entrepreneurial Qualities; *** < .001

Table 4.7

Bootstrapped Total Effects

Construct relationships	Original Sample	T Statistics
Active citizenship -> Intention to start-up	.097	6.485***
PEQ's -> Intention to start-up	.107	12.156***
PEQ's -> Preparedness	.346	19.403***
Preparedness -> Intention to start-up	.310	21.684***

Note. PEQ's = Prototypical Entrepreneurial Qualities; *** < .001

4.6 Discussion

This preliminary study sought to explore the relationship between university students' entrepreneurial career intentions to start their own business and how their university setting was helpful in their preparation for the entrepreneurial career. The findings provided empirical evidence for all the hypothesised predictive relationship between students' perception of the values and the roles that entrepreneurs play in their smaller or wider communities, active

citizenship behaviours and students' willingness to commit to the entrepreneurial career. The validity of the structural model reveals empirical justification for the inclusion of the constructs in the model, formerly suggested on theoretical grounds.

More specifically, this study confirmed that domain-specific self-efficacy (called 'preparedness' at this early phase of the exploration of the Student Entrepreneurial Intention model) can be singled out as having significant positive effect on entrepreneurial career intentions among university students (Culbertson et al. 2011; Zhao et al. 2005; Fayolle et al. 2006; Bandura 1997). Active citizenship had also a significant and positive, albeit weak impact on students' selection to set up their own venture.

Preparedness wasfound to be the most significant predictor of students' entrepreneurial intention, based on its strong direct relationship with the construct. This highlights the necessity of providing opportunities that can enhance students' entrepreneurial self-efficacy (Bandura 2012; Fayolle et al., 2006; Zhao et al., 2005). Mediation analysis revealed that the way students view and perceive the role and values carried by entrepreneurs has direct effect on their sense of preparedness (or self-efficacy to retain the SCCT term) and an indirect effect, demonstrated by the partial mediator role; in the students' career decision preparations. Path structure diagnostics revealed that between preparedness and active citizenship behaviour, preparedness had the higher predictive impact, nevertheless, active citizenship's predictive relationship is equally significant (Humes, 2002). This finding contributes to the line of research investigating the role of education for economic democracy and empowerment on students' engagement with democratic principles, activity in citizenship behaviour and political empowerment on a community and global scale (Sleeper, Schneider, Weber, & Weber, 2006; Pies et al., 2010). However, the direct effect of these democratic attitudes on the entrepreneurial intention paradigm has not been explored.

This finding is paramount to the further elaboration of the Student Entrepreneurial Intention model, and this is the research gap the bridging of which is the main objective of the present thesis. It will be the task of this thesis to demonstrate, how, adherence to democratic principles, empowerment and active citizenship can be perceived as contributing and/or enhancing factors to the adoption of the entrepreneurial career path. The results confirm the theoretical link between engagement in active citizenship behaviour as an important prerequisite of meaningful and successful entrepreneurial activity.

4.7 Limitations

The present sample included students with little or no work experience, their understanding of the entrepreneurial role and values, as well as the adherence to democratic principles callings may not be relevant factors in their intention to start up. This weak link may have limited their mediating power. At a later stage, it may be useful to investigate the mediating role of active citizenship among established entrepreneurs with several years of work experience.

Other limitations prevail: first, the student status and no or little career experience may affect their actual career choice as vocational intention is normally formed at a later stage (e.g. Culbertson et al. 2011; Kickul et al. 2009; Fayolle et al. 2006; Zhao et al. 2005) . Second, all the study constructs were measured at the same time by the same questionnaire. “This common method variance (CMV) may affect the standardized path coefficients and the fit indices in the study measurement and structural models” (Podsakoff et al. 2003).

However, two methods controlling the effects of CMV were deployed (Podsakoff et al. 2012; Podsakoff et al. 2003). First, procedural remedies in the questionnaire and design of the items were implemented such as separating the items measuring entrepreneurial preparedness, intention to start up, entrepreneurial role and values as well as active citizenship behaviour by including these constructs in separate sections of the questionnaire. Second, the effect of CMV was measured by performing a common latent factor analysis, resulting in a less than .2 differencesbetween regression weights in all paths of the two models (with and without the common latent factor).

Although Study 2 is designed to be more complex and use a larger dataset, it will still rely on the preliminary findings and verified hypotheses of this preliminary pilot study. Drawing on the relevant literature review finding preconising a significant link between the sense of calling, living a calling and interest in a career as well as job satisfaction, the next phase of the research will bring in a new construct to the entrepreneurial career decision-making model. This model will comprise of calling, the core triad of SCCT and entrepreneurial interest, as the first step in adopting the entrepreneurial career path.

Chapter 5

Study 2: Global University Entrepreneurial Spirit Students Survey 2011, Hungarian Country Study

5.1 Introduction

The rationale for the present study is to demonstrate, how an SCCT model can refine and enhance our understanding of the role of self-efficacy in entrepreneurial intention. Various authors have stipulated that the widely-used models of entrepreneurial intention discussed above do not fully explain societal embeddedness and do not explore additional attributes that distinguish entrepreneurs from non-entrepreneurs (Fayolle et al. 2014; Liñán et al. 2011, Fayolle & Liñán 2014, Carsrud & Brännback 2011). There are a number of relevant gaps in knowledge concerning the role which values and motivation play in entrepreneurship. In particular, the articulation of values and motivations within the entrepreneurial process perspective and the widely-used entrepreneurial intention models could be very promising (Fayolle et al. 2008; Liñán et al. 2011a, Carsrud & Brännback 2011).

According to the SCCT models, there are several predictors or sources of Self-Efficacy predicting Outcome expectations. Study 2 focuses on the investigation of including Calling as a predictor of Self-efficacy, Outcome Expectations and Interest to start an enterprise.

Exposure to role models and SE can both directly predict career-choice intention. Furthermore, SE can also mediate the effects of other variables (Bandura, 1988; Bulger & Mellor, 1997; Shields, Brawley, & Lindover, 2006; Zhao et al., 2005) in a way that factors contributing to SE (e.g., enactive mastery, vicarious learning) may also have an indirect effect on intention.

The present research extends the entrepreneurship research literature by testing a model of entrepreneurial interest that is based on the Social Cognitive Career Theory (SCCT) (Lent, 2013; Lent & Brown, 2013; Lent, Brown, & Hackett, 1994). Although widely used in vocational psychology research, the SCCT is yet to be applied to the domain of entrepreneurial behaviour. From within the vocational psychology literature, is a substantial body of research into the predictors of career interests, choices, goals, and actions. This thesis meets at the confluence of research into entrepreneurship and vocational psychology by opening up a line of enquiry with respect to the influence of calling on entrepreneurial behaviour.

In the effort of investigating the simultaneous predictors of entrepreneurial intention (EI), and researchers have omitted boundary conditions for competing theories. Recent calls suggest the investigation of moderating effects of contextual factors as former literature has primarily

focused on direct relationships between EI and its determinants. Thus, "currently little is known about how beliefs, attitudes, and perceptions influence each other and cause individuals to hold more positive intentions toward starting a business". Schlaegel and Koenig (2013) in their meta-analysis involving 98 studies found that the Theory of Planned Behaviour or TPB (Ajzen 1991; Krueger et al. 2000; Liñán and Chen 2009; Moriano et al. 2012; van Gelderen et al. 2008) determinants as well as perceived feasibility particularly influence EI through perceived desirability (Hui-Chen et al., 2014; Fayolle & Liñán, 2014). In the TPB, Perceived behavioural control (PBC) relates to people's assessment on how capable they feel to perform that behaviour. Indeed, the construct self-efficacy has replaced PBC in several works on entrepreneurial intentions (Kolvereid & Isaksen 2006; Krueger et al. 2000; Moriano et al. 2012; van Gelderen et al. 2008). It is at this conceptual juncture that the vocational psychology literature is called upon, not only because that discipline's raison d'etre is occupational choice but also because a core theory of vocational psychology addresses the construct of self-efficacy more than any other theory.

5.2 Self-efficacy

Entrepreneurial self-efficacy, or perceived capability to create a business, is known to play a key role in the interest in engaging in entrepreneurial career activities (Wilson, Kickul, & Marlino 2007, p.339).

Self-efficacy must be distinguished from the concept of 'locus of control', which is a generic construct depicting individuals' "overall belief in the power of their own actions across a variety of situations, while self-efficacy refers to an individual's self-confidence in specific tasks and situations" (Boyd & Vozikis, 1994).

The relationship between parallel measures of self-efficacy and interests has been occupying researchers for a long time. Interest- confidence correlations range from .40 to .50: for example, .53 in the Lent et al. (1994) meta-analysis and .46 in the Lent et al. (2005) sample of engineering students. Researchers (e.g., Lent et al., 1994, 2000) agree that self-efficacy leads to interest development.

5.3 Outcome Expectations

Outcome expectations "directly affect interests, intentions, and activities". Bandura (1997) grasped three forms of outcome expectations, (a) physical outcomes that follow behaviour, (b) social reactions that can be positive, including "approval, recognition, monetary reward, and power; and negative, including disapproval, feeling shamed, social rejection, and being

deprived of privileges or having penalties imposed. The third form of outcomes is self-evaluations, both positive and negative, that accompany actions". Path analysis studies have highlighted the joined effect of self-efficacy and outcome expectations in predicting interests, (e.g., Fouad & Smith, 1996; Fouad, Smith, & Zao, 2002; Lent et al., 2001).

5.3.1 Outcome expectations from the entrepreneurial psychology standpoint.

Linan (2011) found in his research involving a total of 145,189 observations from the Global Entrepreneurship Monitor 2004 (Amoros & Bosma, 2005) APS (Adult Population Survey) Data - Individual Level (all respondents, all countries) regarding the impact of socio-cultural perceptions on intentions that despite their significance, the influence socio-cultural variables exert on the population is the weakest among other variables like self-efficacy and the acquaintance with role models.

5.3.1.1 Mediation of ESE and OE by calling.

Douglass and Duffy (2015) found the presence of a calling to be weakly to moderately correlated with the four components of adaptability - concern, control, curiosity, and confidence and to be related to greater levels of on career decision self-efficacy (CDSE) in part because of increased concern, curiosity (when strengths use is high), and confidence (Douglass & Duffy, 2015). Research confirms SCCT's usefulness in entrepreneurship. Using this theory to test a model explaining the modification of attitudes related to entrepreneurial careers in a mentoring context, it was possible to understand the central role of ESE as a mediator variable. These results indicate the contradictory effect of role models, such as mentors, on the attitudes of entrepreneurs.

In line with Fouad et al.'s (2006) recommendation to further explore "theoretically hypothesized paths among self-efficacy, outcome expectancies, interests, and choice in additional areas of career decision making, including a wide range of subject matters and populations", this study the aim is to explore SCCT's core hypotheses that self-efficacy and outcome expectations predict occupational interest, and that self-efficacy as the primary motivational factor also predicts outcome expectations.

Accepted definitions of calling are centered on its aspect as having personal meaning/purpose and that is used to serve others (Dik & Duffy, 2009). The source of people's calling is explained in diverse ways. Historically, *calling* was a term used in a religious context implicating that God or a higher power 'called' the individual to accomplish work resulting in the fulfilment of a larger purpose. In modern interpretations of calling, it can stem from a "sense of destiny (e.g., what one is meant to do) or a perfect fit (e.g., a career that is an ideal match for

one's skills, interests, and values) (Bunderson & Thompson, 2009; Dobrow & Tosti-Kharas, 2011)". Dik and Duffy's (2009) definition embraces an external source (e.g., God, societal need, family legacy), "contributing to a sense of meaning/purpose and that is used to serve others in some capacity". In this definition, it ensues from the external summons feature that calling is essentially distinguished from the notion of vocation.

It is interesting to observe that a greater career maturity and satisfaction in the academic domain in case of students engaged in a line of work display (Duffy, Allan, & Dik, 2011; Duffy & Sedlacek, 2007), and adults with a calling also sense "greater levels of career commitment, work meaning, and job satisfaction" (Duffy, Bott, et al., 2012; Duffy, Dik, & Steger, 2011). Hirschi (2011), on the other hand affirmed that thefollowing features did not contribute to the definition of calling: "(a) a high centrality of work, (b) a high centrality of religion, (c) specific work value orientations (e.g., pro-social, self-enhancement), and (d) positive self-evaluations. On the other hand, he proposed that the presence of calling can be expected to be accompanied by a combination of (a) a state of vocational identity achievement, (b) a high degree of career engagement, and (c) a high level of career confidence" (Hirschi, 2011, p. 71).

5.3.1.2 Study 2A and 2B Conceptual model and hypotheses.

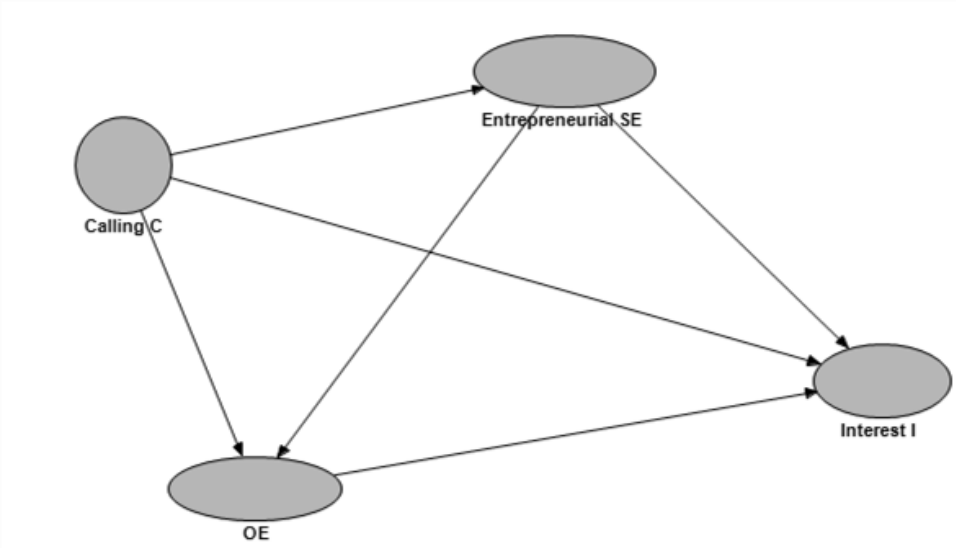

Figure 5.1. Study 2 Conceptual model. OE = Outcome expectations.

Based on the above conceptual model, the following hypotheses for Study 2 have been formulated:

Table 5.1

Study 2 Hypotheses

No.	Description	Predictive Correlation
1.	Entrepreneurial Self-efficacy positively influences Entrepreneurial interest	ESE → INT
2.	Entrepreneurial Self-efficacy positively influences Outcome Expectations	ESE → OE
3.	Calling positively influences Entrepreneurial Interest	CALL → INT
4.	Calling positively influences Entrepreneurial Interest	CALL → INT
5.	Calling positively influences Entrepreneurial Interest	CALL → INT
6.	Outcome Expectations positively influence Entrepreneurial Interest	OE → INT

5.4 Method

5.4.1 Participants.

Retrofitting has been applied to retrieve data from the "Global University Entrepreneurial Spirit Students Survey" (GUESSS; Sieger, Fueglistaller & Zellweger, 2014) wave 2011/2012 from the Hungarian national sample and to test the viability of the Student Entrepreneurial Interest Model.

The GUESSS project takes its start in 2003 by a German and a Swiss university. It wirks with bi-annual student surveys around the world. Its three major goals are : "a) to systematically record the entrepreneurial intentions and activities of students on a long-term basis across time and geographic regions, b) to provide the participating universities and countries with an assessment of the entrepreneurial spirit of their students and to identify individual and social factors that could help enhancing this spirit, and c) to observe the performance of the start-ups created by students (e.g. turnover, number of employees, innovation degree)" (Breugst, 2011).

GUESSS is the only global survey up to date to investigate students' perception of the entrepreneurial career and despite the fact that Study 2 sample has been its 2011 Hungarian wave it is worth taking note of the findings of the last research wave (GUESSS 2013/2014), which can be summarised as such: There are significant *gender differences* in entrepreneurial intentions. Female students are less keen to exhibit entrepreneurial intentions compared to male students. Amongst the antecedent of entrepreneurial intentions, the "*university context* in general and entrepreneurial learning at the universities in particular are important. *Personal career choice motives* are found to be a driving factor behind career choice intentions/entrepreneurial intentions as well. The social and cultural context is identified as an important antecedent of entrepreneurial intentions. Social pressure from individual's immediate

environment as well as risk attitudes show a positive and negative relationship with entrepreneurial intentions, respectively" (Sieger, Fueglistaller, & Zellweger, 2014).

The GUESSS project is manged by the KMU-HSG at the University of St.Gallen (Switzerland) which guides the work of nationally organised country teams, (34 in the wave of 2013/2014). "For each data collection wave since 2003, the GUESSS core team at the University of St.Gallen has been developing a comprehensive survey that meets the highest academic standards. The link to the online survey is then sent out to the different country teams who then forward it to their own students or to their university partners (who then also forward it to their respective students)" (Sieger et al., 2014). Data is collected and prepared centrally.

The theoretical foundation of GUESSS is the Theory of Planned Behavior (Ajzen, 1991, 2002; Fishbein & Ajzen, 1975), with specific focus on career choice intentions in general and entrepreneurial intentions in particular, with the addition of particular factors such as university context, the family context, personal motives, and the social/cultural context.

5.4.2 Procedure.

Originally, the survey was administered by means of paper-based questionnaires (Appendix A) translated to Hungarian from English and distributed to 70,717 students from 502 tertiary education institutions. Out of the total convenience sample, 5677 questionnaires were received, representing an 8 % response rate. The distribution of females in the *N* was 59.4 %, and the average age: 24.7 yrs. To ensure the validity of our analysis, dataset adjustment was carried out by a missing value analysis and applied casewise deletion. All latent variables use a 'mode A' specification for their items (i.e., manifest or observed variables) in their measurement models, which is associated with reflective measurement (Hair, Ringle, & Sarstedt, 2011).

5.4.3 Measures.

Entrepreneurial Interest (INT). The dependent variable, or target construct Interest (I) has been measured by section 4 where respondents were requested to "Please indicate your level of agreement with the following statements about your career choice intentions... ", typical answers being: "This career choice intention has a great personal meaning for me." and "This career choice intention is emotionally important for me." These questions were believed to be the best proxy for students' entrepreneurial interest that can be created from the items in the GUESS survey remaining consistent with existing studies on entrepreneurial interest (Crant, 1996; Krueger, et al., 2000).

Entrepreneurial Self-Efficacy. The construct of *Entrepreneurial self-efficacy* (ESE) has been measured by section 12: "Please indicate your level of agreement with the following statements' and included items like: 'I can pretty much determine what will happen in my life'"; and section 13: "Please indicate your degree of certainty in performing the following roles/tasks.", with typical items like: 'Make decisions under uncertainty and risk'; 'Manage time by setting goals'; and 'Take responsibility for ideas and decisions'". Bandura (1997) admonishes the making of the measurement of self-efficacy as task specific as possible when it is important to achieve the optimum predictive role of efficacy in the task-specific outcomes of interest. While there is ample argument in favour of composite measures of self-efficacy, scholars favour greater predictive power and apply limited-dimensional or even unidimensional measures of ESE (Chen et al. 1998; De Noble et al. 1999; Forbes 2005; Kolvereid & Isaksen 2006).

Calling. The construct of *Calling* (CALL) has been measured by the combination of sections 4 and 5 of the GUESSS 2011 questionnaire. Section 4 included the question "Please indicate your level of agreement with the following statements about your career choice intentions..." (1=very unimportant, 7= very important), typical answers being: "This career choice intention is emotionally important for me". Section 5 contained the question: "How important are the following motives for your future work and career path?" and items such as: Follow a social mission; Follow an environmental mission; Grow and learn as a person.

Entrepreneurial Outcome Expectations. The construct *Entrepreneurial Outcome expectations* (OE) has been derived from section 5, based on the question: "How important are the following motives for your future work and career path?" (1=very unimportant, 7= very important) and included 17 items, amongst which: Earn a larger personal income, Financial security, Build business children can inherit, Continue a family tradition.

Control Variables. Age measures the age of the participant in years, their major the specialisation they are pursuing and gender were also taken into account.

5.5 Results

5.5.1 Measurement model, model estimation.

Missing values have been treated by mean value replacement algorithm. The Path Weighting Scheme is selected for the inner weights estimation, and standardized data are selected for the data metric (Mean 0, Var 1). The PLS-SEM algorithm stops when the maximum number of 300 iterations or the stop criterion of 1.0E-5 (i.e., 0.00001) has been reached. The final parameter setting is for Initial Weights. Per default, SPLS uses a value of 1.0 for all measurement model

relationships to initialize the PLS-SEM algorithm. Further steps in the algorithm (Hair Jr. et al., 2014): "Final latent variable scores are computed by final outer weights. These scores are then used to run OLS regressions to determine estimates for the path relationships in the structural model. PLS-SEM always provides the outer loadings and outer weights, regardless of the measurement model setup. With reflectively measured constructs, the outer loadings are single regression results with a particular indicator in the measurement model as a dependent variable and the construct as an independent variable. In contrast, with formatively measured constructs, the outer weights are resulting coefficients of a multiple regression with the construct as a dependent variable and the indicators as independent variables.

The outer loadings or outer weights are computed for all measurement model constructs in the PLS path model. However, outer loadings are primarily associated with the results for the relationships in reflective measurement models, and outer weights are associated with the results for the relationships in formative measurement models. The estimations for the paths between the latent variables in the structural model are reported as standardized coefficients. In the partial regression models of the structural model, an endogenous latent variable serves as the dependent variable while its direct predecessors serve as independent variables. In addition to the coefficients from the estimation of the partial regression models in the structural model (one for each endogenous latent variable), the output includes the r^2 values of each endogenous latent variable in the structural model. The r^2 values are normed between 0 and + 1 and represent the amount of explained variance in the construct".

Step 1.

Table 5.2

Step 1 Indicator Cross-loadings

Indicator names	ESE	INT	OE
Autonomy	.355	.160	**.670**
Business opportunity	.503	.166	**.759**
Challenge (after grad.)	.208	**.842**	.190
Emotional importance (after grad.)	.169	**.773**	.132
Fin. analysis	.632	.087	.322
Financial security	.205	.104	.528
Flexible life	.250	.163	.577

Indicator names	ESE	INT	OE
Goal setting	**.672**	.273	.325
Higher income	.224	.093	**.569**
Idea development	.392	.095	**.642**
Innovation	.365	.110	**.642**
Management skills	**.706**	.159	.469
New idea generation	**.648**	.228	.373
New product design	**.672**	.127	.462
Personal meaning (5yrs)	.237	**.856**	.218
Personal meaning (after grad.)	.216	**.796**	.174
Planning	**.606**	.221	.297
Recognition	.310	.240	**.598**
Responsibility	**.640**	.184	.311
Risk calculation	**.683**	.136	.313
Risk decision	**.691**	.114	.317
Risk mitigation	**.708**	.130	.335
Self-determination	**.603**	.209	.297
Social standing	.306	.135	**.628**
Start firm	**.688**	.159	.473
Time management	**.641**	.168	.321
Tradition	.387	.114	**.616**

Note. Factor loadings > .55 are in boldface. ESE = entrepreneurial self-efficacy, INT = interest, OE = outcome expectations.

A decision on the empirical substantiation of the conceptual model's theoretical hypotheses can be determined on the basis of the estimated path coefficients and their significance, and by examining the relative sizes of the significant path relationships, it is possible to make statements about the relative importance of the exogenous latent variables in predicting an endogenous latent variable. The loadings of the exogenous items on the latent constructs are displayed in Table 5.2. Items with a loading of > .600 have been retained to maintain indicator reliability. Discriminant validity of the constructs can be established by examining the cross loadings of the indicators (Table 5.2) and/or applying the Fornell-Larcker criterion for Average variance extracted (Table 5.3, 5.4). It is a requirement for the indicator's outer loading on the

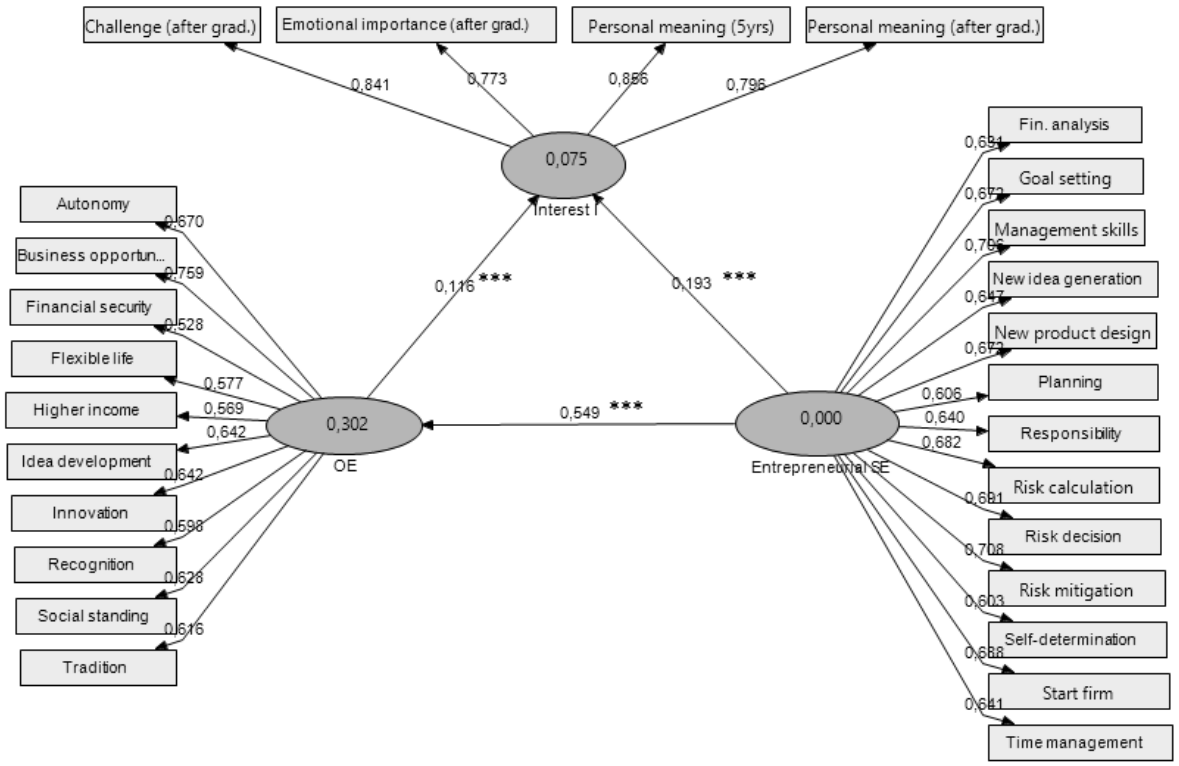

Figure 5.2. Step 1 Measurement model with path coefficients. Model represents construct r^2's, item loadings onto the constructs as well as the predictive paths between the constructs. *** p < .01.

Table 5.3

Reliability Indicators of the Model

Construct names	Cronbachs α	Compo-site Reliability ρ_c	AVE
ESE	.893	.910	**.437**
Interest I	.836	.889	**.668**
Outcome expectations OE	.830	.865	**.392**

Note. AVE = Average Variance Extracted.

associated construct to be greater than the cross-loadings. Cross loadings exceeding the indicators' outer loadings cause a discriminant validity problem.

The composite reliability values of .910 (SE), .889 (I), and .865 (OE) demonstrate that all three reflective constructs have high levels of internal consistency reliability. Convergent validity considers the AVE value as the evaluation criterion; the AVE values of ESE .437, INT

.668, and OE .392 are well above, or near the required minimum level of .50. Thus, the measures of the three reflective constructs have high or satisfactory levels of convergent validity. OE value has been lower than the threshold value but this has been accepted as other quality criteria have been acceptable.

Discriminant validity of the model has been established by applying the Fornell-Larcker criterion that compares the square root of each construct's average variance extracted with its correlations with all other constructs in the model. The model's constructs have been found to comply with this criterion.

Table 5.4

Discriminant Validity of the Model Using the Fornell-Larcker Criterion

Construct names	ESE	INT	OE
ESE	.437		
Interest INT	.066	.392	
Outcome expectations OE	.302	.049	.668

The standardized path coefficients shown in Table 5.5 enable jdgements on the relative importance of relationships in the model. A common bootstrapping routine was used to calculate t-values to test whether path coefficients differ significantly from zero (Henseler et al., 2009). The results show that all relationships in the structural model have statistically significant estimates. Internal consistency displayed suggested minimum levels ($\alpha > .65$; Hair et al., 2012) for all latent constructs.

Table 5.5 below shows the results of the structural model estimation and evaluation of the relationships between the target construct (I) and its two predictors, OE and SE, as well as the relationship between ESE and OE **(**Hypotheses 1, 2 and 3). The central criterion for the structural model's assessment (Henseler et al., 2012), namely the coefficient of determination r^2, has a relatively low value of .075 for this study's key target construct (Interest). Whilst a higher r^2 value would substantiate the model's predictive validity (Hair et al., 2012b), it is further supported by the acceptable levels of Q^2 value (Geisser, 1974; Stone, 1974) of the predictive relevance as depicted in Table 5.6 . After running the blindfolding procedure (Chin, 1998; Henseler et al., 2009), the Q^2 value of Interest (.042), was retrieved, and as it is above zero, the PLS path model's predictive relevance has been confirmed. In the bootstrapping procedure, 5,000 cases and 5,000 samples, and the no sign changes option have been selected

to assess the significance of the path coefficients (Hair et al., 2013a; Hair et al., 2011; Hair et al., 2012b).

When estimating the structural model, significant positive relationships have been found between the ESE construct predicting INT (.192); OE predicting INT (.116); and finally, ESE predicting OE (.549). All three relationships are significant at the $p < .01$ level, as illustrated in Table 5.7. Thus, Hypotheses 1, 2 and 3 have been substantiated. Two further findings are worth mentioning. First, the results show that among the two predictors of Interest, Self-efficacy has a much stronger effect on Interest than Outcome expectations, and that the predictive strength of Self-efficacy on Outcome expectations is much higher (trifold) than any of the other two relationships. This means that it is the self-efficacy beliefs of the students that will determine their interest in adopting the entrepreneurial career, other than their expectations around the moral, material or financial benefits of the career itself.

Table 5.5

Step 1 Inner Model Path Coefficients and their Statistical Significance

Endogenous path description	Original Sample (O)	Sample Mean (M)	Standard Deviation (STDEV)	Standard Error (STERR)	T Statistics (|O/STERR|)
ESE → Interest INT	.192	.194	.017	.017	11.118***
ESE → Outcome expectations OE	.549	.549	.009	.009	58.466***
Outcome expectations OE → Interest INT	.116	.117	.018	.018	6.735***

Note. *** $p < .01$

Table 5.6

Indicators of Validation of the Structural Model

Construct names	Cross-validated Communality H^2	Cross-validated Redundancy Q^2
ESE	.437	-
INT	.668	.042
OE	.000	.112

ESE = entrepreneurial self-efficacy, INT = interest, OE = outcome expectations.

Table 5.7

Bootstrapped Total Effects and Mediation Analysis

Construct relations	Direct effects	Total effects	Indirect effects	VAF	Total effects statistics
ESE → INT	.192	.257	.035	13.6 %	18.551***
ESE → OE	.549	.549	-	-	58.467***
OE → INT	.116	.116	-	-	6.274***

Note. *** $p < .001$. ESE = entrepreneurial self-efficacy, INT = interest, OE = outcome expectations.

Total effects analysis revealed and interesting finding, namely that in the case of the ESE → INT path, there is a residual indirect effect coefficient, indicating a potential mediated relationship between ESE and Interest. Further investigation into the Variance accounted for (VAF), calculated by the formula: indirect effects/total effects yielded 13.6 % which is too weak a value to qualify for partial mediation, the threshold of which is 20 % (Hair et al., 2013.). The presence of this quasi-partial mediation is an indication that further exploration can result in more significant mediation in particular on the ESE → INT path. Step 2 of the current study will explore this path.

Step 2.

The next step sought for two objectives: (a) shorten the measure to increase its utility for research purposes while maintaining high reliability and (b) equalize the number of items on each scale, since there is no theoretically indicated reason for differentially weighting the dimensions (Table 5.8). First, items with factor loadings less than .60 on their intended factor were eliminated. EFA was used to refine an item pool to maximize item homogeneity (Dik, Eldridge, Steger, & Duffy, 2012)

Table 5.8

Step 2 Item Cross-loadings

Item names	CALL	ESE	INT	OE
Business opportunity	.454	.526	.178	**.786**
Challenge (after grad.)	.315	.186	**.857**	.174
Envir. mission	**.692**	.279	.155	.433
Fulfill dream	**.703**	.283	.341	.379

Item names	CALL	ESE	INT	OE
Goal setting	.371	**.602**	.273	.301
Idea development	.340	.426	.102	**.801**
Innovation	.365	.385	.111	**.784**
Management skills	.281	**.771**	.167	.441
New product design	.293	**.722**	.130	.535
Personal growth	**.722**	.244	.308	.387
Personal meaning (5yrs)	.317	.209	**.906**	.203
Personal meaning (after grad.)	.297	.181	**.768**	.169
Recognition	.492	.250	.239	**.605**
Risk calculation	.223	**.714**	.139	.299
Risk decision	.234	**.700**	.116	.307
Risk mitigation	.230	**.745**	.128	.317
Social misson	**.698**	.274	.217	.380
Start firm	.258	**.758**	.168	.436

Note. Factor loadings > .55 are in boldface. CALL = calling, ESE = entrepreneurial self-efficacy, INT = interest, OE = outcome expectations.

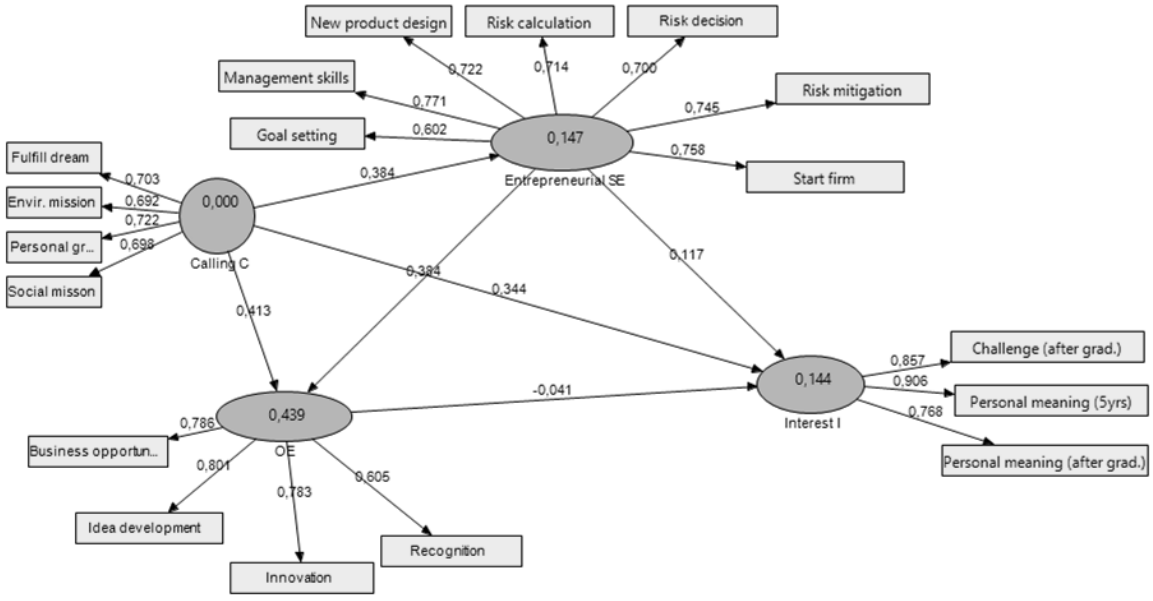

Figure 5.3. Step 2 Measurement model with path coefficients and exogenous item loadings. Model represents construct r^2 's, item loadings onto the constructs as well as the predictive paths between the constructs.

The above model can be simplified into the following model:

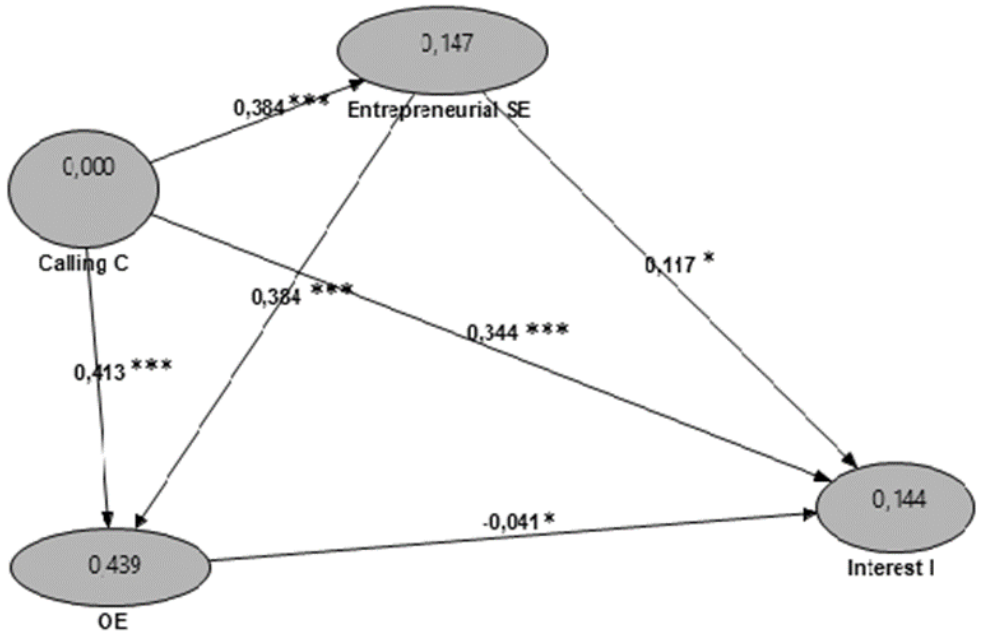

Figure 5.4. Step 2 Measurement model with endogenous path coefficients and their significance. *p < .10; ***p < .01 (two-tailed test). OE = outcome expectations.

Table 5.9

Reliability Indicators of the Model 2

Constructs	r^2	Cronbach's α	Composite Reliability ρ_c	AVE
CALL	0	.661	.797	.495
ESE	.147	.844	.881	.515
INT	.144	.798	.882	.715
OE	.439	.734	.834	.560

Note. AVE = Average variance extracted.

Table 5.10

Discriminant Validity of the Model Using the Fornell-Larcker Criterion

Construct names	CALL	ESE	INT	OE
CALL	.495			
ESE	.147	.515		
INT	.134	.052	.715	
OE	.314	.294	.047	.560

Note. CALL = calling, ESE = entrepreneurial self-efficacy, INT = interest, OE = outcome expectations.

Stone-Geisser's Q^2 value (Geisser, 1974; Stone, 1974) has been applied to further diagnose predictive accuracy (Table 5.11). "Q^2 values larger than 0 suggest that the model has predictive relevance for a certain endogenous construct. In contrast, values of 0 and below indicate a lack of predictive relevance" (Hair Jr et al., 2013). "The cross-validated redundancy approach builds on the path model estimates of both the structural model (scores of the antecedent constructs) and the measurement model (target endogenous construct) of data prediction. Therefore, prediction by means of cross-validated redundancy fits the PLS-SEM approach perfectly (Hair Jr et al., 2013).

Table 5.11

Indicators of Validation of the Structural Model

Construct names	Cross-validated Communality H^2	Cross-validated Redundancy Q^2
Calling CALL	.495	
Entrepreneurial self-efficacy ESE	.515	.071
Interest INT	.715	.028
Outcome expectations OE	.561	.155

5.5.1.1 Assessing effect size f^2.

Effect size considerations and specifications are taken from Cohen (1988). „In addition to evaluating the r^2 values of all endogenous constructs, the change in the r^2 value when a specified exogenous construct is omitted from the model can be used to evaluate whether the omitted construct has a substantive impact on the endogenous constructs. How much a predictor

construct contributes to the r^2 value of a target construct in the structural model is estimated in the following way: Initially, you estimate the r^2 value with a particular predecessor construct. Without the predecessor construct, the result is a lower r^2 value. On the basis of the difference of the r^2 values for estimating the model with and without the predecessor construct, you obtain the f^2 effect size. This measure is referred to as the f^2 effect size. f^2 values of 0.02, 0.15, and 0.35, respectively, represent small, medium, and large effects of the exogenous latent variable". Table 5.12 demonstrates f^2 effect sizes.

Table 5.12

Step 2 Exogenous Construct f^2 Effect Sizes and their Magnitude

Endogenous construct name	Original r^2 in model	Omitted Exogenous Construct	r^2 as measured with omitted construct	Effect size f^2	Magnitude of effect size
INT	.144	ESE	.137	.009	ns
	.144	OE	.152	-.009	ns
	.144	CALL	.058	.086	small
ESE	.147	OE	.155	.101	small
OE	.439	CALL	.308	.234	medium/large
	.439	ESE	.332	.191	medium

Note. CALL = calling, ESE = entrepreneurial self-efficacy, INT = interest, OE = outcome expectations.

Next, bootstrapping has been used to assess the significance of path coefficients (Table 5.13). The rule is that the minimum number of bootstrap samples must be at least as large as the number of valid observations but should be 5,000. The number of cases should be equal to the number of valid observations in the original sample. Critical values for a two-tailed test are 1.65 (significance level = 10%), 1.96 (significance level = 5%), and 2.57 (significance level = 1 %). In applications, path coefficients with a 5% or less probability of error are considered as significant (Hair Jr et al., 2013). All path coefficients were found to be significant at the 1 % level, except for OE -> Interest I.

Constructs have been evaluated also based on their indirect effects via one or more mediating constructs (Table 5.13) and the *total effect*, or the sum of direct and indirect effects. The interpretation of total effects is particularly useful for the purposes of the present study aiming at – inter alia – "exploring the differential impact of different driver constructs on the dependent construct via several mediating variables" (Hair Jr et al., 2013).

Table 5.13

Mediation Analysis

Mediation correlations	Indirect effect	Total effect	VAF
Calling CALL → ESE	-	.384***	-
Calling CALL → INT	.022***	.366***	6%
(Mediator: OE)			(below threshold mediation)
Calling CALL → OE	.147***	.560***	26.3%
(Mediator: ESE)			(partial mediation)
ESE → INT	-.015*	.102*	14.7%
(Mediator: OE)			(5.3 % points less than partial mediation)
ESE → OE	-	.384***	-
OE → INT	-	-.041*	-

Note. *$p < .10$; ***$p < .01$ (two-tailed test). CALL = calling, ESE = entrepreneurial self-efficacy, INT = interest, OE = outcome expectations. VAF = Variance accounted for.

In the next phase, the indirect effect of the construct 'Calling' on the dependent variable, 'Interest to start up' has been analysed by means of applying the Variance accounted for (VAF) calculation. This indicator determines the size of the indirect effect in relation to the total effect (direct effect + indirect effect) (Shrout & Bolger, 2002). The Variance accounted for (VAF) result demonstrates that there is partial mediation, 26.3 % of the construct 'Calling's effect on the construct 'Interest' is explained via the 'Self-efficacy' mediator. This mediation is considered to be partial mediation as VAF is larger than 20% and less than 80% (Hair et al., 2014).

5.6 Discussion

The broad purpose of this study was to discern predictors of entrepreneurial interest from the theoretical perspective the SCCT. Using a large dataset—the GUESSS—this study provides evidence of a predictive relation between the criterion entrepreneurial interest and the predictors calling, self-efficacy, and outcome expectations. Although outcome expectations were treated as a predictor, its effect was most evident as a mediator of self-efficacy's relation with

entrepreneurial interest. Similarly, self-efficacy's relation with entrepreneurial interest was evident as a mediator of calling's relation with entrepreneurial interest.

Study 2 sought to assess the relative contribution of cognitive (self-efficacy beliefs, outcome expectations) variables on students' career interest and extended the traditional SCCT model. The results of path analysis supported social cognitive career theory (SCCT), indicating that the students' self-efficacy beliefs influenced their degree of interest of taking up the entrepreneurial career.

Although the SCCT model does not specify the role of calling in CDSE, this study found greater self-esteem and vocational identity to be closely correlated with higher CDSE. This means that CDSE is a contributor to general (i.e., self-esteem) and career specific (i.e., vocational identity) self-concept. This result is supported by previous findings reporting similar strong relationship (Brown et al., 2000; Creed et al., 2004; Solberg, Good, Fischer, Brown, & Nord, 1995).

The construct of self-efficacy is at the core of social cognitive theory and the SCCT; therefore, its measurement in the current study followed the exhortation by Lent and Brown (2006) to be as task specific as possible when establishing the measure of self-efficacy. This suggestion has not always been followed by researchers and there are cases reported when ESE was measured by one or two questions relating to respondents' confidence in starting a new venture (McGee et al. 2009). Following the guidelines published by Lent and Brown (2006), a balance has been struck between having a sufficient number of items to represent the qualities of entrepreneurship without restraining the meaningfulness of the latent factor by having too small a number. The PLS-SEM analysis revealed an acceptable level of fit to the data; therefore it was concluded that the measurement model was acceptable.

The main finding of the study is that it is mostly the self-efficacy beliefs of the students that will determine their interest in adopting the entrepreneurial career, other than their expectations around the moral, material or financial benefits of the career itself. This finding is purported by earlier findings by various entrepreneurship researchers ((Liñán, Santos, et al., 2011; Zhao, Seibert, & Hills, 2005; Pihie & Bagheri, 2013; Zhang, Duysters, & Cloodt, 2013) This is an interesting revelation as it can tell practitioners that by increasing the level of self-efficacy of students or any other participants in entrepreneurship training, they can be motivated to initiate steps to start an entrepreneurial career. If the gain or projected social acceptance associated to the entrepreneurial career are not part of a primary motivation impacting the adoption of the career then it is possible, that there may be other motivating factors out there having stronger impact. This is an area worth exploring that will lead the researcher to the next

step, Step 2 in this study the focus of which will be the exploration of the role of 'calling' in the entrepreneurial career model and its interplay with the other constructs of the model.

The initial model of Step 1 has been extended with the inclusion of the construct of 'calling'. This extension has been instigated by three concurrent reasons: one being the suggestion of relevant literature of the relevance of other factors beyond self-efficacy and social norm, control or expectations that may significantly impact the development of entrepreneurial intent, and the second being the trace of mediating relationship between self-efficacy (ESE) and interest (INT). The third reason is that literature asks for further model elaboration, construct clarification and further observations.

Assessing the extent to which calling plays a role in students' career development may significantly contribute to the extant literature by offering varying perspectives on the relationships between calling and other processes of career preparation resulting in career interest.

Step 2 model offered justified need for model elaboration: not only did the extended model constitute a valid model by quality and relevance criteria, but it also revealed important relationships between the various constructs resulting in a better understanding of the constituents and the development of the entrepreneurial interest.

The insertion of the construct of 'calling' resulted in a number of improvements: the coefficient of determination r^2 of the key target construct (Interest), has increased from a relatively low value of .075 of Model 1 to .144 of Model 2, accounting for a two-fold increase. Predictor construct's information has been improved from .302 to .439 for outcome expectations (OE). Overall, Model 2's quality criteria AVE displays an increase in the case of all three constructs included in both models. From among the predictor constructs, CALL has the primacy over ESE predicting the target construct of INT (p =.344, < .01 significance), followed by ESE (p = .117, < .01 significance) and OE (p = .041, < .05 significance.

The notion of entrepreneurial self-efficacy is not new; however, what is novel in the current study is the application of SCCT that is focused on occupational choice (Lent et al., 1994) to postulate hypotheses concerning two of its core constructs (i.e., self-efficacy and outcome expectations) and a construct that is emerging in the vocational psychology literature (i.e., calling). Furthermore, this study was based in the context of entrepreneurship education (i.e., participants enrolled in business courses); thus, in terms of the SCCT, entrepreneurial calling can be interpreted as a *person input* that indirectly influences occupational aspirations and choices via self-efficacy and outcome expectations, with *learning experiences* as the bridge between the two. Although it is conceptually reasonable to presume learning experiences to be

a bridge, as such, for the sake of testing a parsimonious model, its role in the hypothesised relations was not directly assessed.

5.7 Limitations

This study used an archival data set; accordingly, the study involved fitting items in the GUESSS to the theoretical model. Retrofitting items to constructs is methodologically quite different to using established measures of constructs that are selected *a priori*. Albeit a relatively novel analytic procedure within the psychological research literature (Willaby, Costa, Burns, MacCann, & Roberts, 2015), PLS-SEM is well suited to such retrofitting because it is relatively sensitive to weaker effects sizes. In the current study, such weaker effects may be present as a result of the retrofitting of items in the GUESSS to the SCCT's constructs. The dataset used in this study was specific to Hungary; therefore, it is recommended that the socio-economic conditions of Hungary be considered when interpreting the findings and, moreover, to not presume that the results generalise to other nations in Europe.

Chapter 6

Study 3: Entrepreneurial Calling, Corvinus University of Budapest, 2015

6.1 Introduction

The original research design sought to constitute a chain of studies: while Study 1 was a pilot study testing the feasibility of the application of SCCT to a career decision situation involving students' perception about active citizenship behaviour. Study 2 built on the pilot model's findings and extended the model by inserting calling and further assessed the model. Study 3 is the final link in this chain and involves testing the most complex model. It is the final element drawing on knowledge derived from current achievements in the research of the field assisted by state of the art modelling software. The focus of Study 3 has been placed on an encompassing analysis of the extended SCCT model including two new constructs, active citizenship behaviour (ACTCIT) and calling (CALL) to follow a particular line of work. To follow suit with the principle of continuity, the conceptualisation of the constructs has also been refined to reflect the progress made in the research of the field and review of recent body of literature.

Various modules of PLS have been used to test and assess model dynamics. These modules each have a distinct analytical approach and their combination helps detect the functionality of various constructs and indicators. The overarching objective of the multiple analysis approach is to add information to the model characteristics and reach decisive conclusions relating to the original hypotheses.

ACTCIT for the purposes of Study 3 is conceptualised as the cohort's current attitudes towards participation in the democratic processes such as "citizenship, civic and political participation (i.e., citizenship attitudes), their intentions to participate in civic and political activities in the future (i.e., citizenship intentions), and their citizenship skills, in this case, the extent to which young people feel able to influence the government, their school and their family" (Print, 2007).

CALL is conceptualised as the cohort's perception of the degree to which they believe that they are called to a particular career. Living a calling refers to the "degree to which an individual is currently engaging in activities or work that meet this calling" (Duffy, Bott, et al., 2012). Researchers have found that the obstruction of living out one's calling, perceiving a calling may be unrelated to work and general well-being outcomes (Duffy, Allan, Autin, & Bott, in press; Duffy, Bott, et al., 2012).

Figure 6.1 presents the global conceptual model of Entrepreneurial Calling including ACTCIT and CALL. The core triangle of the career decision module of SCCT (including the constructs of entrepreneurial self-efficacy, or ESE, outcome expectations or OE, and interest or INT) has been extended in two directions, to test the impact of ACTCIT and CALL on ESE, VOCSE and OE, and how all these constructs finally predict FLOU. ESE is further explicated by how students perceive the identity of entrepreneurs (IDENT), (their progressive role in bringing change to their respective communities). In other words, the global model will demonstrate how students' interest (and therefore their career decision) to adopt the entrepreneurial career path is impacted by their assessment of both vocational and entrepreneurial self-efficacy, their outcome expectations related to the same career, and how their interest will contribute to their sense of flourishing (Huppert & So, 2013).

The core triangle of SCCT has been extended to include the person-related distal variables of calling and active citizenship. It has been expected that the inclusion of these constructs will shed light on the interaction of these social learning outcomes on the career choice resulting in a perceived sense of flourishing. There is evidence, albeit little, in the extant literature of the interaction of calling with career interest, also believed to play an important role in cultivating subjective well-being (Allan & Duffy, 2013). Other authors found that the "relation of living a calling to life satisfaction was partially mediated by job satisfaction and life meaning, and the link between living a calling and job satisfaction was mediated by work meaning and career commitment" (Duffy, Allan, Autin, & Bott, 2013) .

The multidimensional construct of flourishing involves "positive aspects of mental functioning: competence, emotional stability, engagement, meaning, optimism, positive emotion, positive relationship, resilience, self-esteem, and vitality" (Huppert & So, 2013).

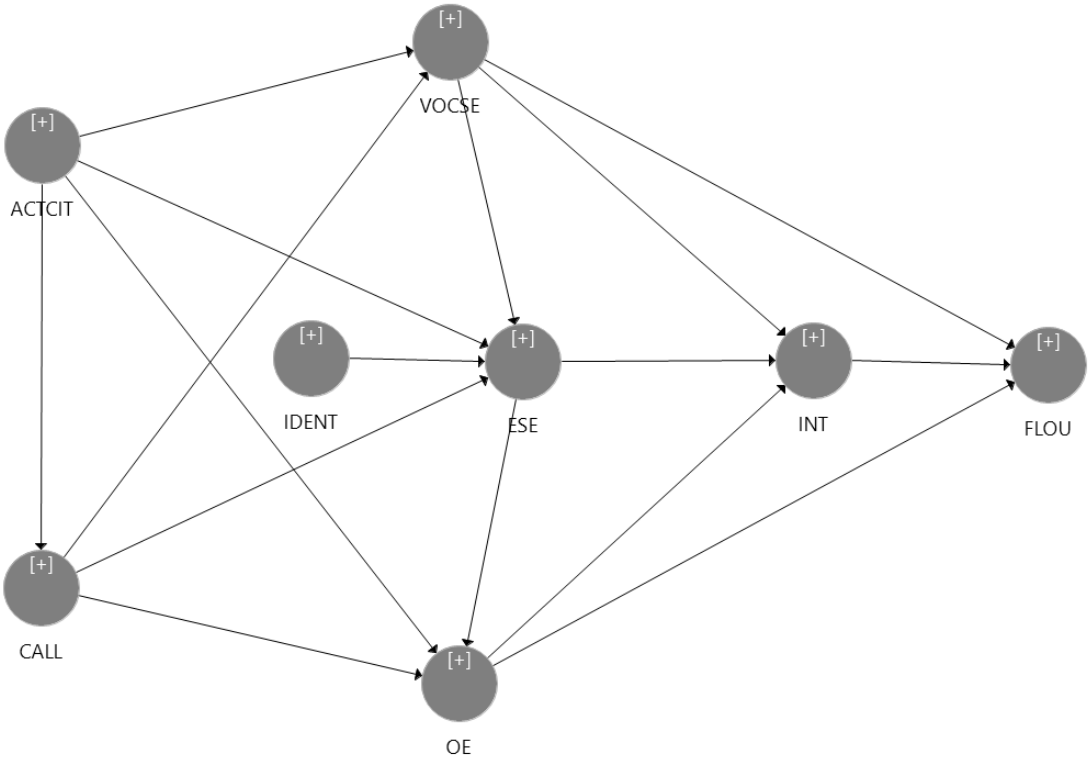

Figure 6.1. Entrepreneurial Calling 2015 Conceptual Model. ACTCIT = active citizenship, CALL = calling, VOCSE = Vocational self-efficacy, ESE = entrepreneurial self-efficacy, IDENT = entrepreneurial identity, INT = interest, OE = outcome expectations, FLOU = flourishing

Ensuing from the nature of the model comprising of several constructs and complex paths, Study 3 hypotheses include all possible direct and indirect paths to reflect the objectives set out above:

Table 6.1

List of Hypotheses

No.	Description	Predictive Correlation
H1.	Vocational Self-efficacy predicts Entrepreneurial Self-efficacy	VOCSE → ESE
H2.	Vocational Self-efficacy predicts Interest	VOCSE → INT
H3.	Vocational Self-efficacy predicts Flourishing	VOCSE → FLOU
H4.	Active Citizenship predicts Vocational Self-efficacy	ACTCIT → VOCSE
H5.	Active Citizenship predicts Entrepreneurial Self-efficacy	ACTCIT → ESE
H6.	Active Citizenship predicts Outcome Expectations	ACTCIT → OE

No.	Description	Predictive Correlation
H7.	Active Citizenship predicts Calling	ACTCIT → CALL
H8.	Calling predicts Vocational Self-efficacy	CALL → VOCSE
H9.	Calling predicts Entrepreneurial Self-efficacy	CALL → ESE
H10.	Calling predicts Outcome Expectations	CALL → OE
H11.	Identity predicts ESE	IDENT → ESE
H12.	Entrepreneurial Self-efficacy predicts Interest	ESE → INT
H13.	Entrepreneurial Self-efficacy predicts Outcome Expectations	ESE → OE
H14.	Interest predicts Flourishing	INT → FLOU
H15.	Outcome Expectations predict Interest	OE → INT
H16.	Outcome Expectations predict Flourishing	OE → FLOU
H.17.	There will be significant differences in the predictive correlations between the NOSTARTUP and STARTUP groups	

Note. ACTCIT = active citizenship, CALL = calling, VOCSE = Vocational self-efficacy, ESE = entrepreneurial self-efficacy, IDENT = entrepreneurial identity, INT = interest, OE = outcome expectations, FLOU = flourishing

In addition to the hypotheses of direct effect, some other hypotheses of mediating effects that will be tested in Study 3. These hypotheses build on all potential mediating relationships.

Table 6.2

List of Hypotheses of Mediating Effect

No.	Description	Predictive Correlation
H1.	Vocational Self-efficacy will mediate the relationship between Active Citizenship and Entrepreneurial Self-efficacy	ACTCIT → ESE
H2.	Vocational Self-efficacy will mediate the relationship between Calling and Entrepreneurial Self-efficacy	CALL → ESE
H3.	Calling will mediate the relationship between Active Citizenship and Outcome Expectations	ACTCIT → OE
H4.	Entrepreneurial Self-efficacy will mediate the relationship between Vocational Self-efficacy and Interest	VOCSE → INT
H5.	Entrepreneurial Self-efficacy will mediate the relationship between Calling and Outcome Expectations	CALL → OE

No.	Description	Predictive Correlation
H6.	Interest will mediate the relationship between Outcome Expectations and Flourishing	OE → FLOU
H7.	Interest will mediate the relationship between Vocational Self-efficacy and Flourishing	VOCSE → FLOU
H8	There will be significant differences in the mediating correlations between the NOSTARTUP and STARTUP groups	

Note. ACTCIT = active citizenship, CALL = calling, VOCSE = Vocational self-efficacy, ESE = entrepreneurial self-efficacy, IDENT = entrepreneurial identity, INT = interest, OE = outcome expectations, FLOU = flourishing

Extant literature points to the existence of further mediating relationships, in particular in the ESE → INT, and ESE → OE paths (Liñán, Santos, et al., 2011; Fayolle, Liñán, & Moriano, 2014 ; Carsrud & Brännback, 2011 ; Allan & Duffy, 2013). Owing to the complexity of the model and the number of predictive relationships, these mediating relationships can be explored and assessed following a decomposition procedure. This procedure, by means of a gradual elimination of constructs will reveal additional mediating relationships. The following table, Table 6.3 contains the Partial Model Hypotheses:

Table 6.3

List of Partial Model Hypotheses of Mediating Effect

No.	Description	Predictive Correlation
PH1.	Vocational Self-efficacy will mediate the relationship between Active Citizenship and Interest	ACTCIT → INT
PH2.	Vocational Self-efficacy will mediate the relationship between Active Citizenship and Flourishing	ACTCIT → FLOU
PH3.	Outcome Expectations will mediate the relationship between Calling and Interest	CALL → INT
PH4.	Outcome Expectations will mediate the relationship between Calling and Flourishing	CALL → FLOU

6.2 Participants and Procedure

The sample comprised *N* = 336 Hungarian students from the Corvinus University of Budapest, Faculty of Business (115 males, 216 females; mean age *M* = 21.5; *SD* = 2.946). Corvinus University is home to the most prestigious business school in the country and is assessed as one of the top performing universities in Europe (Eduniversal, 2015). It has a centre of excellence in entrepreneurial studies and manages a start-up hub for student and graduate entrepreneurs. About half of the participants (52%) held a university degree. Participants reported to have completed 2 semesters of studies (30.7 %), 3 semesters (20.8 %) and 4 semesters (17.9 %), respectively.

Table 6.4

Composition of the Academic Disciplines of the Sample

Major	Frequency	Percent
Rural Management	13	3.9
Agribusiness	22	6.5
Retail Marketing	76	22.6
Tourism	11	3.3
Tourism-Hospitality	95	28.3
Hospitality	24	7.1
Entrepreneurship	94	28.0
Total	335	99.7
Missing	1	.3
	336	100

Participants were recruited from Corvinus University via the University's intranet site. Students were able to download the questionnaire from the intranet site and fill out at their discretion and hand them in to the reception of their Department. Completed questionnaires were then handed in in person into the reception desk of their respective academic Department, who then forwarded the questionnaires and consent sheets in separate batches to the investigator; thus, ensuring retention of confidentiality. Appendix D. contains the full questionnaire. Ethics Clearance pertaining to the procedure of data collection was obtained from the University of Southern Queensland under the approval code H14REA214 (Appendix C).

6.2.1 Scale development.

Tthe study of relevant theoretical and empirical literature has preceded the design of multiitem scales for each construct and formerly validated existing measurement scales selected wherever available. A specificity of the current study is that it is set in a cultural environment where these scales have not been used before. Geographical and cultural setting may have significant impact on scale validity (Chen, Gully, & Eden, 2001; Domene, Socholotiuk, & Woitowicz, 2011; Rigotti, Schyns, & Mohr, 2008) In some cases, such as in the case of the construct of 'calling', as presented in the section of Calling in the Literature Review, almost all the extant scales have been validated an Anglo-Saxon cultural setting. As the setting of Study 3 is a Central European country, Hungary, a major concern was to use scales that have been validated in an international, preferably in European setting. Thus, beyond the conventional criterion of assessed high internal consistency, to the extent of availability, scales had to have been validated in a cross-cultural setting. Scale items were translated into Hungarian and then translated back to English to check for translation errors and discrepancies. To assess content validity, this list of items was sent to a panel of 5 Hungarian native speaker expert reviewers in vocational psychology and pedagogy, who were instructed to evaluate the relevancy of each item to the defined construct and rate the clarity of each item, as well as provide any additional remarks about item content. Based on these reviews, items were reformulated and reworded to match Hungarian language structure, logic and cultural framework, for equivalency purposes. Table 6.5 provides the list of measures with relevant indices such as origin, and internal consistency reliability indicators.

6.3 Measures

Sociodemographic data. Participants' gender (1 = male, 2 = female), age, major, semester completed and parents' education (Primary school or below = 1, some vocational school = 2, high school diploma =3, vocational diploma = 4, advanced vocational diploma = 5, college = 6, university diploma = 7, PhD = 8) were included as items in the survey.

Start-up plans and start-up training experience. Participants were asked about their workload if employed, and their start-up plans and the sector of industry they plan to start up in, if applicable. 53.6 % of students confirmed that they had plans to start up in the next 5 years, against 45.2 % who did not have such plans. Correspondingly, students were asked about their start-up training background within or outside the University framework. This question helps understand the respondents' familiarity with start-up creation. 29.8 % of total respondents had participated in a start-up course within the university framework, while 17.3 % had participated

in a training offered by an external training institution (chamber of commerce = 1, adult vocational education = 2, other training organised for entrepreneurs = 3, online training = 4, with a mentor = 5, in an entrepreneurial network = 6). The majority of those attending external training opted for having worked with a mentor (27.6 %).

Vocational self-efficacy (VOCSE). It taps into the perceived competence a person feels in successfully fulfiling the tasks involved in his or her job. It is a context-specific form of self-efficacy (Bandura, 1977), drawing on four types of information sources: "performance attainment, vicarious experiencing, verbal persuasion, and physiological states and reactions". Of these four, performance attainment, defined as "personal performance accomplishments" (Dobrow & Tosti-Kharas, 2011), is most salient for the association between career-related self-efficacy and calling. Based on the original scale comprised of 20 items, proposed by Schyns et al., (2005), Rigotti et al. (2008) introduced a short form of the Vocational Self-Efficacy Scale, comprised of eight items. The scale had been validated in five different European countries where translation and back-translation worked well. This was an indication that the scale would have satisfactory internal consistency in a Hungarian setting. In this study, however, an even shorter version comprised of five items was used. The items were selected on the basis of their item characteristics, such as item–total correlation, factor loading, and effect on the internal consistency. Responses ranged from: "1 = not at all agree 2 = do not agree, 3 = rather not agree, 4 = rather agree, 5 = almost totally agree, 6 = totally agree".

Entrepreneurial self-efficacy (ESE). Entrepreneurial self-efficacy refers to the individual's perception about his or her capabilities pertaining to the establishing of a start-up. This category's items have been taken from the Entrepreneurial Intention Questionnaire (EIQ) (Liñán, Rodríguez-Cohard, & Rueda-Cantuche, 2011) originally developed and validated by Liñán and Chen (2009). ESE, CALLING and CAREER response options range from 1 = not at all agree 2 = do not agree, 3 = cannot decide if agree or not agree, 4 = somewhat agree, 5 = totally agree.

Calling (CALL). The experiencing of a calling is conceptualized as an important contributor to career meta-competencies, such as "identity, adaptability and career decidedness". In the current study, this construct was assessed by the Living a Calling Scale (LCS; Duffy, Allan, & Bott, 2012), with example items being, "I have regular opportunities to live out my calling" and "I am currently engaging in activities that align with my calling." In the current study, this construct was assessed by the Brief Calling Scale (BCS; Dik, Eldrigde, Steger, & Duffy, 2012), which includes the items "I have a calling to a particular kind of work" and "I have a good understanding of my calling as it applies to my career."

The Multidimensional Calling Measure (MCM). ((Hagmaier & Abele, 2012), validated on several German sample group has been used. It covers three factors: (a) Identification with one's work and Person-Environment-Fit; (b) Transcendent guiding Force; and (c) Sense and Meaning and Value-driven Behaviour. Responses to the 9 items ranged from 1 = not at all agree 2 = do not agree, 3 = cannot decide if agree or not agree, 4 = somewhat agree, to 5 = totally agree.

Career interest (INT). Items in this section pertain to the Entrepreneurial interest of the respondents as well as to their career insight. Entrepreneurial interest is conceptualised as respondents' propensity to start a business and eventual steps that they had taken in order to start their business. Career insight is conceptualised as "the extent to which the person has realistic perceptions of him or herself and the career goals" (Dobrow & Tosti-Kharas, 2011, p.1032). This insight usually precedes learning and development.

Entrepreneurial role Identity (IDEN). Role identity is "the individual's desire to follow and emulate the example of others; individuals are attracted to role models who can help them to develop themselves further by learning new tasks and skills" (Gibson 2004). Role models are known to impact career decisions (Kolvereid 1992; Krueger, Reilly, & Carsrud 2000). The scale used in this study was originally developed by Horvath (2103), with Questionnaire questions worded in the following way: "Please assess the following statements on the community role of an entrepreneur: On the scale from 1-4 please indicate your level of agreement with the statements: 1= not at all agree 2 = do not agree, 3 = somewhat agree, 4 = totally agree."

Active Citizenship (ACTCIT). This category of factors comprised of two scales, the Critical Consciousness (CC) Scale and the Active Citizenship Composite Indicator (ACCI). CC is theorized to be composed of two subcomponents. The critical reflection component encompasses critically reflecting on perceived societal inequalities as well as the endorsement of societal equality; the critical action component encompasses individual or collective action taken to change perceived democratic deficiencies (Diemer, Rapa, Park, & Perry, 2014). The overal**l** model of Active Citizenship is comprised of four dimensions: "Protest and social change, Community life, Representative democracy and Democratic values. The dimension on Protest and Social change organisations is comprised of four components. The first component is protest activities which are a combination of five indicators: signing a petition, taking part in a lawful demonstration, boycotting products, ethical consumption and contacting a politician" (Hoskins & Mascherini, 2009). CC was coded as a dichotomous variable with participation versus no participation. ACCI measured students' confidence in their ability to engage in active

citizenship behaviour at the intrapersonal, interpersonal, community, and institutional/political levels, response options ranged from "1 = not at all agree 2 = do not agree, 3 = somewhat agree, to 4 = totally agree".

Outcome Expectations (OE). This factor comprises of two elements, the Vocational Outcome Expectations and the Entrepreneurial Outcome Expectations. Both are measured by a 4-point Likert scale with "1 = not at all agree 2 = do not agree, 3 = somewhat agree, 4 = totally agree" options. Outcome expectations are the perceived gains from adopting the entrepreneurial career, the first scale focusing on community and societal achievements and the second one on concrete, tangible gains such as pecunial growth.

Flourishing (FLOU). Flourishing refers to "the experience of life going well. It is a combination of feeling good and functioning effectively (Huppert & So, 2013) and its components include: purpose in life, positive relationships, engagement, competence, self-esteem, optimism, and contribution towards the well-being of others" (Diener et al. 2010). This factor was measured by a 7-point Liker scale, complying with the original scale, with response options of: "1 = not at all agree 2 = do not agree, 3 = rather not agree, 4 = cannot decide if not agree or agree, 5 = rather agree, 6 = almost totally agree, 7 = totally agree".

Table 6.5

Study 3 Scales with Source and Internal Consistency Measures

Item no.	Factor	Sample item	Likert scale points	Source	Scale Cronbach. α
1-7	AGE AND SES Education attainment	What is your highest level of completed education? If student, which year are you in?			
	Parents' education attainment	Please indicate your father's/mother's highest educational degree.			
8-23	VT Vocational training and Start-up plans	Are you thinking about starting a company in the next 5 years?			
	Industry sector	Please indicate the sector of industry you are currently/will be involved in.			
24-28	VOCSE Vocational self-efficacy	Whatever comes my way in my job, I can usually handle it.	6	Rigotti et al. (2008)	D: .87, SWE: .86, BLG: .85, UK: .90, ESP: .86
29-31	ESE Entrepreneurial self-efficacy	I am prepared to start a viable firm.	5	Linan et al. (2011)	na
32-40	CALLING Multidimensional Calling Scale	An inner voice is guiding me in doing my job.	5	Hagmaier and Abele (2012)	.81-.87
41-46	CAREER Entrepreneurial interest	My professional goal is to become an entrepreneur	5	Zhao et al. (2005)	.85-.88
	Career insight	I have a strategy for achieving my career goals.	5	Day and Allen (2004)	.81-.92
47-51	IDEN Entrepreneurial identity	An entrepreneur is a change agent: works to create value.	4	Horvath (2014)	na

Item no.	Factor	Sample item	Likert scale points	Source	Scale Cronbach. α
52-61	ACTIVE CITIZENSHIP				
	Critical Consciousness Scale	It is important to be an active and informed citizen.	yes=1, no= 2	Diemer et al. (2014)	.87
	Active Citizenship Composite Indicator	How important is it for a citizen to be active in politics?	4	Hoskins and Mascherini (2009)	na
62-69	OE		4		
	Vocational Outcome Expectations	My career planning will lead to a satisfying career for me		Metheny and McWirther (2013); a modified version of the Vocational Outcome Expectations scale (VOE; McWhirter, Rasheed, & Crothers, 2000).	.93
	Entrepreneurial Outcome Expectations	My opinion about the entrepreneurial career path is that it provides great respect by the community.		GEM (2014)	na
70-78	FLOURISHING SCALE	I am optimistic about my future.	7	Diener et al. (2009)	≥.80

Note. Factors are printed in capital letters to reflect questionnaire section organisation. D=Germany; SWE= Sweden; BLG= Bulgaria; UK=United Kingdom; ESP= Spain. ACTCIT = active citizenship, CALL = calling, VOCSE = Vocational self-efficacy, ESE = entrepreneurial self-efficacy, IDENT = entrepreneurial identity, INT = interest, OE = outcome expectations, FLOU = flourishing

6.3.1 Treatment of missing data, outliers, and normality.

Statistical analysis procedures must essentially start with descriptive statistics. Zikmund et al. define descriptive statistics as "Statistics which summarize and describe the data in a simple and understandable manner" (2009, p. 413). They are used "to check variables for any violation of the assumptions that are the basis of the statistical techniques adopted to address research questions" (Pallant, 2011). Missing data normally occurs when respondents miss an item or fill it incorrectly (Muijs, 2006). The most preferred method to estimate the missing data, when it is under 10 percent, is known to be imputation (Hair et al., 2010). Raymond and Roberts (1987) found that regression imputation was the best method in estimating missing data based on the measure of discrepancy. PLS uses mean replacement method to treat missing values, meaning that it replaces all missing data points with the mean value of all remaining data points per column (i.e. indicator or variable). This method has the benefit of not changing the sample size and the sample mean of variables. However, it affects the variance and the correlation estimates. (Hair Jr et al., 2013), therefore its use is recommended when there are less than 5% values missing per indicator, as was the case of the Calling 2015 data set.

Next, outlying values were identified in the set of data which are most commonly caused by uncorrected miscoding (Holmes-Smith, 2011). Holmes-Smith (2011) suggests two approaches to identify outliers, "through the frequency distribution of each item and the minimum and maximum values. The value out of the range (scale points) can be considered outlier value. The second approach is identifying the outliers by the histogram distribution of each variable". Outliers were checked via frequency distributions.

Mean and standard deviation were used to describe the data whereas skewness and kurtosis used to tests of the normality of data distribution. Appendix F contains these essential statistical indicators. As items used in this study were normally distributed, no actions were required to treat the data and these data will be input to the next stage of analysis and to test the study model.

6.4 Results

6.4.1 Measurement model, model estimation.

PLS-SEM has been found to be a notably practical multivariate analysis method in (strategic) management research (Hair et al., 2014). PLS-SEM has just recently gained acceptance in the discipline of psychology (Willaby et al., 2015) . SmartPLS 3.2.1 (Ringle et al., 2015) was used to compute the path model and parameter estimation was carried out on the basis of the path weighting scheme (Henseler et al., 2012; Henseler et al., 2009). Result evaluation and reporting was conducted applying guidelines for PLS-SEM given by Chin (2010) and Hair et al. (2014) before evaluating the structural model. Maximum iterations were set at 300 with stop criterion at 7.

All multi-item measures in this study denote manifestations of the underlying construct thus reflective measurement models were used for all the constructs. To begin with, reflective measurement models need to be assessed for their reliability (i.e., the construct measures' indictor reliability and internal consistency reliability) and validity (i.e., convergent validity and discriminant validity). Reflective indicators with outer loadings below .70 have been eliminated from the constructs in order to reach satisfactory indicator reliability levels. In addition, the composite reliability values of .70 and higher proved the construct measures' internal consistency reliability.

All AVE were higher than .50, proving the measures' convergent validity. Finally, two distinct approaches diagnosed the constructs' discriminant validity: the indicators' cross loadings which proving that no indicator loaded higher on any opposing construct. Second, the Fornell and Larcker (1981) criterion was applied requiring each construct's AVE to be higher than its correlation with all of the other constructs. Both analyses reinforce the discriminant validity of the constructs (Figure 6.5 and Table 6.6). The only reliability indicators below the threshold of .700 are in the Cronbach α results for the construct of IDENT (.625) and OE (.675). However, this result was admissible and was even expected because Identity (IDENT) is a lower-order independent variable directly impacting a single variable, ESE (Entrepreneurial Self-efficacy). As for OE's results, assessment guidelines (Hair Jr et al., 2013) preconise composite reliability values of .60 to .70 to be acceptable in exploratory research.

The structural model is centeres on the higher-order construct FLOU (Flourishing), which exhibits discriminant validity with all the other constructs. The measurement model diagnosis verified that all the constructs are reliable and valid. Subsequently, the structural model, incorporating the hypothesized relationship between the constructs was diagnosed.

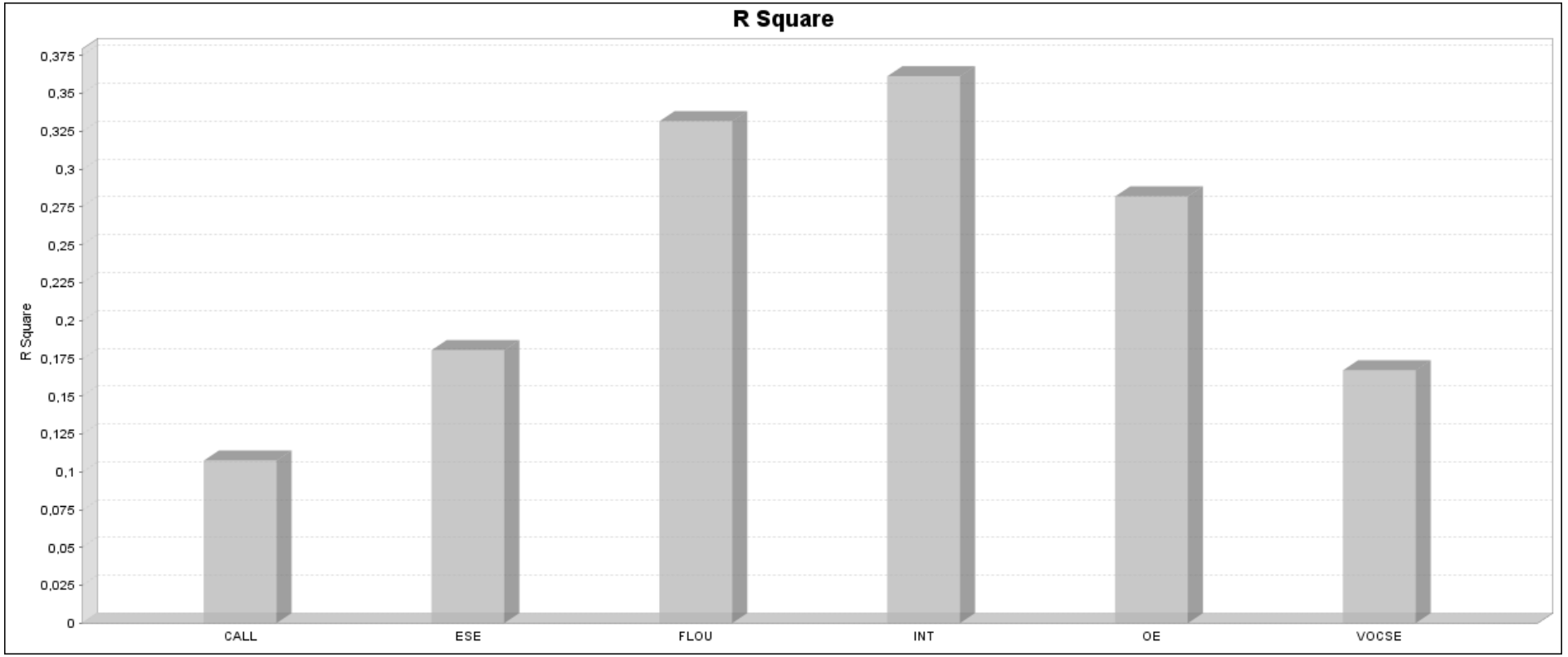

Figure 6.2. r^2 analysis of the Entrepreneurial Calling 2015 Model. ACTCIT = active citizenship, CALL = calling, VOCSE = Vocational self-efficacy, ESE = entrepreneurial self-efficacy, IDENT = entrepreneurial identity, INT = interest, OE = outcome expectations, FLOU = flourishing

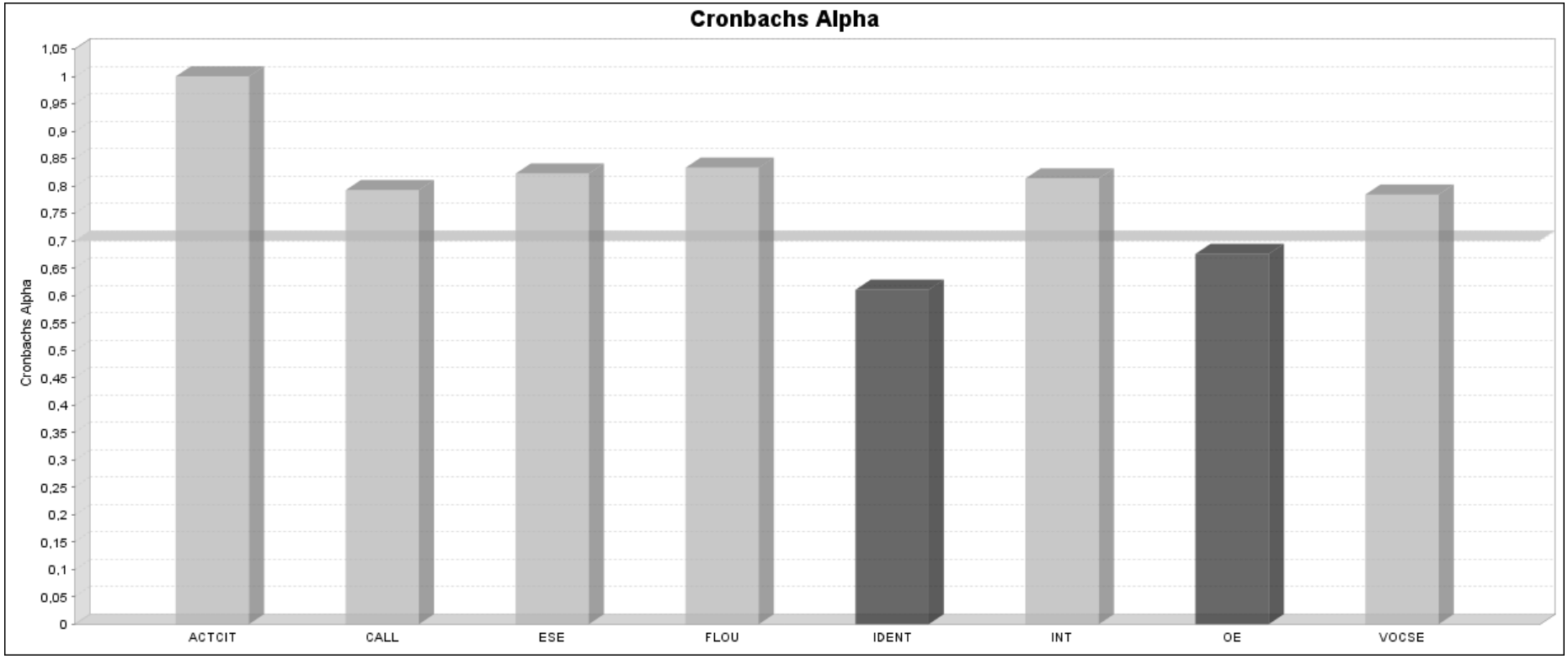

Figure 6.3. Cronbach Alpha analysis of the Entrepreneurial Calling. 2015 Model. ACTCIT = active citizenship, CALL = calling, VOCSE = Vocational self-efficacy, ESE = entrepreneurial self-efficacy, IDENT = entrepreneurial identity, INT = interest, OE = outcome expectations, FLOU = flourishing

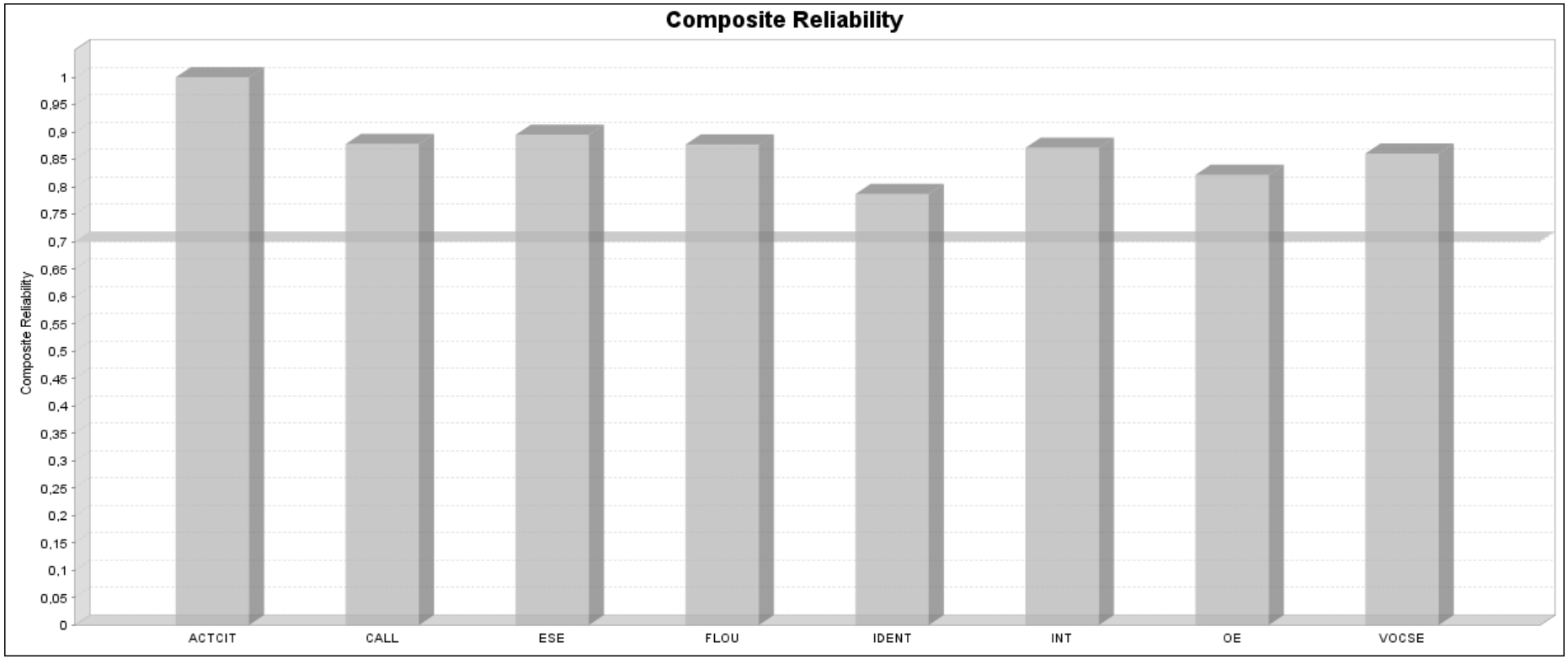

Figure 6.4. Composite reliability analysis of the Entrepreneurial Calling 2015 Model. ACTCIT = active citizenship, CALL = calling, VOCSE = Vocational self-efficacy, ESE = entrepreneurial self-efficacy, IDENT = entrepreneurial identity, INT = interest, OE = outcome expectations, FLOU = flourishing.

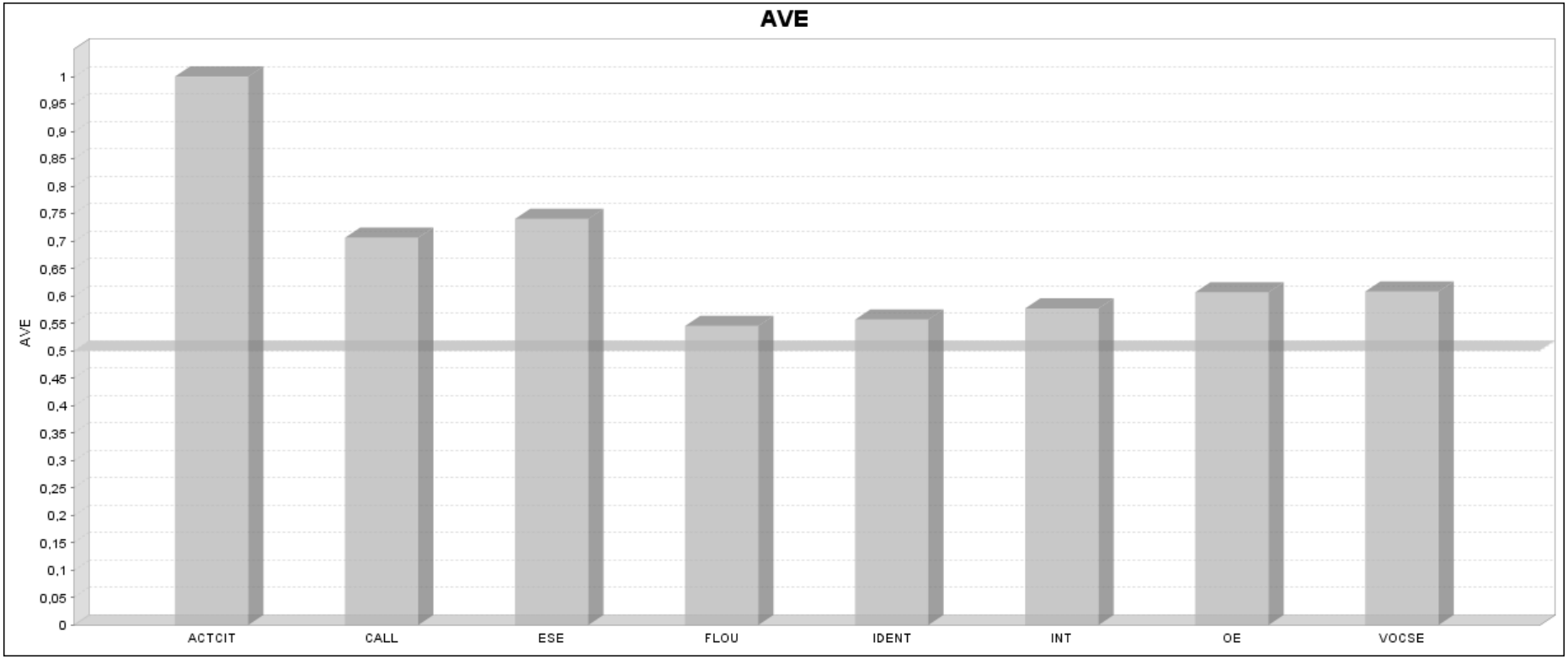

Figure 6.5. Average Variance Extracted analysis of the Entrepreneurial Calling 2015 Model. ACTCIT = active citizenship, CALL = calling, VOCSE = Vocational self-efficacy, ESE = entrepreneurial self-efficacy, IDENT = entrepreneurial identity, INT = interest, OE = outcome expectations, FLOU = flourishing.

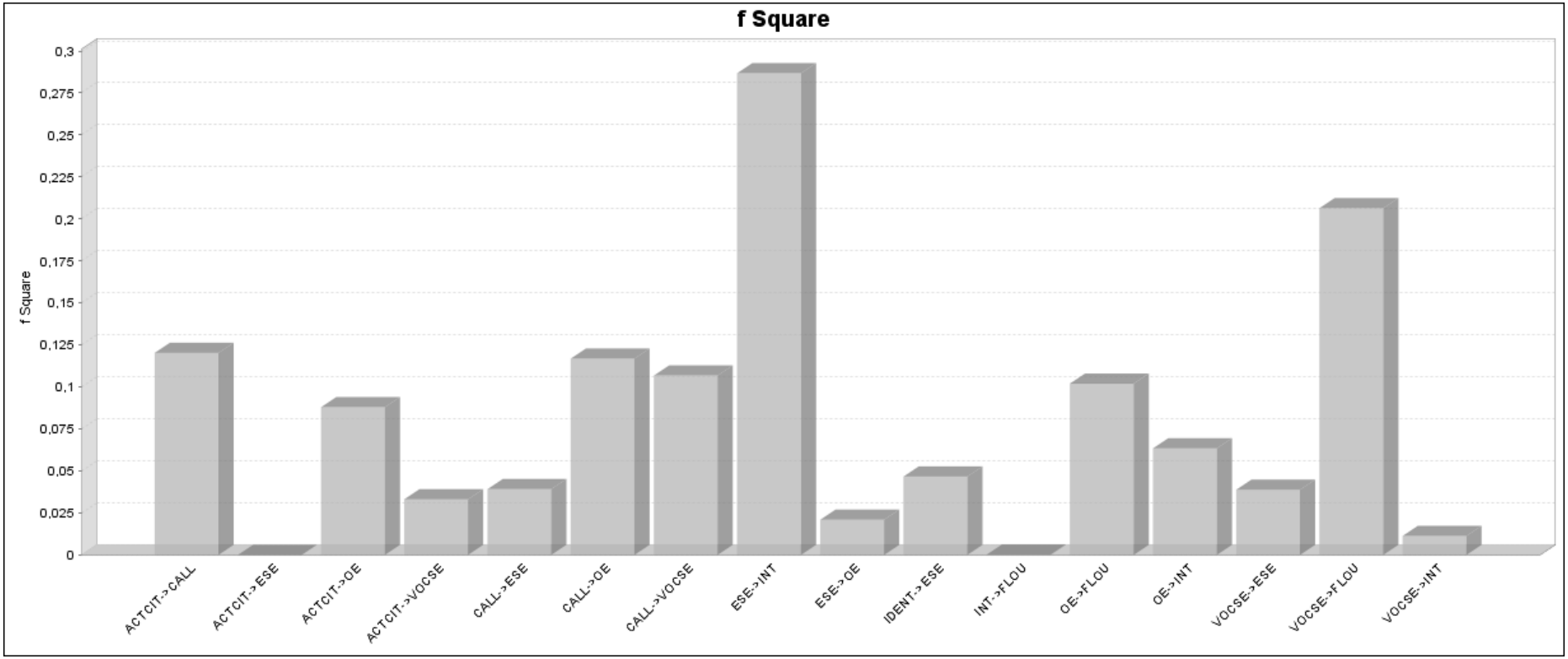

Figure 6.6. f^2 analysis of the complete model of the Entrepreneurial Calling 2015. ACTCIT = active citizenship, CALL = calling, VOCSE = Vocational self-efficacy, ESE = entrepreneurial self-efficacy, IDENT = entrepreneurial identity, INT = interest, OE = outcome expectations, FLOU = flourishing.

Table 6.6

Discriminant Validity of the Model Using the Fornell-Larcker Criterion

Construct	ACTCIT	CALL	ESE	FLOU	IDENT	INT	OE	VOCSE
ACTCIT	1.000							
CALL	.328	.841						
ESE	.168	.308	.861					
FLOU	.345	.381	.234	.739				
IDENT	.220	.163	.277	.227	.746			
INT	.150	.282	.547	.246	.377	.760		
OE	.393	.446	.272	.430	.309	.374	.779	
VOCSE	.279	.373	.314	.505	.205	.310	.335	.780

Note. ACTCIT = active citizenship, CALL = calling, VOCSE = Vocational self-efficacy, ESE = entrepreneurial self-efficacy, IDENT = entrepreneurial identity, INT = interest, OE = outcome expectations, FLOU = flourishing

6.4.2 Structural model.

The results the PLS-SEM analysis consist of the structural model estimation and evaluation of the relationships between active citizenship, calling, entrepreneurial self-efficacy, identity, vocational self-efficacy and outcome expectations with the target constructs of interest and flourishing. The "central criterion for the structural model's assessment" (Henseler et al., 2012), r^2 displays a moderately high value of .361 for this study's key target construct (interest) and .332 for flourishing. The high r^2 value "substantiates the model's predictive validity" (Hair et al., 2012b). Predictive relevance is also supported by the Q^2 value (Geisser, 1974) that is calculated by running the blindfolding procedure (Chin, 1998; Henseler et al., 2009). The Q^2 value (construct cross-validated redundancy) of interest was .202, and that of flourishing .172. The value of these results is well above zero, "indicating the predictive relevance of the PLS path model". In the next phase, the significance of the path coefficients was diagnosed by the bootstrapping procedure, with parameters detailed in Table 6.7.

Table 6.7

Bootstrapping Procedure for the Entrepreneurial Calling 2015 Model

Parameters	Setting
Complexity	Complete Bootstrapping
Confidence interval method	Bias-Corrected and Accelerated (BCa) Bootstrap
Parallel processing	Yes
Samples	5000
Cases	334
Sign changes	No Sign Changes
Significance level	.01
Test type	Two Tailed

When estimating the structural model (Figure 6.7), path correlations show that the strongest direct effects are that of ESE on INT (.459), VOCSE on FLOU (.403) and ACTCIT on CALL (.328). All these values are significant on the ($p < .01$) level. Out of the 16 path correlations, there are only two which are not significant at the .01 level, and the r^2 's demonstrate values in the range of .107 to .180 in subordinate constructs. The complete model explains target construct dynamics by 36.1 % (INT) and 33.2 % (FLOU).

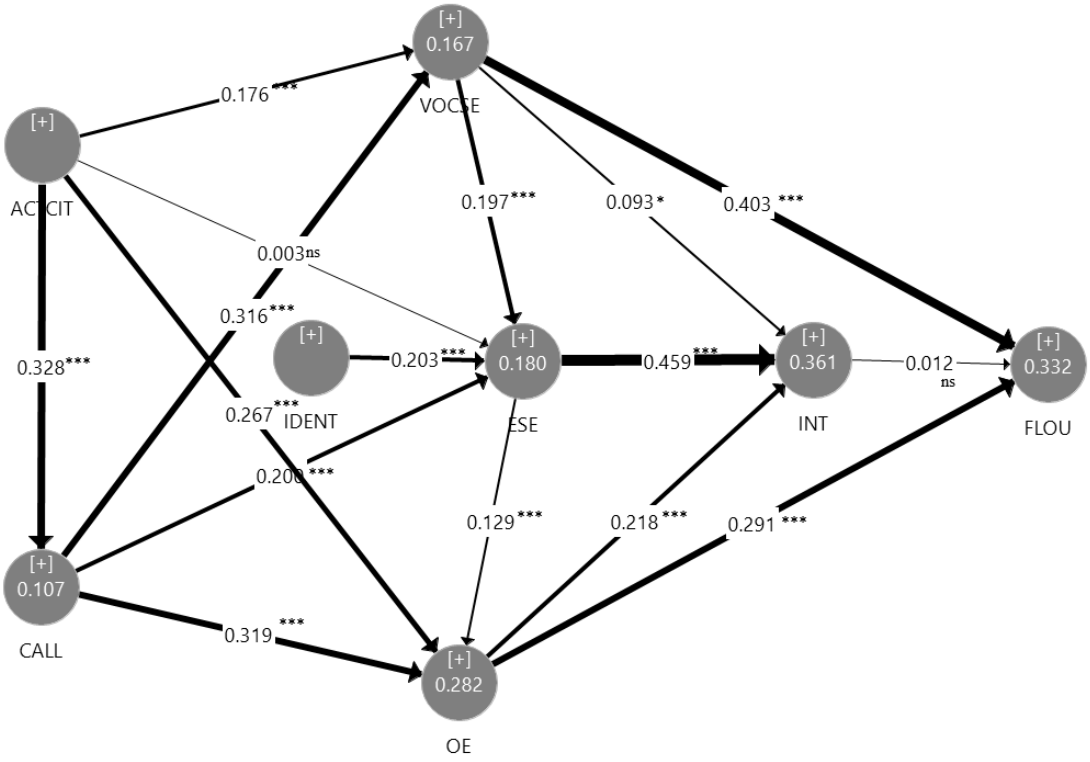

Figure 6.7. Global Structural Model of Entrepreneurial Calling 2015 complete with path coefficients, path significance and r^2 values. Density of the path correlations reflect relative strength for visual presentation. *** p < .01; ** p < .05; * p < .10. ACTCIT = active citizenship, CALL = calling, VOCSE = Vocational self-efficacy, ESE = entrepreneurial self-efficacy, IDENT = entrepreneurial identity, INT = interest, OE = outcome expectations, FLOU = flourishing

Table 6.8

Item Loadings

Items	Loadings							
	ACT CIT	CALL	ESE	FLOU	IDENT	INT	OE	VO CSE
ACT54	1.000							
CALL32		.824						
CALL33		.856						
CALL34		.841						
CAR41						.778		
CAR42						.826		
CAR43						.828		

Items	Loadings							
	ACTCIT	CALL	ESE	FLOU	IDENT	INT	OE	VOCSE
CAR44						.708		
CAR45						.643		
ESE29			.793					
ESE30			.910					
ESE31			.874					
FLOU70				.731				
FLOU72				.796				
FLOU73				.673				
FLOU74				.817				
FLOU75				.715				
FLOU78				.688				
IDEN47					.857			
IDEN48					.755			
IDEN50					.606			
OE63							.755	
OE64							.830	
OE68							.749	
VOCSE24								.719
VOCSE25								.780
VOCSE26								.824
VOCSE28								.793

Note. ACTCIT = active citizenship, CALL = calling, VOCSE = Vocational self-efficacy, ESE = entrepreneurial self-efficacy, IDENT = entrepreneurial identity, INT = interest, OE = outcome expectations, FLOU = flourishing

Model quality criteria demonstrate high reliability and validity; pointing to the conclusion that there is rationale and justification for inserting ACTCIT and CALL as exogenous and endogenous latent variables into the model. In addition, based on path coefficients and their significance, hypotheses 1-17 have been empirically substantiated.

Several further findings are worth mentioning. First, the results show that VOCSE has a much stronger effect on FLOU than OE. Second, CALL has an almost equally strong effect on both OE and VOCSE, but a much weaker effect on ESE. Third, among three constructs

predicting INT, ESE has a predictive relevance or effect that is twice as strong as the effect of the second strongest construct which is OE.

6.4.3 Further decomposition.

To further refine and consolidate the role of the newly imported constructs, the model has been decomposed by removing ACTCIT first and CALL second. It is expected that the comparison of the global and modified path coefficients and model dynamics reveal the justification of the utility of these variables in the global model.

Path analyses complemented by indirect and total effect analyses revealed the occurrence of indirect effects between exogenous and target constructs not directly related. This means that the exogenous constructs' effect or impact can be assessed in the target constructs of INT and FLOU via the paths of ESE. Decomposing will also help detect the occurrence and assess the coefficients of mediating relationships between the focal and target constructs such as INT and FLOU. To this effect, a further decomposition resulted in three-construct models, including CALL, OE and INT, as well as CALL, OE and FLOU on one hand, and ACTCIT, VOCSE, INT, and ACTCIT VOCSE and FLOU on the other. Mediation analyses for these simplified models comprising of all possible mediation effects are presented within the global model mediation table (see Table 6.10). The reason for theses analyses is the occurrence of total effects with higher magnitude than the direct effects.

6.4.3.1 Version 1: The construct of ACTCIT absent.

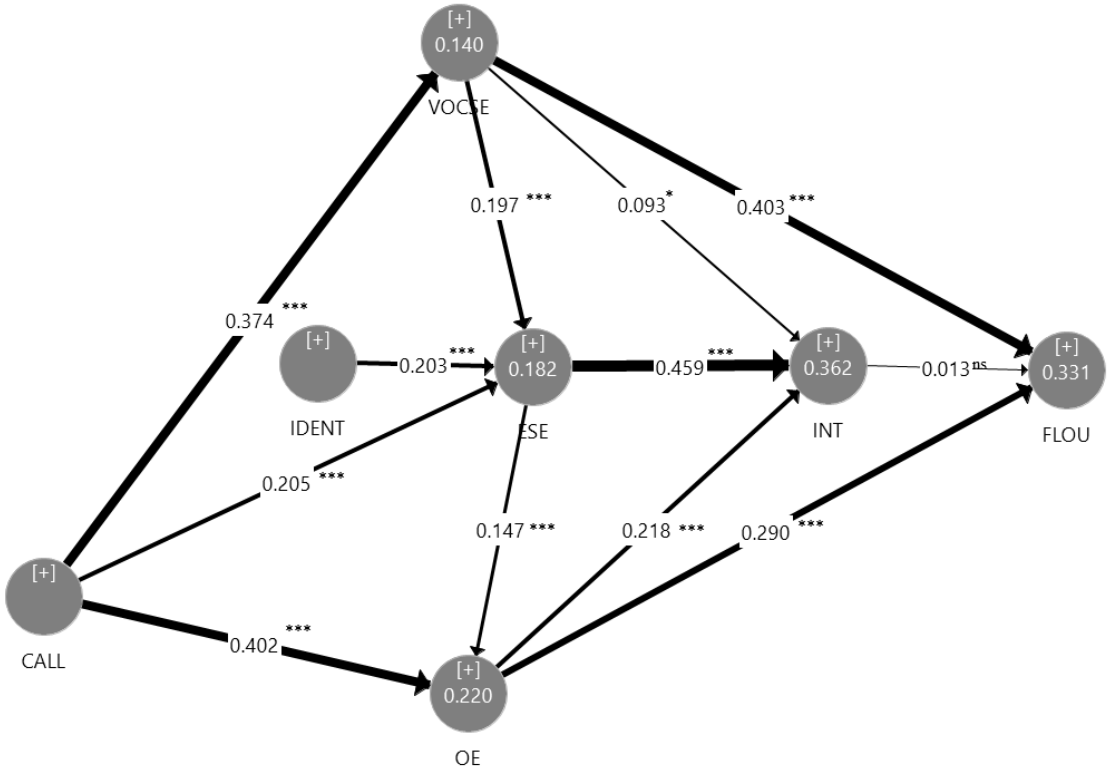

Figure 6.8. Global Model without ACTCIT. Density of the path correlations reflect relative strength for visual presentation. *** p < .01; ** p < .05; * p < .10.

When compared to the global model, the decomposed model demonstrates that ACTCIT will indeed have an effect in the determination of both the CALL → OE and the CALL → VOCSE path relations, as both of these display higher coefficients when the construct is not present. Furthermore, both VOCSE's and ESE's coefficient of determination (r^2) are altered in the global model, strongly indicating ACTCIT's explanative power.

6.4.3.2 Version 2: the construct of CALL absent.

When compared to the global model, the decomposed model demonstrates that CALL will indeed have an effect in the determination of many more path relations, such as ACTCIT → VOCSE, ACTCIT → OE, IDENT → ESE, ESE → INT, VOCSE → FLOU, OU → FLOU Affected constructs will be VOCSE, ESE, and OE. From the decomposition analyses it ensues that CALL has a much more significant effect in the global model dynamics than ACTCIT.

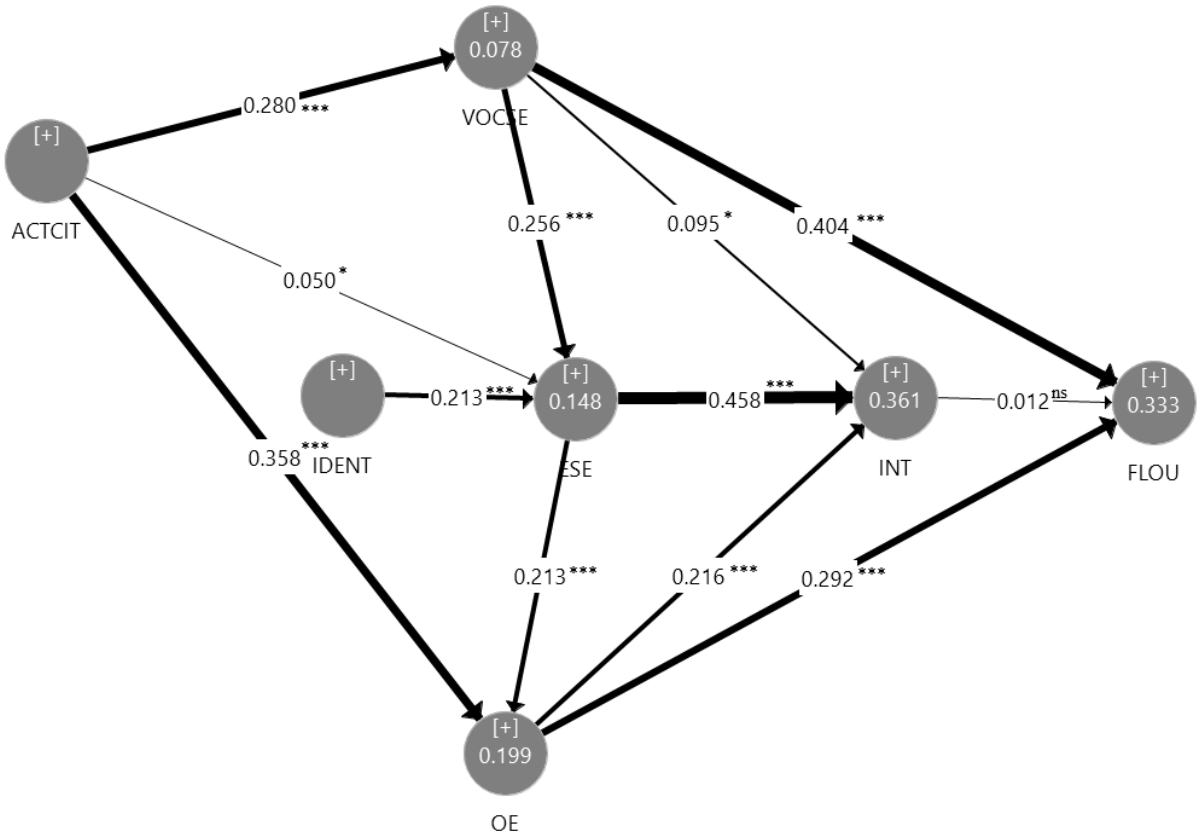

Figure 6.9. Global Model without CALL. *** p < .01; ** p < .05; * p < .10.

6.4.4 Multi-group analysis (MGA).

In the next stage of Study 3, the global model was tested for heterogeneity. It has been hypothesised that there would be significant differences in how student sub-samples approach career preparations and decisions. Students that are somewhat prepared to adopt the entrepreneurial path (and have made necessary steps to this effect) are prone to assess their vocational and entrepreneurial self-efficacy in a different way than those students who have not thought about adopting the entrepreneurial path. “Heterogeneity exists when two or more groups of respondents exhibit significant differences in their model relationships” (Hair et al., 2013).

In the current equation, there is a categorical moderator variable directly or indirectly impacting on construct relationships in the PLS path model. PLS-MGA was selected to detect and verify group-specific effects in how the two latent constructs newly imported variables to the SCCT model, ACTCIT and CALL contribute to the model dynamics, across sub-samples with different career intentions.

Sub-samples have been created based on the respondents' intention to start an enterprise in the next five years (Questionnaire question no.8; dichotomous answer option, yes = 1; no = 2). Sub-sample STARTUP comprised of 180 students (53.5 %) and NOSTARTUP, of 151 students, (44.9 %) missing answer: 1.6 %.

PLS-MGA comprises of different techniques of comparing PLS model estimates across groups of data. PLS-MGA is a parametric test allowing for the exploration of path coefficient differences in the structural model and to verify if "pre-defined data groups have significant differences in their group-specific parameter estimates (e.g., outer weights, outer loadings and path coefficients). SmartPLS provides outcomes of three different approaches that are based on bootstrapping results from every group" (Hair Jr et al., 2013). "A result is significant at the 5% probability of error level, if the p-value is smaller than 0.05 or larger than 0.95 for a certain difference of group-specific path coefficients".

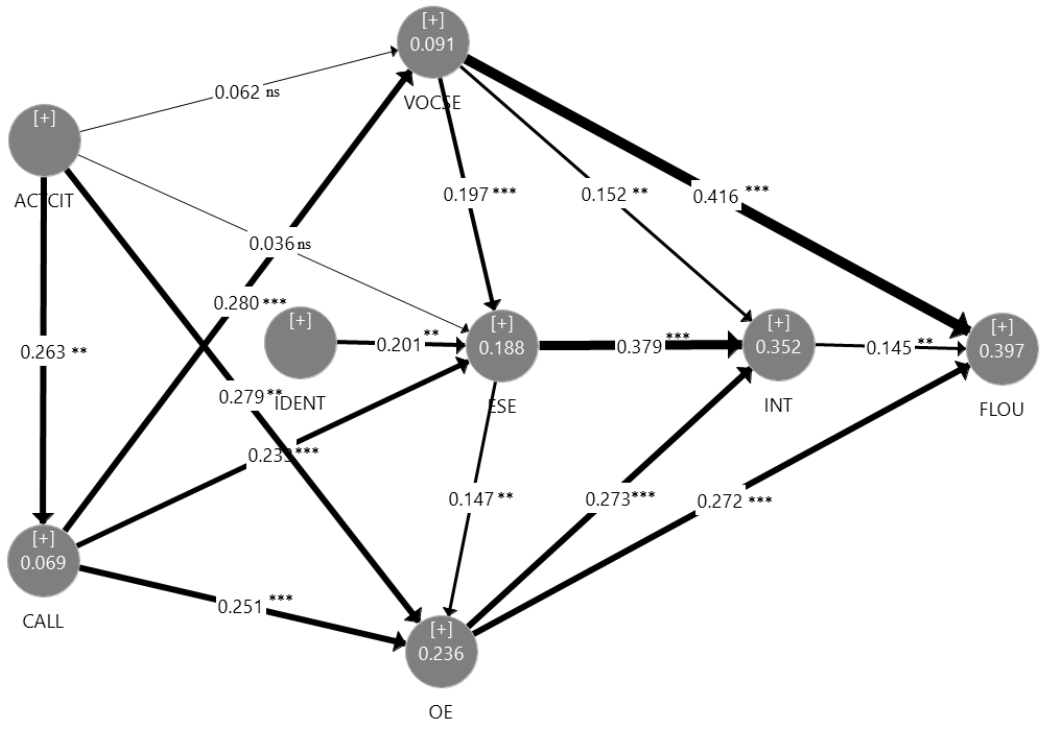

Figure 6.10. Start-up intention model with Path Coefficients, path significance and r^2 values. Density of the path correlations reflect relative strength for visual presentation. *** p < .01; **p.05; * p < .10. ACTCIT = active citizenship, CALL = calling, VOCSE = Vocational self-efficacy, ESE = entrepreneurial self-efficacy, IDENT = entrepreneurial identity, INT = interest, OE = outcome expectations, FLOU = flourishing

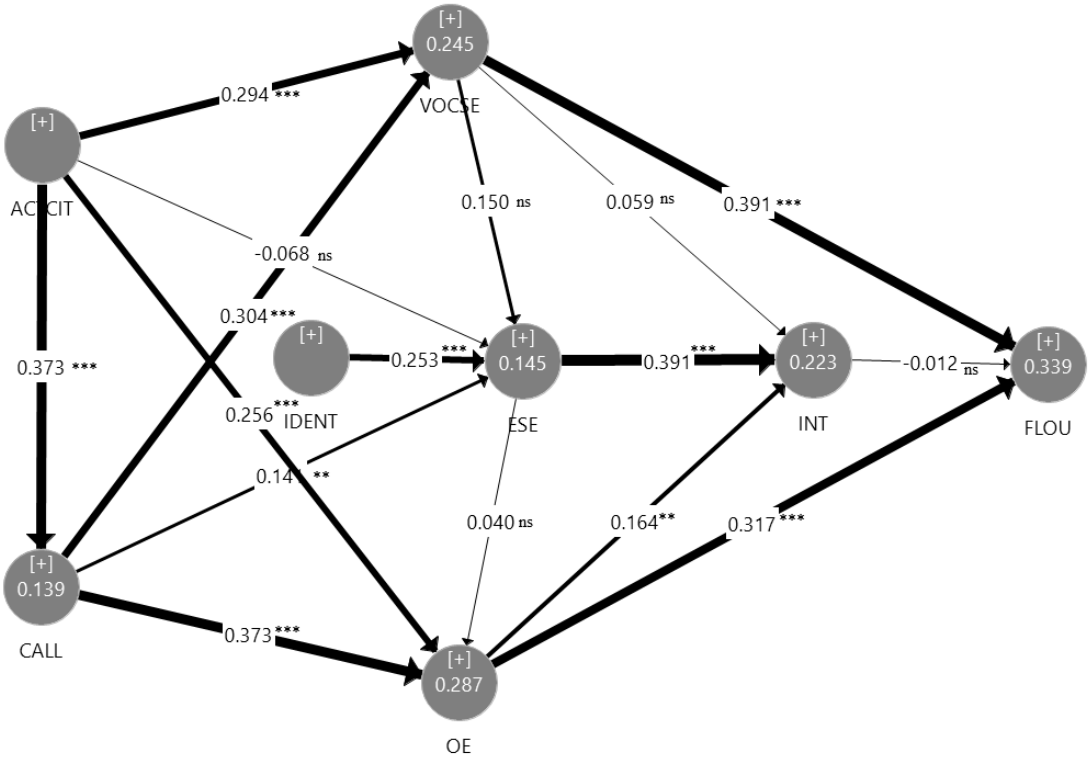

Figure 6.11. No start-up intention model with path coefficients, path significance and r^2 values. Density of the path correlations reflects relative strength for visual presentation. *** $p < .01$; ** $p < .05$; * $p < .10$. ACTCIT = active citizenship, CALL = calling, VOCSE = Vocational self-efficacy, ESE = entrepreneurial self-efficacy, IDENT = entrepreneurial identity, INT = interest, OE = outcome expectations, FLOU = flourishing

6.4.4.1 PLS-MGA results.

The figures in the first column show differences between the two groups, whereas the second column displays probability figures, indicating significant differences in the group-specific PLS path model estimations.

Table 6.9

Structural Model MGA Results

Construct correlation	Path Coefficients-difference (Δ NOSTARTUP - STARTUP)	*p* - value (NOSTARTUP vs STARTUP)
ACTCIT -> CALL	.110	.213
ACTCIT -> ESE	.104	.872
ACTCIT -> OE	.022	.568
ACTCIT -> VOCSE	.232	.028*
CALL -> ESE	.092	.798
CALL -> OE	.122	.127
CALL -> VOCSE	.024	.407
ESE -> INT	.012	.438
ESE -> OE	.107	.864
IDENT -> ESE	.052	.344
INT -> FLOU	.157	.916*
OE -> FLOU	.046	.376
OE -> INT	.109	.831
VOCSE -> ESE	.047	.646
VOCSE -> FLOU	.024	.605
VOCSE -> INT	.093	.750

Note. ACTCIT = active citizenship, CALL = calling, VOCSE = Vocational self-efficacy, ESE = entrepreneurial self-efficacy, IDENT = entrepreneurial identity, INT = interest, OE = outcome expectations, FLOU = flourishing
*=significant at the .05 level.

Greatest differences between the two groups are to be found in the path coefficients of ACTCIT -> VOCSE and INT -> FLOU, and both differences are significant at $p < .05$. This feature of PLS-MGA thus justified the veracity of Hypothesis 17.

Table 6.10

PLS-MGA Bootstrapping Results for Total Effects

Construct relationship	Path Coefficients (NOSTART UP)	Path Coefficients Mean (STARTUP)	STERR (NOSTART UP)	STERR (STARTUP)	t-Values (NOSTART UP)	t-Values (STARTUP)	p-Values (NOSTART UP)	p-Values (STARTUP)
ACTCIT -> CALL	.382	.270	.085	.107	4.397***	2.459**	.000	.014
ACTCIT -> ESE	-.065	.033	.072	.058	.944ns	.623 ns	.346	.533
ACTCIT -> OE	.260	.275	.090	.119	2.846***	2.353**	.005	.019
ACTCIT -> VOCSE	.294	.069	.068	.100	4.352***	.618 ns	.000	.537
CALL -> ESE	.138	.232	.086	.073	1.651*	3.202***	.099	.001
CALL -> OE	.383	.256	.072	.080	5.218***	3.155***	.000	.002
CALL -> VOCSE	.314	.287	.078	.068	3.912***	4.133***	.000	.000
ESE -> INT	.392	.377	.090	.068	4.364***	5.587***	.000	.000
ESE -> OE	.038	.151	.066	.072	.608 ns	2.037**	.543	.042
IDENT -> ESE	.268	.218	.092	.095	2.769***	2.124**	.006	.034
INT -> FLOU	-.005	.145	.075	.084	.165*	1.726*	.869	.085
OE -> FLOU	.328	.280	.117	.102	2.715***	2.660***	.007	.008
OE -> INT	.166	.274	.091	.071	1.814*	3.818***	.070	.000

Construct relationship	Path Coefficients (NOSTART UP)	Path Coefficients Mean (STARTUP)	STERR (NOSTART UP)	STERR (STARTUP)	t-Values (NOSTART UP)	t-Values (STARTUP)	p-Values (NOSTART UP)	p-Values (STARTUP)
VOCSE -> ESE	.154	.199	.103	.064	1.457 ns	3.062***	.146	.002
VOCSE -> FLOU	.392	.417	.072	.054	5.469***	7.648***	.000	.000
VOCSE -> INT	.057	.156	.124	.066	.477 ns	2.311**	.634	.021

Note. ACTCIT = active citizenship, CALL = calling, VOCSE = Vocational self-efficacy, ESE = entrepreneurial self-efficacy, IDENT = entrepreneurial identity, INT = interest, OE = outcome expectations, FLOU = flourishing. *** $p < .01$; ** $p < .05$; * $p < .10$.

6.4.5 Mediation analysis.

Next, a verification of the mediation hypotheses has been implemented, the objective being an encompassing and thorough assessment of the newly imported constructs' dynamics in the model. Mediation analysis has been selected to this effect, as it enables a better understanding of the relationships between dependent and predictor constructs: a significant mediator variable absorbs a cause-effect relationship. Works by various authors (Domene, 2012; BarNir et al., 2011; St-Jean & Mathieu, 2015; Pihie & Bagheri, 2013) suggested that there may be some significant mediating relationships in the (extended) SCCT model and therefore a stringent mediation analysis has been carried out, using the guidelines suggested by (Hair Jr et al., 2013) and (X. Zhao, Lynch, & Chen, 2010; Klarner, Sarstedt, Hoeck, & Ringle, 2013).

The means of assessment of mediation, the variance accounted for (VAF; Helm et al., 2010) is normed between 0 % and 100 %. "The extent to which the variance of the dependent variable is directly explained by the independent variable and how much of the target construct's variance is explained by the indirect relationship via the mediator variable (Hair Jr et al., 2013). The mediator variable indicates that, in terms of all full and partial mediations, a significant amount (or all the amount) of the total effect stems from the indirect path". Table 6.11 presents the joint mediation configuration by NOSTARTUP and STARTUP sub-samples that have been created based on their response to the groups.

The most important between-groups differences are in the CALL → ESE relation with no mediation by VOCSE in the NOSTARTUP group versus partial mediation in the STARTUP group; and in the VOCSE → INT relation with ESE as mediator in the NOSTARTUP group (no mediation) versus partial mediation in the STARTUP group. Mediation Hypotheses 2-4 have been verified to be true (when applying the PLS-MGA, only partly true), whereas hypotheses 1 and 5-7 have been rejected.

Partial model mediation analyses yielded heterogeneous results: it is only in the predictive correlation paths of CALL → INT (mediator: OE) and CALL → FLOU (mediator: OE) that significant partial mediations could be detected in both sub-samples. As for the other two partial model mediating hypotheses, they were tested to be valid only in one of the sub-samples. Partial model hypotheses PH3 and PH4 therefore consolidate the role and impact of CALL, while PH1 and PH2's ambiguous results mean that the role and impact of ACTCIT are not evident in the extended model.

Table 6.11

Mediation Analysis of the PLS-MGA Results

Source construct	Target construct											
	ESE			INT			FLOU			OE		
	Indirect effect	Total effect	VAF	Indirect effect	Total effect	VAF	Indirect effect	Total effect	VAF	Indirect effect	Total effect	VAF
ACTCIT												
	Mediator: VOCSE (H1)			Mediator: VOCSE (PH1)			Mediator: VOCSE (PH2)			Mediator: CALL (H3)		
NOSTARTUP	.300^{ns}	.052^{ns}	no mediation	.149^{ns}	.108	no mediation	.161***	.459***	35 % (partial mediation)	.147***	.260***	57 % (partial mediation)
STARTUP	.186^{ns}	.125^{ns}	no mediation	.084**	.172**	50 % (partial mediation)	.074^{ns}	.248**	no mediation	.082***	.275**	30 % (partial mediation)
CALL												
	Mediator: VOCSE (H2)			Mediator: OE (PH3)			Mediator: OE (PH4)			Mediator: ESE (H5)		
NOSTARTUP	.047^{ns}	.185**	no mediation	.110**	.246**	42 % (partial mediation)	.125**	.530***	24 % (partial mediation)	-	.390***	no mediation
STARTUP	.055**	.232***	24% (partial mediation)	.126***	.331***	38 % (partial mediation)	.144***	.288***	50 % (partial mediation)	-	.300***	no mediation

Source construct	Target construct											
	ESE			INT			FLOU			OE		
	Indirect effect	Total effect	VAF	Indirect effect	Total effect	VAF	Indirect effect	Total effect	VAF	Indirect effect	Total effect	VAF
VOCSE												
				Mediator: ESE (H4)			Mediator: INT (H7)					
NOSTARTUP				.007^{ns}	.117^{ns}	no mediation	.061^{ns}	.397***	no mediation			
STARTUP				.085**	.156**	54 % (partial mediation)	.044***	.461***	no mediation			
OE												
							Mediator: INT (H6)					
NOSTARTUP							-	.329***	no mediation			
STARTUP							-	.318***	no mediation			

Note. ACTCIT = active citizenship, CALL = calling, VOCSE = Vocational self-efficacy, ESE = entrepreneurial self-efficacy, IDENT = entrepreneurial identity, INT = interest, OE = outcome expectations, FLOU = flourishing. *** $p < .01$; ** $p < .05$; * $p < .10$.

6.4.6 Importance-performance matrix analysis (IPMA).

In order to assess an additional dimension to the basic feature of PLS-SEM, latent variables' average values, a further feature of the PLS method has been selected: Importance-performance matrix analysis (IPMA). It taps into PLS-SEM estimates of the path model relationships (Hair Jr et al., 2013) : "for a specific endogenous latent variable representing a key target construct in the analysis, IPMA contrasts the structural model total effects (importance) and the average values of the latent variable scores (performance). IPMA results permit the identification of determinants with a relatively high importance and relatively low performance", allowing practitioners to intervene in areas indicated by the results. In the entrepreneurial career choice case, this could mean tackling areas that are detected as low performing by the introduction of intensified training programs, or other means of social learning.

While a basic PLS-SEM analysis identifies the relative importance of constructs in the structural model by extracting estimations of the direct, indirect, and total relationships, the IPMA extends these PLS-SEM results with another dimension, including the actual performance of each construct. Executing an IPMA first requires identifying a target construct. To complete an IPMA of a particular target construct, the total effects and the performance values are needed. The importance of latent variables for an endogenous target construct-as analysed by means of an importance-performance matrix-emerges from these variables' total effects. In PLS-SEM, the total effects are derived from a PLS path model estimation (Hair Jr et al., 2013) .

The results representation for the IPMA of the key target construct comprises of the x-axis depicting the total effects (importance) of the latent variables and of the y-axis depicting the average construct or indicator scores, otherwise performances.

6.4.6.1 Target construct: INT.

Figure 6.12 provides a two-dimensional results representation of the IPMA process for INT as a target construct in the STARTUP sub-sample. While VOCSE has the highest score in importance in predicting INT, it ranks 4th in the actual performance among the other exogenous variables. In a ceteris paribus situation, an increase of one point in the performance of VOCSE is expected to increase the performance of INT by the value of the total effect, which is .22. The two sub-samples demonstrate a significant difference in the category of the most important construct: while in the STARTUP sample, OE is the most important construct, but at the same time one of the lowest in terms of performance, the most important construct for the NOSTARTUP sample is ESE, scoring lower in performance than the all the other constructs.

In practical terms, it means that there is room for improving the performance of OE: the interest of students in the entrepreneurial career choice could be enhanced by an induction into or an introduction to the possible outcome expectations by offering role models. Social learning (introduction to role models) of the outcome expectations is therefore an area of intervention where practitioners could devise programs to enhance career choice. When assessing the positioning of CALL in the two groups, while the construct ranks third highest in importance and second highest in performance, the actual scores are higher in the STARTUP group. The order of the first construct for importance is reversed in the two groups: while it is OE in the STARTUP, it has become ESE in the NOSTARTUP.

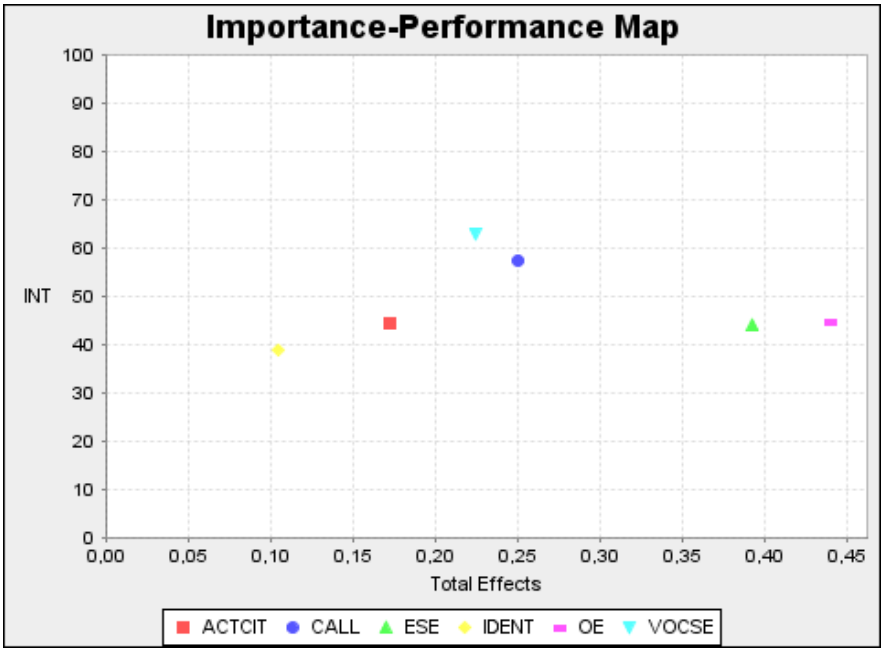

Figure 6.12. Construct IPM of the STARTUP sub-sample for INT. ACTCIT = active citizenship, CALL = calling, VOCSE = Vocational self-efficacy, ESE = entrepreneurial self-efficacy, IDENT = entrepreneurial identity, INT = interest, OE = outcome expectations, FLOU = flourishing

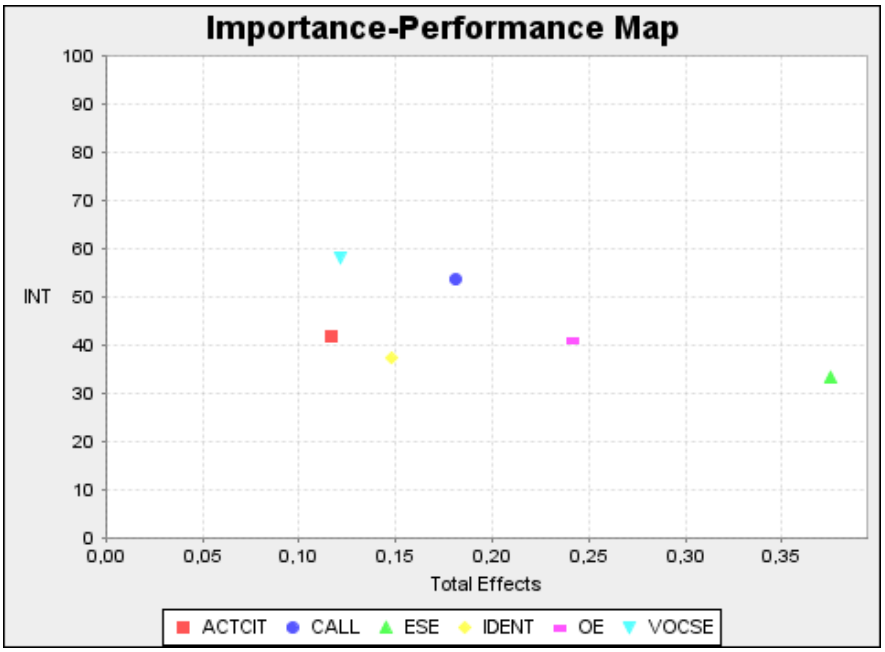

Figure 6.13. Construct IPM of the NOSTARTUP sub-sample for INT. ACTCIT = active citizenship, CALL = calling, VOCSE = Vocational self-efficacy, ESE = entrepreneurial self-efficacy, IDENT = entrepreneurial identity, INT = interest, OE = outcome expectations, FLOU = flourishing

IPM can also be prepared by indicators as represented in Figure 6.14. Comparison of the two sub-samples reveals that while students' choice with clear interest in start-up is impacted most significantly by OE63[4] (career planning leading to a satisfying career), its performance is the lowest (entailing a need for intervention) inversely, the other group, students with no immediate start-up focus assess ESE31 (capability of controlling of the creation of a firm) as the most important indicator (albeit its performance is rather low). This, translated to practical language means that students with some experience or background in career preparation value career planning while students not so ready to start-up need more training in firm creation. IPM has thus revealed an excellent tool to detect intervention areas to enhance performance on indicators.

[4] see Appendix D for the full Questionnaire and indicator/item list

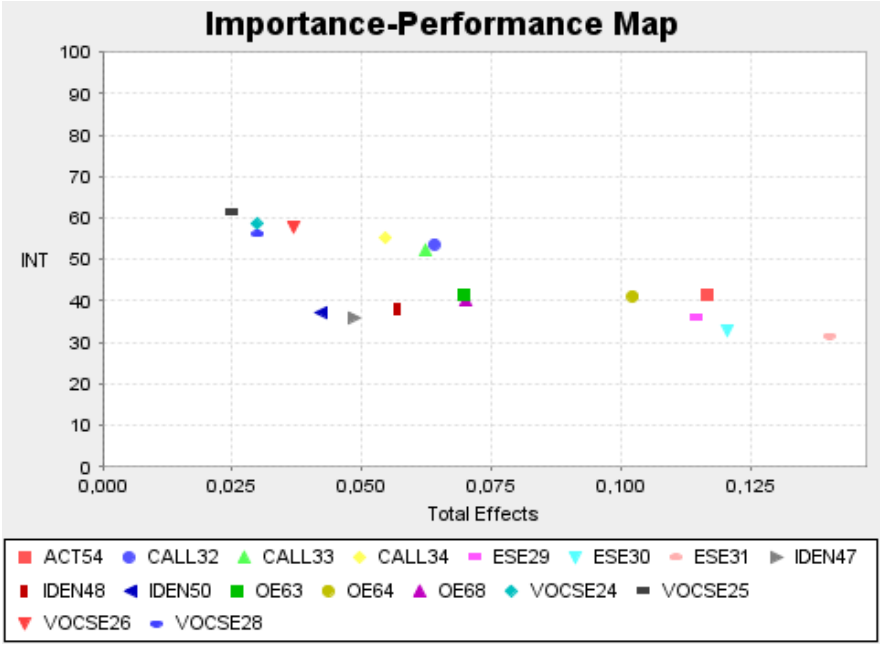

Figure 6.14. Indicator IPM of the NOSTARTUP sub-sample for INT. ACTCIT = active citizenship, CALL = calling, VOCSE = Vocational self-efficacy, ESE = entrepreneurial self-efficacy, IDENT = entrepreneurial identity, INT = interest, OE = outcome expectations, FLOU = flourishing

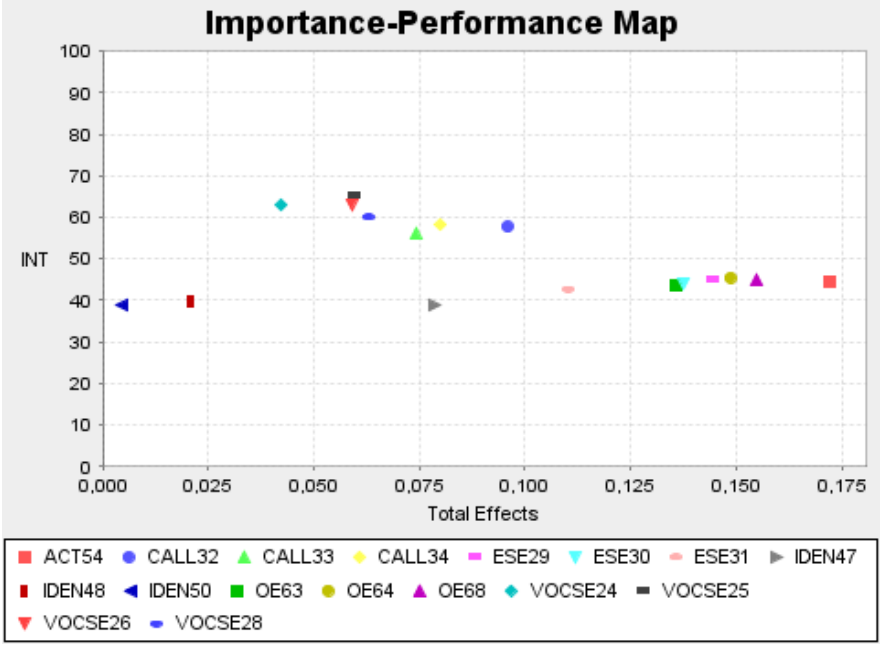

Figure 6.15. Indicator IPM of the STARTUP sub-sample for INT. ACTCIT = active citizenship, CALL = calling, VOCSE = Vocational self-efficacy, ESE = entrepreneurial self-efficacy, IDENT = entrepreneurial identity, INT = interest, OE = outcome expectations, FLOU = flourishing

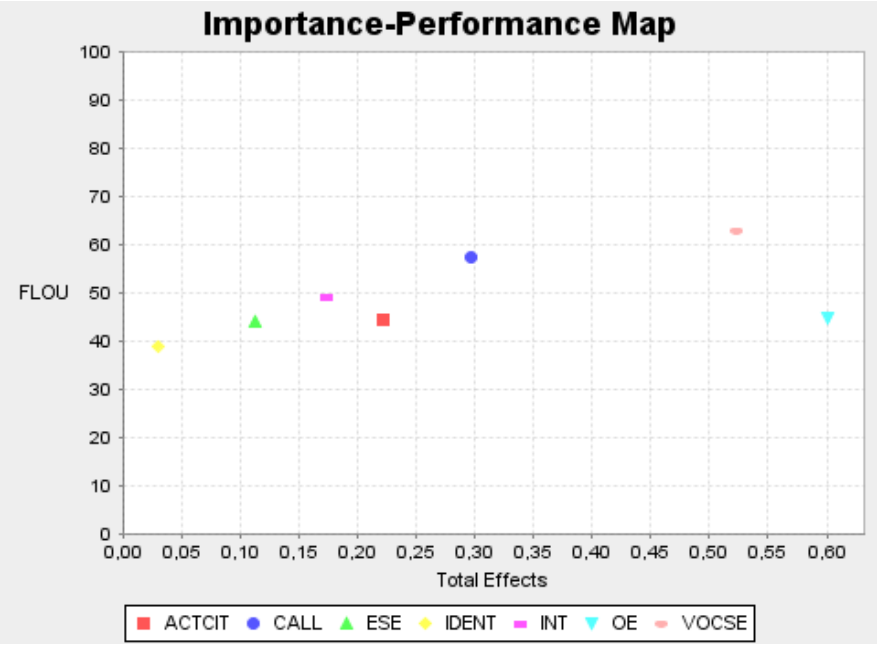

Figure 6.16. Construct IPM of the STARTUP sub-sample for FLOU. ACTCIT = active citizenship, CALL = calling, VOCSE = Vocational self-efficacy, ESE = entrepreneurial self-efficacy, IDENT = entrepreneurial identity, INT = interest, OE = outcome expectations, FLOU = flourishing

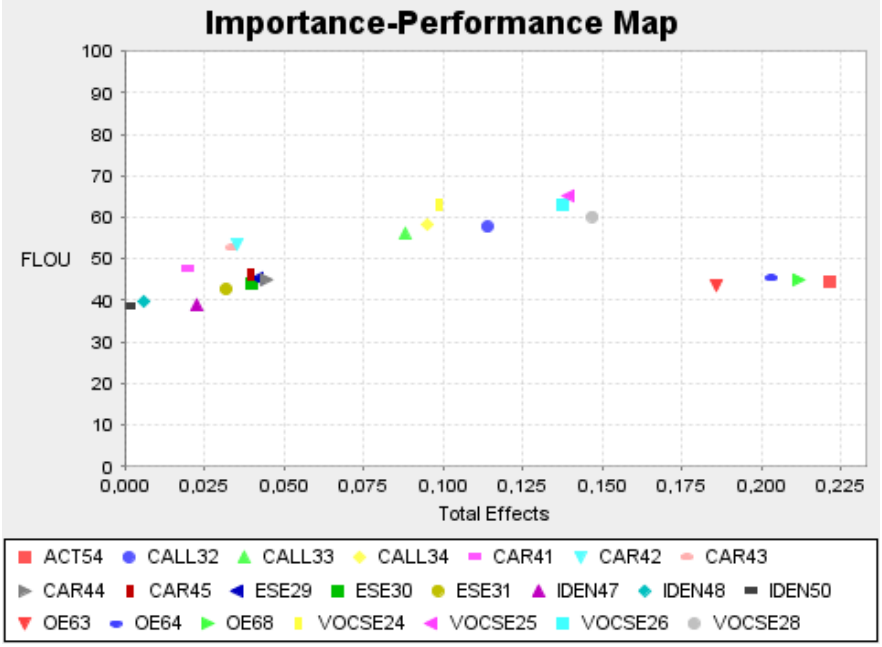

Figure 6.17. Indicator IPM of the STARTUP sub-sample for FLOU. ACTCIT = active citizenship, CALL = calling, VOCSE = Vocational self-efficacy, ESE = entrepreneurial self-efficacy, IDENT = entrepreneurial identity, INT = interest, OE = outcome expectations, FLOU = flourishing

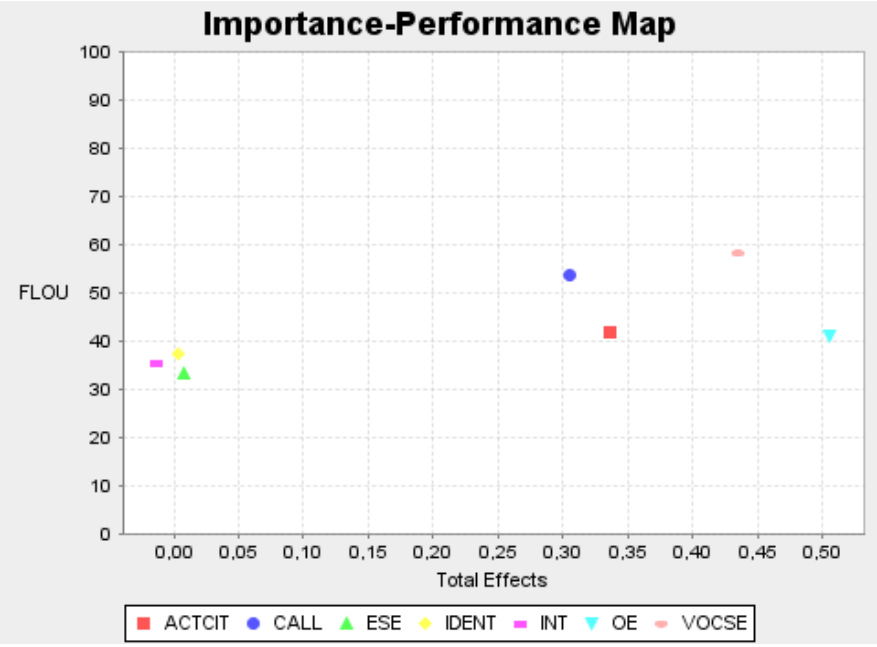

Figure 6.18. Construct IPM of the NOSTARTUP sub-sample for FLOU. ACTCIT = active citizenship, CALL = calling, VOCSE = Vocational self-efficacy, ESE = entrepreneurial self-efficacy, IDENT = entrepreneurial identity, INT = interest, OE = outcome expectations, FLOU = flourishing

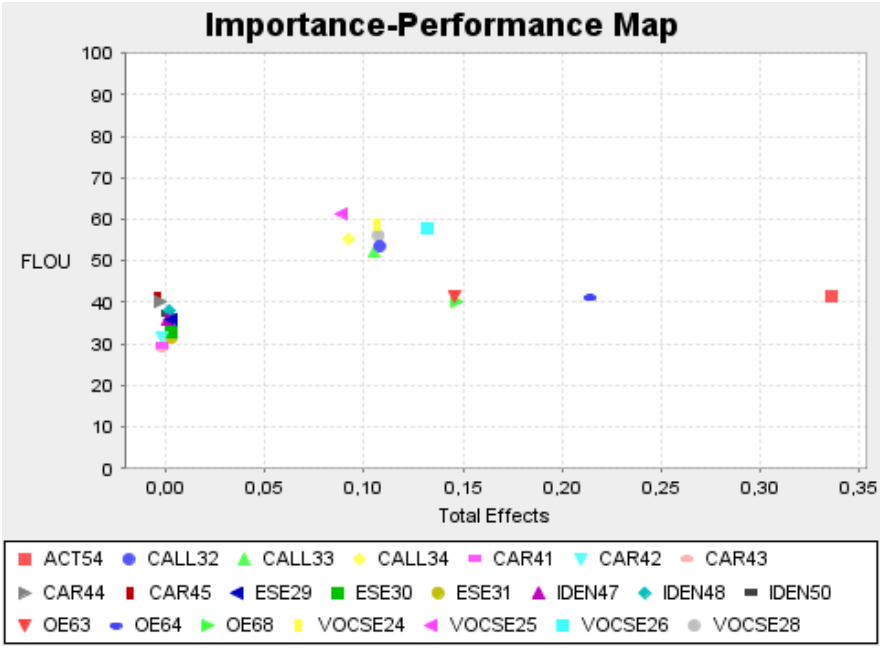

Figure 6.19. Indicator IPM of the NOSTARTUP sub-sample for FLOU. ACTCIT = active citizenship, CALL = calling, VOCSE = Vocational self-efficacy, ESE = entrepreneurial self-efficacy, IDENT = entrepreneurial identity, INT = interest, OE = outcome expectations, FLOU = flourishing

6.4.6.2 Target construct: FLOU.

Both groups demonstrate high levels of importance in OE, although the start-up group's coefficient is .10 higher than that of the nostart-up group. The second most important construct is VOCSE in both cases although start-up group's coefficient is above .60 and no start-up's is below .60.

As for the indicator IPM, both groups assess that the most important indicator impacting FLOU is ESE 30 (ease of starting and managing a firm), but the second place in the STARTUP group is taken by OE 68 (personal growth) followed by OE 64 (success in chosen career), and the total effects of these two constructs are nearly identical. As their performance is less than average, there is room for intervention by practice.

The NOSTARTUP group's second ranking indicator is OE 64 followed by OE 63 (career planning leading to a satisfying career) and OE 68 (personal growth). However, students with experience in the preparation for the entrepreneurial career path think that personal growth is the second most important factor that may impact their sense of flourishing.

6.5 Discussion

This third and final study was designed to be the most complete and methodologically most sophisticated piece in the chain of the studies exploring university students' career interest and choice by assessing the dynamics of an amended model suggested by SCCT. The third and final study was based on the full review of theoretical and conceptual literature of both the entrepreneurial psychology literature pertaining to the interest in adopting the entrepreneurial path as well as the relationship between the entrepreneurial careers and flourishing. The study's conceptual model, as illustrated by Figure 6.1, incorporated the SCCT model and inserted two new latent constructs, active citizenship behaviour and calling for the entrepreneurial career. In this respect, this final study was a verification or justification of the dynamics of entrepreneurial career interest predicting flourishing based on two new constructs.

Regarding the relationship between VOCSE, ESE and INT, tested by a structural path technique based on Bandura's recent model (2012), the findings of Study 3 substantiated the hypothesized relationship between self-efficacy, (both entrepreneurial and vocational), outcome expectations and vocational interest in the entrepreneurial path. The study explored and assessed Hungarian university students' entrepreneurial intentions and their perception of career prerequisites of flourishing. More specifically, this study confirmed other scholars' findings that "domain-specific self-efficacy has the most significant positive effect on entrepreneurial career intentions among university students" (BarNir et al. 2011; Culbertson et

al. 2011; Zhao et al. 2005; Fayolle et al. 2006; Bandura 1997). Therefore, it can be concluded that students' entrepreneurial intentions can be reinforced or intensified when their career path goal coincides with setting up their own enterprises. This will give them enough support to fight challenges of a new venture creation process. Furthermore, students' entrepreneurial intention was most significantly impacted (predicted) by their self-efficacy, ensuing from its strong direct and indirect relationships with the construct. This points to the necessity of support and opportunities for students enabling the augmentation of their entrepreneurial self-efficacy (Bandura, 2012; Culbertson et al., 2011; Wilson et al., 2007; Souitaris et al., 2007; Fayolle et al., 2006; Zhao et al., 2005).

Although it is widely accepted that the indirect effect of exposure to entrepreneurial role models (conceptualized as entrepreneurial identity in this study) may be attributed to the manner in which self-efficacy belief develops, path structure diagnosis revealed that both IDENT's performance and importance rank low among the other constructs, in each of the three models (GLOBAL, NOSTARTUP and STARTUP). When observing the subsamples individually, the NOSTARTUP subsample performs better in predicting ESE than the STARTUP subsample (p = .253*** vs. p = .201**). This effect can be explained by the occurrence of a stronger predictive impact of VOCSE on ESE in the latter group (p = .197***) while the coefficient in the NOSTARTUP group is nonsignificant, p = 150. In fact, STARTUP subsample's VOCSE → INT path is partially mediated by ESE (54 %) Students determined to start up in the next 5 years draw on their vocational self-efficacy to tackle necessary tasks of company foundation and management instead of deriving self-efficacy from entrepreneurial role models.

This study confirmed findings of the mediation analysis in Study 2 revealing that both ESE and OE exert (partial) mediation in the CALL → OE ESE →INT path correlation, respectively, drawing on Bandura's meta-analytical findings (1997) suggesting that in partial-mediation models, all the factors are related to performance both directly and partly through self-efficacy. In the direct-effects model, all the factors affect performance only directly, without any mediation through self-efficacy. In the total indirect model, the relations of the factors to performance are entirely mediated through self-efficacy (Bandura, 2012).

A further finding of the study is the magnitude of CALL's total effect on FLOU (p = .530***), which is the highest coefficient in all the intra-construct relationships (Table 6.11), purporting other authors' (Duffy et al., 2013; Duffy & Sedlacek, 2010; Dik et al., 2012) findings on the enhancing effect of calling on societal well-being. CALL also solidly predicted both ESE and VOCSE (as earlier found by Hirschi, Hermann, [2013]), as well as OE (earlier discussed

by Dobrow and Thosti-Kharas, (2011). In the segmented model mediation analysis, OE was found to partially mediate the predictive path between CALL and FLOU, confirming Doenges (2011)'s finding on the role of social support and expectations mediating the calling-components of well-being path.

Additionally, this finding complements (Allan & Duffy, 2013) research where CGSE (career goal self-efficacy) partially mediated the relation between calling and life satisfaction, suggesting that calling may be related to life satisfaction in part because having a calling increases CGSE, which in turn increases well-being. This may also mean that in order for people with callings to feel confident about their abilities to accomplish their career goals and reap well-being benefits, having high self-transcendence goals and avoiding physical self-goals is important. As discussed in the Literature Review chapter, callings are careers with other-oriented values that often have a component of spirituality (Dik & Duffy, 2009).

The interaction between ACTCIT and CALL is also worth emphasising: the way the model was structured enables ACTCIT to predict CALL and not vice versa. It would be interesting in the course of further research to investigate the effects of a reverse predictive path direction, as earlier findings by Dik et al., (2009) purport that "those engaged in pursuing their calling may value the resulting sense of fulfilment and the opportunity to make a *difference in society"*.

In the third study, the path coefficient of ACTCIT predicting CALL revealed to be strong and significant, and stronger in the NOSTARTUP subsample than in the STARTUP sample ($p = .373^{***}$, vs. $.263^{**}$). The general low performance of ACTCIT in the STARTUP sample can be explained by the start-up students' main concern about immediate preparation for the firm activities and therefore they have less time for engaging in civic activities. The present study's findings support this view: the Importance-Performance analyses revealed that in the STARTUP subsample, the indicator 'personal growth' has the second highest coefficient of importance, after 'ease of starting a firm and running it'.

Regarding the tested new constructs, ACTCIT and CALL, both have been found to 'permeate' the model by exerting specific indirect effects through other subordinate constructs via predictive path relationships and have an impact on the target DV, FLOU. This 'permeating' effect is more palpable in the STARTUP sub-sample, where a totality of 6 mediating relationships have been detected, involving 5 constructs, versus the NOSTARTUP sub-sample with 3 mediating relationships involving an equal number of constructs. It can be said with certainty that both CALL and ACTCIT in the STARTUP sub-sample have a more significant role: students will be likely to be more attracted or impacted in their career attempts to choose

the entrepreneurial path when confronted with these activities, in the form of training or education, or extra-curricular activities.

6.6 Limitations of the Present Study

The present study has several limitations. First, while the student sample was conveniently encompassing a general homogeneity and life stage experience, it was restrictive in terms of assessing the impact of professional experience on the establishment of new ventures. This relates to the findings describing that " in cases in which the career choice forms later in life, antecedents of intention may not be captured in a sample that includes participants in their very early career stages" (BarNir, Watson, & Hutchins, 2011). Second, there are limitations in terms of the measures used in this study, specifically in the case of intention. It is a single-item measure, which, despite its general reliability (Nagy, 2002; Wanous et al., 1997), may not reflect all aspects of entrepreneurial career intention.

Chapter Seven

General Discussion of the Results and Implications

7.1 Theoretical Implications

Despite considerable interest in the core constituents of the SCCT model, SE, INT and OE, the pathways through which distal variables are linked with these constructs have received only little systematic investigation. Accordingly, understanding of the mechanisms underlying the associations of the distal variables impacting interest and, especially, outcome expectations is underdeveloped. The goal of the present research was to examine the direct and indirect contributions of two newly inserted constructs to the extended SCCT model, calling and active citizenship behaviour, in the context of a career decision process namely choosing the entrepreneurial career, In addition to the examination of the core constructs of the SCCT model, the model dynamics have been investigated through the direct and indirect contributions of the new constructs on the dependent variable, which is flourishing. It was hypothesised, that graduates selecting the entrepreneurial career do so since they are more actively engaged in active citizenship behaviour and as is their sense of calling to the particular line of career which is entrepreneurship.

To this end, three substantive studies were conducted to investigate these links. In light of the inconsistent ESE-OE-INT relations observed in the existing literature (Fouad and Guillén, 2006; Mercedes Inda-Caro & Pena-Calvo, 2015) and the suggestions for future research by extending the SCCT model by Lent and Brown (2013) the first study was centrally concerned with clarifying the validity of active citizenship behaviour for predicting interest in the entrepreneurial career. The path coefficients (Active citizenship -> Intention to start-up = .097 ***; PEQ's -> Preparedness = .346 ***; Preparedness -> Intention to start-up = .310 ***; all significat at the .001) provided empirical evidence for all the hypothesised predictive relationship between students' perception of the values and the roles that entrepreneurs play in their smaller or wider communities, active citizenship behaviours and students' willingness to commit to the entrepreneurial career. The validity of the structural model revealed empirical justification for the inclusion of the constructs in the model, formerly suggested by entrepreneurship psychology authors in particular (Audretsch, Thurik 2000; Miller & Besser, 2000; Hallak et al. 2012).

In this pilot study using archival dataset, and as a means to anticipate the formal deployment of SCCT's in Study 2, SE was substituted by preparedness, sharing some of the

construct's properties. Preparedness, concomitantly, also refers to the degree of satisfaction with university training in students' preparation for the entrepreneurial career. Preparedness, together with active citizenship's predictive relationship emerged as significant contributors to students' entrepreneurial intentions. Preparedness proved to be the stronger factor influencing students' career decision-making and this finding enabled the construction of more complex and sophisticated models around the entrepreneurial self-efficacy-interest axis (Bandura 2012; Culbertson et al. 2011; Wilson et al.2007; Souitaris et al.2007; Fayolle et al.2006; Zhao et al., 2005). Mediation analysis revealed that the way students view and perceive the role and values carried by entrepreneurs has direct effect on their sense of preparedness (or self-efficacy to retain the SCCT term) and an indirect effect, demonstrated by the partial mediator role; in the students' career decision preparations. This finding purports previous findings on the predictive relationship between the perception of the entrepreneurial role and the actual interest in the entrepreneurial career (Culbertson et al. 2011; Zhao et al. 2005; Fayolle et al. 2006) which Bandura (1997) explains as vicarious learning; and they confirm the theoretical link between engagement in active citizenship behaviour as an important prerequisite of meaningful and successful entrepreneurial activity.

In Study 2, SCCT has been fully adopted as the conceptual framework and another archival dataset was drawn upon to test the study's hypotheses. PLS-SEM offered a very useful way to examine the proximal interplay among key variables in actual life contexts by generating a snapshot of predictive relationships between constructs of the conceptual model of Study 2. A snapshot offers an immediate picture of the versatile moods and satisfaction (sensitive to ongoing events) together with their precursors and consequences.

The novelty of Study 2 was the interpolation of the construct of calling into the conceptual model depicting graduate entrepreneurial interest as predicted by proximal and distal variables suggested by the SCCT model. In doing so, the meta-analytic data on calling reinforced the model specifications of the direct and indirect relations of calling with self-efficacy and outcome expectations, as well as with interest and flourishing, central concern of the study. A number of supplementary research issues were equally addressed in the process of conducting the meta-analytic review and model testing. These include the mediating effects of self-efficacy, outcome expectations as well as the dimensional structure of calling and active citizenship from the perspective of the present conceptualization of entrepreneurial career decision-making. The path coefficient results obtained from Study 2 (CALL → ESE = .384***; CALL → INT = .366***; CALL → OE= .560***; ESE → INT = .102***; ESE → OE= .384***; OE → INT:= -.041***) contribute to the advancement of theory bearing on the possible extensions of SCCT

by distal variables, as well as the explanation of the development of entrepreneurial interest, educational practice, and methodology in important and novel ways.

Study 3's target and deconstructed model specifications were developed in response to calls for greater theoretical integration concerning the ways in which distal dispositional constructs and situational mediating processes operate together to influence the interplay between the core constructs of the SCCT model as well as the additions such as calling and active citizenship.

In Study 3, active citizenship and calling emerged as significant predictors of self-efficacy and outcome expectations, and, in turn, interest and flourishing. Despite some works on the focus on others and in particular on social justice as a predictor of self-efficacy (Autin, Duffy, & Allan, 2015; Beer, Spanierman, Greene, & Todd, 2012; Miller et al., 2009) , this area of research has not been sufficiently explored. Active citizenship can be regarded as a distal personal variable in the SCCT model and is comparable to the construct of social justice. This thesis is also pioneer in its way of approaching and handling the construct of active citizenship behaviour in the SCCT model. Active citizenship proved to be a significant and strong predictor of calling, outcome expectations and to a lesser extent, of vocational self-efficacy. It did predict entrepreneurial self-efficacy via the mediating role of vocational self-efficacy, as demonstrated in the decomposed model analyses. Whilst ACTCIT emerged as a general strong predictor of the core constructs, multi-group analyses detected between-group differences, in particular in the strength of the ACTCIT → VOCSE path. Students with no intention to start up are more influenced by their perception of active citizenship when envisaging outcome expectations of their career decisions, than those students who are already committed to the entrepreneurial career path by preparing their entry. There is an additional finding emanating from the Importance-Performance Map reiterating this finding: ACTCIT is the fourth most important construct impacting flourishing in the case of the start-up subsample (total effects: .22), whereas it is the third most important construct in the non-start-up sub-sample, with total effects .34.

The slighter performance of the ACTCIT in the start-up subsample can be explained by the temporary intensive engagement in the preparatory phase of setting up the enterprise and being absorbed in the nuts and bolts of it and lesser time spent in the involvement in other-directed activity such as political activity, supporting NGO's and other civil society entities. Although focus on others and on the community, is an attitude that entrepreneurs commonly adopt when properly in business (Culbertson et al. 2011; Zhao et al. 2005; Fayolle et al. 2006), it appears that in the preparatory phase of starting up this is not the main concern. Perhaps it is the result

of a process of social learning to get more engaged with the community life and understand the expectations of their respective communities regarding their involvement.

The findings on the role and dynamics of calling in the model demonstrate without any doubt that calling is in fact a strong a significant predictor of both types of self-efficacy, outcome expectation (Figure 6.7 and Table 6.11) and furthermore, as demonstrated in the decomposed model, it also predicts flourishing by the mediating means of outcome expectations. Calling is the third most important factor predicting flourishing in the start-up subsample, against the fourth rank in the no-start-up subsample.

Empirical investigations in recent calling literature have concomitantly examined calling toward a domain and career pursuit (e.g., Bunderson & Thompson, 2009; Duffy, Allan, & Dik, 2011; Wrzesniewski et al., 1997). Study 3's further contribution to theory is demonstrating how early calling and later career pursuit are associated by a key mechanism, and furthermore, how callings toward a career field are related to career pursuit. From the study, calling emerged as a significant predictor of people's cognitions, influencing people's perceptions, "even over objective external information about their abilities". This coincides with Dobrow and Tosti-Kharas' (2012) findings that "a stronger early calling toward the music domain made participants of the research perceive their music abilities as being greater several years later, which ultimately led to a higher likelihood of pursuing a career in this challenging domain - regardless of their actual ability level".

7.2 Implications to Practice

Entrepreneurship educators and career practitioners may rely on the results of this study to inform the entire range of educational processes focusing on the preparation for self-employability of the students. These processes include, without being exhaustive, curriculum design, delivery of the curriculum and organising training and practicum for the students. As Bandura (1997) stipulates and Study 1 reinforces, the sources of self-efficacy most relevant to the context of teaching are persuasion, observation, and experience. Based on the novel evidence of the relation between calling and self-efficacy and entrepreneurial interest emerging from the thesis, educators may consider how best to shape a supportive and creative environment and formulate learning activities on the basis of the sources of efficacy so as to best recruit students' calling to effect interest. Learning activities could link students reflecting on their past experiences of engaging in conversations with significant others to determine how those conversations influenced self-efficacy. Such conversations will involve the sources of persuasion and observation.

This study also conveys messages for career counsellors. The strong relationship this study found between active citizenship, calling and career decision-making validates interventions focusing on these aspects. Ensuing from this relationship, reinforcing active citizenship behaviour and augmenting a sense of calling may be deployed to manage career indecision. This study also highlights the importance of social support as emanating from Study 1 learning environment, suggesting that career counsellors have an important task in helping students to fully benefit from networking and develop support systems.

7.3 Methodological Implications

In terms of the method of data analysis, PLS-SEM proved to be a very useful and practical tool. The application is an increasingly widespread in social sciences research across a variety of disciplines but novel to psychology. Its competitive advantage over CB-SEM is that is better serves the research objectives of prediction and theory development. The ease of method deployed in this thesis may prove to be attractive for other researchers looking for novel approaches, resulting in the further articulation of the empirical method into the literature of the field. The demonstration of the applicability, validity and the viability of the PLS-SEM method is an important contribution to the diversification of the empirical methods allowing researchers to adopt new and unconventional approaches.

The use of both archival data and retrofitting tecnhique, while unusal in the career development literature, had been called upon as a necessity originating from the specific research design and satisfied the aim of the research design.

7.4 Implications and Recommendations to Policy

The present study has practical implications and suggests the utility of the SCCT model in the context of career development and technology. Professionals could find support from this research for developing career interventions focused on increased self-efficacy beliefs, outcome expectations, and interests in adopting the entrepreneurial career. If the aim is to increase the number of graduate start-ups, (a fundamental objective of the European Union), interventions—especially in high school—should promote the development of entrepreneurial technology self-efficacy beliefs, technology outcome expectations, and technology interests.

Lent, Lopez, Lopez, and Sheu (2008) suggested that “career interest formation and goals can be inhibited by environments that do not promote career efficacy-building experiences”. Findings in the thesis support their advice that “academic advisors and vocational psychologists can create environments supportive of CDSE development by stressing the importance of

finding majors with which students emotionally identify. Counsellors and advisors should work with students to help them to identify courses and major-specific experiences in which (a) they felt enthusiastic and happy and (b) there are career options that they appraise favourably and could take pride in pursuing" (Conklin et al., 2013).

Virtually all of the participants in Study 3 experience 'strong' calling ($M \geq 6.56$, on a 7-point scale in the questionnaire), it is presumed that not all will be able to professionally live their callings. These individuals in particularly challenging career contexts, like the entrepreneurial ecosystem in Hungary, may consider pursuing the entrepreneurial calling in less challenging career paths such as avocation, a part-time profession, or one component of a protean career (Hall, 1976) taking shape of jobs like business advisor, project manager, project coordinator, or start-up facilitator. In these areas, students with stronger callings will have a *competitive advantage*, resulting from the positive reinforcement on both the intrinsic and extrinsic sides of their career.

Although it is widely accepted in previous studies (Gemmell, Boland, & Kolb, 2012) (Hallak et al., 2012) that the indirect effect of exposure to entrepreneurial role models (conceptualized as entrepreneurial identity in this study) may be attributed to the manner in which self-efficacy belief develops, the low performance of the construct means that exposure to role models may exert inverse influence and instead of enhancing interest, with the intensity of the experience and full understanding of the engagement that the career entails, may altogether deter students from the entrepreneurial career. The IPMA analysis in Study 3 clearly demonstrates that despite a significant predictive relationship to the interest in engaging entrepreneurial activities, the entrepreneurial identity is the least important in terms of the importance exerted on the dependent variables such as interest and flourishing. These results reiterate questions on the contradictory effect of role models, such as mentors, on the attitudes of entrepreneurs (St-Jean & Mathieu, 2015). Trainings with such exposure must therefore be designed and delivered with extreme care in order to avoid deterring impact.

As a finding having a bearing on policy and practice, it can be said that because mentoring seems to increase self-efficacy and, at by the same token, reduce intention to remain within the profession, mentoring should be introduced very early on in the entrepreneurial process. Since entrepreneurship is not a career choice that suits everyone, the mentor's effect, from the individual's standpoint, may be considered positive. By allowing novice entrepreneurs to identify and embrace their strengths and weaknesses on one hand, and what being an entrepreneur entails on the other, the model favours acceleration and confirmation of career choice. Recently, the intention to start a business is has been reported as high among youth (St-

Jean & Tremblay, 2014), but their lack of entrepreneurial experience may lead to unrealistic career plans. This may partly explain why the majority of start-ups fail within the first 5 years (MDEIE, 2008). As observed in this survey, on a sample of novice entrepreneurs owning small businesses that seem to have a low growth potential, being paired with an experienced business person appears to lower the intention to remain in the profession. Thus, career counsellors may use mentoring as an effective tool in building well-adjusted expectations toward the entrepreneurial career.

7.5 Limitations

This study has several limitations. First, in terms of career decision making, or the preparation for it was measured by the CDSE (Taylor & Betz, 1983; Betz et al., 1996). Other career-related self-efficacy measures were excluded as self-efficacy pertaining to career decision-making is disparate from self-efficacy pertaining to other career behaviours (Betz & Hackett, 2006). Thus, this study's findings may not relate to other types of self-efficacy measures. Perhaps in the future, another study, this time extended to the examination of other career-related self-efficacies such as career search self-efficacy, would prove to be useful to provide a ground for comparison. In addition, the studies included in the systematic literature review on calling meta-analysis were relatively limited, as its unique focus was on journal articles. Further search must be extended to thesis and thesis databases, allowing a broader generalization of the meta-analytical results. In addition, SCCT model analysis was restricted to some of its components and relationships between other constructs such as outcome expectations, goals, further choice action and persistence were not observed.

Future research can cast a light on the behavioural results of VOCSE and ESE. Despite its limitations, this study made an attempt to clarify the role of VOCSE and ESE using the SCCT framework and managed to identify social cognitive variables, including self-concept variables that are crucial for VOCSE and ESE, interest and flourishing from an expanded framework. These findings will hopefully prove to be germane in the expansion of understanding on SCCT model focusing on process-specific career self-efficacy as well as in designing career interventions for VOCSE and ESE.

7.6 Conclusion and Future Prospects

This research confirms SCCT's usefulness in entrepreneurship research. Using SCCT to test a model explaining of attitudes related to entrepreneurial careers in a mentoring context, the central role of ESE as a mediator variable emerged.

From a career-counselling practice standpoint, this research suggests mentoring as an efficient tool in helping potential entrepreneurs with their career choice. This suggests a closer and more refined study of the effect of role models, such as mentors, in entrepreneurial career development for future research.

This study's implications for researchers and practitioners are manifold: while VOCSE is assessed to be a significant contributor in diverse career behaviours, studies reporting on it contain inconsistent findings. This study managed to identify generic and career-specific factors correlating more strongly and directly with VOCSE, which in turn may facilitate appropriate research design in the domain of VOCSE studies. In addition, two self-concept factors (self-esteem and vocational identity), formerly absent from the SCCT model, were incorporated to explain CDSE. Their insertion proved to be justified: there is a significant relationship between self-concept factors and CDSE.

Finally, the cross-cultural validity of vocational assessment has been the topic of a limited number of studies, the majority of the articles preoccupied with interest inventories. It is recommended that more cross-cultural application of career assessment instruments are initiated and launched not only to progress the field, but to disseminate information in various cultures.

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Appendices

Appendix A

Sample of the GUESSS 2011 Hungary Survey Items

Number of the questionnaire
Year of birth
Gender
Marital status
Number of older siblings
Nationality
other nationality TEXT
Please select your University/University of Applied Science
What is your current level of studies?
Exchange student
How long have you been studying in total? (Years)
How long have you been studying at your current University / University of Applied Science? (Years)
What is your field of study? Choose the most appropriate one.
other field of study TEXT
Offering: Entrepreneurship in general
Offering: Family firms
Offering: Financing entrepreneurial ventures
Offering: Technology entrepreneurship
Offering: Social entrepreneurship
Offering: Entrepreneurial marketing
Offering: Innovation and idea generation
Offering: Business planning
Offering: Workshops/networking with experienced entrepreneurs
Offering: Contact platforms with potential investors
Offering: Business plan contests / workshops
Offering: Mentoring and coaching programs for entrepreneurs
Offering: Contact point for entrepreneurial issues
Offering: Technology and research resources (library, web)
Offering: Seed funding / financial support from University
Not offered/unknown: Entrepreneurship in general
Not offered/unknown: Family firms
Not offered/unknown: Financing entrepreneurial ventures
Not offered/unknown: Technology entrepreneurship
Not offered/unknown: Social entrepreneurship
Not offered/unknown: Entrepreneurial marketing
Not offered/unknown: Innovation and idea generation
Not offered/unknown: Business planning
Not offered/unknown: Workshops/networking with experienced entrepreneurs
Not offered/unknown: Contact platforms with potential investors
Not offered/unknown: Business plan contests / workshops
Not offered/unknown: Mentoring and coaching programs for entrepreneurs
Not offered/unknown: Contact point for entrepreneurial issues
Not offered/unknown: Technology and research resources (library, web)
Not offered/unknown: Seed funding / financial support from University
Attended: Entrepreneurship in general
Attended: Family firms
Attended: Financing entrepreneurial ventures
Attended: Technology entrepreneurship
Attended: Social entrepreneurship
Attended: Entrepreneurial marketing
Attended: Innovation and idea generation
Attended: Business planning
Attended: Workshops/networking with experienced entrepreneurs
Attended: Contact platforms with potential investors
Attended: Business plan contests / workshops

Attended: Mentoring and coaching programs for entrepreneurs
Attended: Contact point for entrepreneurial issues
Attended: Technology and research resources (library, web)
Attended: Seed funding / financial support from University
Satisfied: Entrepreneurship in general
Satisfied: Family firms
Satisfied: Financing entrepreneurial ventures
Satisfied: Technology entrepreneurship
Satisfied: Social entrepreneurship
Satisfied: Entrepreneurial marketing
Satisfied: Innovation and idea generation
Satisfied: Business planning
Satisfied: Workshops/networking with experienced entrepreneurs
Satisfied: Contact platforms with potential investors
Satisfied: Business plan contests / workshops
Satisfied: Mentoring and coaching programs for entrepreneurs
Satisfied: Contact point for entrepreneurial issues
Satisfied: Technology and research resources (library, web)
Satisfied: Seed funding / financial support from University
The University offerings I attended.....increased my understanding of the attitudes, values and motivations of entrepreneurs.
The University offerings I attended.....increased my understanding of the actions someone has to take in order to start a business.
The University offerings I attended.....enhanced my practical management skills in order to start a business.
The University offerings I attended.....enhanced my ability to develop networks.
The University offerings I attended.....enhanced my ability to identify an opportunity.
There is a favorable climate and premises for becoming an entrepreneur at my University.
At my University I found many entrepreneurial-minded classmates.
Thinking about any classes or training in entrepreneurship that you have had, were they mainly imparting knowledge (1) or could you work on own entrepreneurial ideas (7)?
Career choice intentions: Right after studies
Career choice intentions: 5 years after studies
RIGHT AFTER STUDIES: This career choice intention has a great personal meaning for me.
RIGHT AFTER STUDIES: This career choice intention is emotionally important for me.
RIGHT AFTER STUDIES: I intend to pursue this career path also when I experience troubles and when problems arise.
FIVE YEARS AFTER COMPLETION OF STUDIES: This career choice intention has a great personal meaning for me.
FIVE YEARS AFTER COMPLETION OF STUDIES: This career choice intention is emotionally important for me.
FIVE YEARS AFTER COMPLETION OF STUDIES: I intend to pursue this career path also when I experience troubles and when problems arise.
Motives: Challenge myself
Motives: Realize my own dream
Motives: Grow and learn as a person
Motives: Earn a larger personal income
Motives: Financial security
Motives: Build business children can inherit
Motives: Continue a family tradition
Motives: Follow example of a person I admire
Motives: Be innovative, at the forefront of technology
Motives: Develop an idea for a product
Motives: Achieve something, get recognition
Motives: Gain a higher position for myself
Motives: Get greater flexibility for personal life
Motives: Be my own boss
Motives: Exploit a specific business opportunity that I recognized
Motives: Follow a social mission
Motives: Follow an environmental mission
Are your parents currently self-employed or do they have a majority ownership in a company?
Please indicate if your father and/or mother have ever been self-employed.

When was the (last) company (companies) sold/given up? (Month)
When was the (last) company (companies) sold/given up? (Year)
Level of agreement: Family togetherness is important.
Level of agreement: Family members feel very close.
Level of agreement: When family gets together, everyone is present.
Level of agreement: Family members ask each other for help.
Please indicate if and how seriously you have been thinking about founding an own company.
Have you been self-employed before, but are not any more?
What was the most important reason for quitting this business?
Other reasons TEXT
Entrepreneurship: Being an entrepreneur implies more advantages than disadvantages to me.
Entrepreneurship: A career as entrepreneur is attractive for me.
Entrepreneurship: If I had the opportunity and resources, I would become an entrepreneur.
Entrepreneurship: Being an entrepreneur would entail great satisfactions for me.
Level of reaction: Parents / other family members
Level of reaction: Friends / fellow students
Level of reaction: People important to me in general
Importance of opinion: Parents / other family members
Importance of opinion: Friends / fellow students
Importance of opinion: People important to me in general
Charakter: When I get what I want, it is usually because I am lucky.
Charakter: I have often found that what is going to happen will happen.
Charakter: It is not always wise for me to plan too far ahead because many things turn out to be a matter of good or bad fortune.
Charakter: My life is chiefly controlled by powerful others.
Charakter: I feel like what happens in my life is mostly determined by powerful people.
Charakter: In order to make my plans work, I make sure that they fit in with the desires of people who have power over me.
Charakter: I am usually able to protect my personal interests.
Charakter: When I make plans, I am almost certain to make them work.
Charakter: I can pretty much determine what will happen in my life.
Competence: Establish and achieve goals and objectives
Competence: Generate new ideas
Competence: Develop new products and services
Competence: Perform financial analysis
Competence: Reduce risk and uncertainty
Competence: Take calculated risks
Competence: Make decisions under uncertainty and risk
Competence: Manage time by setting goals
Competence: Take responsibility for ideas and decisions
Competence: Start my own firm
Competence: Lead my own firm to success
Image: When you think of the word ''entrepreneur'', how closely do you fit that image (1=0%, 7=100%)?

Appendix B

BBS Hungary Questionnaire

1	**Please assess, how important do you find :** *1(not at all important)2,3,4,5,6,7,8,9,- 10 (very important)*	
V1	family	
V2	belonging to a group	
V3	being member of society	
V4	knowledge, expertise	
V5	liberty, independence, autonomy	
V6	religion	
V7	money, wealth	
V8	cultural heritage	
V9	historical heritage	
V10	self-replenishment	
V11	care, provision	
V12	financial security	
V13	trust	
V14	learning, education	
V15	acting for the benefit of society	
V16	environmental protection	
V17	responsibility for environment	
V18	profession, vocation	
V19	stabile job	
V20	work-life balance	
V21	rich, active life	
2	**In the constitution of your own set of values, assess the influence of:** *1(not at all important)2,3,4,5,6,7,8,9,- 10 (very important)*	
V22	political environment	
V23	economic environment	
V24	own uncertainty	
V25	guidance of family	
V26	societal norms	
V27	workplace values	
V28	values conferred by media	
V29	values of my peer group	
V30	patterns learnt at Uni	
V31	global politics	
3	**An Active citizen** *(not true 1; not really true: 2; partly true:3; completely true: 4)*	
A32	participates in shaping society's future	
A33	in the current political deficit, he does not exist	
A34	his activity enhances societal satisfaction	
A35	actively participates in NGO's work	
A36	actively participates in political parties	
A37	is a pillar of participative democracy	
A38	builds national unity	
A39	does volunteer work	
A40	**I consider myself an active citizen (yes** *1, no 2)*	

Dear student!

By filling in this questionnaire you will help international researchers understand more about the vision and perception of tourism and hospitality undergraduates. Thank you for taking your time to respond, your answers are invaluable for us.

Wishing you a succesful career start:

Horváth Zsuzsann

6.	**As an active citizen, I would participate:** *(not at all likely 1; rather not likely 2; rather likely 3; wholly likely 4)*
A53	in an NGO
A54	in a political party
A55	at Uni, in Student union's work
A56	in volunteer work
A57	would stand up for my citizen's rights
A58	in a charity
A59	as a global active citizen, in foreign volunteering
A60	don't want to be an active citizen
7.	**How satisfied are you with your life, all elements combined** *(scale 1-100)*
F61	o at present
F62	o in 5 years
F63	o in 10 years
F64	o in 15 years
8.	**I have a concretised idea what I want to achieve (***yes: 1, no: 2)*
F65	o in 5 years
F66	o in 10 years
F67	o in 15 years
9.	**My attitude to my future:** *(not at all likely 1; rather not likely 2; rather likely 3; wholly likely 4)*
F68	Not interested in future
F69	I control my future
F70	I can hardly influence my future
F71	I have confidence in my future
F72	I am concerned (afraid) about my future
10.	**In planning my future, I am influenced by** *1(not at all important)2,3,4,5,6,7,8,9,- 10 (very imp*
F73	political environment
F74	economic environment
F75	own uncertainty
F76	guidance by family
F77	societal norms
F78	workplace values
F79	values transmitted by media

5.	**If answer is NO, what prevents me from it?** **If YES, what prevents others from it?** *(not at all agree:1 rather not agree 2, rather agree 3, fully agree 4)*	
A41	not interested in future	
A42	not interested in politics	
A43	lack of opportunity/inertia	
A44	lack of time	
A45	lack of information	
A46	struggle for subsistence	
A47	the idea is completely new for me	
A48	Uni did not provide any guidance	
A49	unable to introduce changes	
A50	politicians decide everything	
A51	institutions not efficient/democratic deficit	
A52	will migrate to another country	

12.	**An Entrepreneur** *(not at all agree 1; rather not agree 2 rather agree 3, fully agree 4)*	
E91	creates value	
E92	by creating value, becomes a change agent	
E93	his objective is not value creation	
E94	is not empowered to create value	
E95	is a significant figure of civil society	
E96	is a main financier and organiser of civil society	
E97	is a role model for ambitious youth	
E98	impersonates active citizen	
E99	**Entrepreneurship skills must be taught in every business school is an independent course** *(not at all agree 1; rather not agree 2 rather agree 3, fully agree 4)*	

14	**Most important traits of an Entrepreneur** *1(not at all important)2,3,4,5,6,7,8,9,- 10 (very important)*	
E100	responsibility	
E101	success orientatedness	
E102	risk taking	
E103	fully controls his life	
E104	ability for innovation, creation of sth new	
E105	cooperation	
E106	openness	

15	**My attitude to entrepreneurship**
F80	values of network of friends
F81	patterns and models tansmitted by Uni
F82	global politics

11.	**I am interested in the future of:** *1(not at all important)2,3,4,5,6,7,8,9,- 10 (very imp*
F83	my family
F84	network of friends
F85	workplace
F86	living environment
F87	my Uni
F88	my nation
F89	Arab world
F90	the World

17	**It is the responsibility of a modern Uni** *(not at all agree 1; rather not agree 2 rather agree 3, fully agree 4)*
	teaching of
U120	entrepreneurial competencies
U121	values understood by Generation Y
U122	practical knowledge
	preparation for
U123	active citizenship
U124	societal responsibility
U125	responsible thinking/planning about future

18	**How satisfied am I with my Uni regarding:**
	teaching of
U126	entrepreneurial competencies
U127	values understood by Generation Y
U128	practical knowledge
	preparation for
U129	active citizenship
U130	societal responsibility
U131	responsible thinking/planning about future

19.	**Satisfaction with my industrial practice/If not yet a** *(scale 1-100)*
	teaching of
U132	entrepreneurial competencies
U133	values understood by Generation Y
U134	practical knowledge
	preparation for
U135	active citizenship

	(not at all agree 1; rather not agree 2 rather agree 3, fully agree 4)	
E107	I feel that I am apt for starting a new business	
	I am thinking of starting a new business in the next	
E108	o 1 yr	
E109	o 5 yrs	
E110	o 10 yrs	
E111	I do not wish to be an entrepreneur	
E112	I have succesful entrepreneur in the family	
E113	I have entrepreneur in the family, but not succesful	
16.	**I do not wish to start a new business because of lack of:** *(not at all agree 1; rather not agree 2 rather agree 3, fully agree 4)*	
E114	capital	
E115	knowledge	
E116	personal traits	
E117	positive model, example	
E118	government incentives	
E119	learnt competencies	
119/A	Did you attend entrepreneurship class?(yes:1, no:2)	

U136	societal responsibility
U137	responsible thinking/planning about future
S138	Age: **138AMajor**: **138B**Year:
S139	**Gender(1:male, 2: female) 139A Nationality:**
S140	Attended industrial practice (yes:1, no:2)
S141	o Abroad?(yes:1, no:2)
S142	Duration in months
20	**Birthplace**
S143	Capital city city over 1 M inhabitants 500thou.-1 M city 100thou.-1 M city 50-100thou. town 10-49thou. town 5-9thou. town 1-5thou. twn 1thou. and below village
21	**Secondary education**
S144	Capital city city over 1 M inhabitants 500thou.-1 M city 100thou.-1 M city 50-100thou. town 10-49thou. town 5-9thou. town 1-5thou. twn 1thou. and below village
22	**Father's highest educational degree**
S145	primary 1, vocational 2, secondary 3, tertia
23	**Mother's highest educational degree**
S146	primary 1, vocational 2, secondary 3, tertia

Appendix C

Approval Letter of the University of Southern Queensland's Human Research Ethics Committee

OFFICE OF RESEARCH
Human Research Ethics Committee
PHONE +61 7 4631 2690| FAX +61 7 4631 5555
EMAIL ethics@usq.edu.au

23 July 2015

Ms Zsuzsanna Horvath

Dear Zsuzsanna

The USQ Human Research Ethics Committee has recently reviewed your responses to the conditions placed upon the ethical approval for the project outlined below. Your proposal is now deemed to meet the requirements of the *National Statement on Ethical Conduct in Human Research (2007)* and full ethical approval has been granted.

Approval No.	**H14REA214**
Project Title	Exploration of Active Citizenship, Entrepreneurial Behaviour and Calling in Career
Approval date	23 July 2015
Expiry date	23 July 2018
HREC Decision	**Approved**

The standard conditions of this approval are:

(a) conduct the project strictly in accordance with the proposal submitted and granted ethics approval, including any amendments made to the proposal required by the HREC
(b) advise (email: ethics@usq.edu.au) immediately of any complaints or other issues in relation to the project which may warrant review of the ethical approval of the project
(c) make submission for approval of amendments to the approved project before implementing such changes
(d) provide a 'progress report' for every year of approval
(e) provide a 'final report' when the project is complete
(f) advise in writing if the project has been discontinued.

For (c) to (e) forms are available on the USQ ethics website:
http://www.usq.edu.au/research/ethicsbio/human

Please note that failure to comply with the conditions of approval and the *National*

Statement (2007) may result in withdrawal of approval for the project.

You may now commence your project. I wish you all the best for the conduct of the project.

Annmaree Jackson
Ethics Coordinator

Copies to: zseuilia1@gmail.com

Appendix D

Questionnaire of Entrepreneurial Calling, Corvinus University of Budapest, 2015

STUDENTS PERCEPTION OF THE ENTREPRENEURIAL CAREER

Dear Student!
This project is being undertaken as part of my PhD thesis at the University of Southern Queensland, in Australia. I request your assistance because I intend to assess students' perception of the entrepreneurial career.
Your participation in this project is entirely voluntary and anonymous. If you do not wish to take part you are not obliged to. By answering the questionnaire questions that require max. 15 minutes of your time, you agree to your responses being processed. Thesis survey methodology and the content of the questionnaire have been approved by the Ethics Committee of the University of Southern Queensland under H14REA214. If you wish to receive a copy of the aggregate results of this survey, please indicate your email address at the bottom of the second page. If you are interested in the topic of the survey and you would be available for a repeat wave, please indicate your email address so that I can notify you about the date and link where you can assess the questionnaire
Please refer to the Research Team Contact Details to have any questions answered or to request further information about this project: Zsuzsanna.Horvath@usq.edu.au Thank you for your participation and efforts.

SES	1	**Please indicate your age.** ….. yrs
	2	**What is your gender? male =1 female =2**
	3	**What is your country of origin ? …….**
	4	**What is your major?** …….
	5	**How many semesters have you completed in this major ?** …….. yrs
	6	**Please indicate your father's highest educational degree.** Primary school or below =1, some vocational school =2, high school diploma=3, vocational diploma=4, advanced vocational diploma=5, college=6, university diploma=7, PhD=8
	7	**Please indicate your mother's highest educational degree.** Primary school or below =1, some vocational school =2, high school diploma=3, vocational diploma=4, advanced vocational diploma=5, college=6, university diploma=7, PhD=8
VT	8	**Are you thinking about starting a company in the next 5 years?** yes=1, no=2
	9	**Have you found a product/service that you will be offering when entering the market?** yes=1, no=2, cannot decide/ I am not in the position to answer =3
	10	**If you are an established entrepreneur, which is your industry sector ? / When starting your own company, which will be your industry sector?** production, manufacturing=1, design=2, innovation= 3, services=4, financial services=5, argriculture=6, tourism=7, catering, hospitality=8, commerce, trade=9, foreign trade=10, consulting =11 cannot decide/I am not in the position to answer : 12
	11	**What is the size of the company that you are managing as an entrepreneur/ if you are an employee, what is the size of your employer's company?** mikro company 1-10 employees (1), small company 11-50 employees (2), medium size company 51-100 employees (3), large company over 101 employees (4), I am neither manager nor employee= 0
	12	**How many years of entrepreneurial experience have you got?** …. yrs, I am not in the position to answer= 0
	13	**If you are an employee, what is your work status?** full time employment=1, contract work=2, trainee=3, cannot decide= 4
	14	**How many hours per week do you work?** …. hrs , cannot decide= 0
	15	**Is there an entrepreneur in your extended family?** yes=1, no=2
	16	**Do you work in a family company?** yes, as an entrepreneur=1, yes, as an employee=2, no= 3
	17	**Are you a 'necessity entrepreneur'?** *A 'necessity entrepreneur' is a person who is not an employee because he/she is compelled to submit an invoice for the work/services rendered to the former employer and/or is compelled to pay social security from the invoiced sums.* yes=1, no=2
	18	**Have you attended any entrepreneurship courses offered by your University?** yes=1, no=2
	19	**Have you received any education/training outside University framework?** yes=1, no=2
	20	**If yes, in which organisation/framework ?** training organised by chamber of commerce=1, adult vocational education=2, other training organised for entrepreneurs= 3, online training = 4, with a mentor =5, in an entrepreneurial network =6

		Please answer the 2 questions below only if you are an active entrepreneur. *On the scale from 1-4 please indicate your level of agreement with the statements: 1=not at all agree 2= do not agree, 3=somewhat agree, 4= totally agree*
	21	**To what extent are you supported by mentors, or more experienced entrepreneurs?** 1-2-3-4
	22	**To what extent are you supported by entrepreneurial networks?** 1-2-3-4
	23	**Have you got a passion, a hobby that helps you in your business / future business?** yes=1, no=2
On the scale from 1-6 please indicate your level of agreement with the statements: 1=not at all agree 2= do not agree, 3=rather not agree, 4= rather agree, 5=almost totally agree, 6= totally agree		
SE	24	**I can remain calm when facing difficulties in my job/studies because I can rely on my abilities** 1-2-3-4-5-6
	25	**I meet the goals that I set for myself in my job/studies**. 1-2-3-4-5-6
	26	**Whatever comes my way in my job/studies, I can usually handle it.** 1-2-3-4-5-6
	27	**My past experiences in my job/studies have prepared me well for my occupational future.**1-2-3-4-5-6
	28	**I feel prepared for most of the demands in my job/studies.** 1-2-3-4-5-6
On the scale from 1-5 please indicate your level of agreement with the statements: 1=not at all agree 2= do not agree, 3=cannot decide if agree or not agree, 4=somewhat agree, 5= totally agree		
ESE	29	**Based on my skills and experience I am prepared to start a viable firm.** 1-2-3-4-5
	30	**To start a firm and keep it working would be easy for me.** 1-2-3-4-5
	31	**I can control the creation process of a new firm**.1-2-3-4-5
In my job/future job it will be my expectation		
CALL	32	**Doing my job I can realise my full potential.** 1-2-3-4-5
	33	**I am passionate about doing my job.** 1-2-3-4-5
	34	**I identify with my work.** 1-2-3-4-5
	35	**By doing my job I serve my community's good/values**. 1-2-3-4-5
	36	**My job helps me to make the world a better place.** 1-2-3-4-5
	37	**I have high moral standards for doing my job.** 1-2-3-4-5
	38	**An inner voice in guiding me in doing my job.** 1-2-3-4-5
	39	**I follow an inner call that guides me on my career path.** 1-2-3-4-5
	40	**I am destined to do exactly the job I do.** 1-2-3-4-5
CAR	41	**My professional goal is to become an entrepreneur.** 1-2-3-4-5
	42	**I am ready to take all the necessary steps to become an entrepreneur.** 1-2-3-4-5
	43	**I have very seriously thought about starting a firm.** 1-2-3-4-5
	44	**I have a strategy for achieving my career goals.** 1-2-3-4-5
	45	**I know what I need to reach my career goals.** 1-2-3-4-5
	46	**I have a plan for my career.** 1-2-3-4-5
Please assess the following statements on the community role of an entrepreneur: On the scale from 1-4 please indicate your level of agreement with the statements: 1=not at all agree 2= do not agree, 3=somewhat agree, 4= totally agree		
IDEN	47	**An entrepreneur is a change agent.** 1-2-3-4
	48	**An entrepreneur is a significant figure of the civil society.** 1-2-3-4
	49	**An entrepreneur is a role model for youth.** 1-2-3-4
	50	**An entrepreneur's role in society is to create value.** 1-2-3-4
	51	**An entrepreneur is an active citizen. 1-2-3-4**
Please indicate your level of agreement with your involvement in the following activities. yes=1, no=2 *In the last 3 months …*		
ACT	52	**I participated in a civil rights group or organization. yes=1 no =2**
	53	**I joined a protest march, political demonstration or political meeting.**
On the scale from 1-4 please indicate your level of agreement with the statements: 1=not at all agree 2= do not agree, 3=somewhat agree, 4= totally agree		
	54	**Young people have an important role to play in making the world a better place.** 1-2-3-4
	55	**It is important to participate in the political activity and decision-making of our country**. 1-2-3-4
	56	**It is my responsibility to get involved and make things better for society.** 1-2-3-4
On the scale from 1-4 please indicate how much you identify with each of these civil attitudes 1=not at all agree 2= do not agree, 3=somewhat agree, 4= totally agree		
	57	**to be active in policy-making** 1-2-3-4
	58	**to go to elections** 1-2-3-4
	59	**to obey laws and regulations** 1-2-3-4
	60	**to form an independent opinion** 1-2-3-4
	61	**to be active in a voluntary organisation** 1-2-3-4
On the scale from 1-4 please indicate your level of agreement with the statements: 1=not at all agree 2= do not agree, 3=somewhat agree, 4= totally agree		
OE	62	**Starting a new business is considered as a good career choice.** 1-2-3-4
	63	**My career planning will lead to a satisfying career for me.** 1-2-3-4
	64	**I will be successful in my chosen career.** 1-2-3-4

	65	**By becoming entrepreneur, I will be able to solve the problems of my community.** 1-2-3-4
My opinion about the entrepreneurial career path is the it provides …		
	66	**financial stability**
	67	**material and professional autonomy** 1-2-3-4
	68	**personal growth**
	69	**great respect by the community** 1-2-3-4
On the scale from 1-7 please indicate your level of agreement with the statements: 1=not at all agree 2= do not agree, 3=rather not agree, 4= cannot decide if not agree or agree, 5=rather agree, 6= almost totally agree, 7= totally agree		
FLOU	70	**I lead a purposeful and meaningful life.** 1-2-3-4-5-6-7
	71	**My social relationships are supportive and rewarding** 1-2-3-4-5-6-7
	72	**I am engaged and interested in my daily activities.** 1-2-3-4-5-6-7
	73	**I actively contribute to the happiness and well-being of others.** 1-2-3-4-5-6-7
	74	**I am competent and capable in the activities that are important to me.** 1-2-3-4-5-6-7
	75	**I am a good person.** 1-2-3-4-5-6-7
	76	**I live a good life.** 1-2-3-4-5-6-7
	77	**I am optimistic about my future**1-2-3-4-5-6-7
	78	**People respect me.** 1-2-3-4-5-6-7

I am interested in the survey results, please send me information to the following email address:	**I am interested in participating in the second round of the survey, please send me information to the following email address:**	
		CODE

Appendix E

Student Respondent Information Sheet

Project Details

Title of Project: **Exploration of Active Citizenship, Entrepreneurial Behaviour and Calling in Career**

Human Research Ethics Approval Number: H14REA214 USQ

Research Team Contact Details

Principal Investigator Details
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Description

This project is being undertaken as part of my PhD degree.

I am interested in young people's attitude towards the entrepreneurial career. My focus is on the exploration of their perceptions about the role entrepreneurs play in the lives of communities, and their engagement with democratic processes. I am equally interested in understanding students' background or former experience in working as entrepreneurs and if in the future they will be thinking in terms of establishing their own start-ups.

In order to gain valuable insight to the topics above, I have decided to approach students of the Corvinus University majoring in Business Studies by sending an email promoting the project via the students' intranet network. Students can download a copy of the questionnaire and fill out at their discretion and hand them in to the reception of their Department. Should you decide to complete the questionnaire, you may hand it into the reception desk of your academic Department, who will then forward the questionnaires in batches to the Research Team.

Participation

Your participation will involve completion of a questionnaire with 76 questions that will take approximately 15 minutes of your time. The questionnaire design enables quick and easy responses by simply circling the appropriate number listed in the answer.

Typical questions will include

On the scale from 1-5 please indicate your level of agreement with the statements: 1=not at all agree 2= do not agree, 3=cannot decide if agree or not agree, 4=somewhat agree, 5= totally agree		
ESE	29	**Based on my skills and experience I am prepared to start a viable firm.** 1-2-3-4-5
	30	**To start a firm and keep it working would be easy for me.** 1-2-3-4-5
	31	**I can control the creation process of a new firm**.1-2-3-4-5

Your participation in this project is entirely voluntary and anonymous. If you do not wish to take part you are not obliged to.

By signing the Consent Form, you agree to participate in the research project and respond to the questionnaire questions. You also consent to not requesting a withdrawal of your response sheet after it is collected, as it will not no longer be identifiable.

Your responses may be used for the purposes of future research, so you may choose to opt in or opt out by ticking the box at the end of the questionnaire. If you feel that you need further clarification or details, or you wish to have a summary of the findings, you need to email the Chief Investigator.

Your decision whether you take part, do not take part, or to take part and then withdraw, will in no way impact your current or future relationship with the Corvinus University.

Expected Benefits

It is expected that this project will not directly benefit you, but by accessing the summary of findings of the survey you may gain some insight into how your age group and peers feel about the entrepreneurial career. This may be helpful for you if you are considering becoming a start-up owner yourself.

Risks

Your participation is entirely voluntary and based on your genuine interest in the project. Your identity will not be revealed, so the university management will not be able to assess who participated and who did not participate in the project.

Privacy and Confidentiality

All comments and responses will be treated confidentially unless required by law. Your responses may be used for the purposes of future research, so you may choose to opt in or opt out by ticking the box at the end of the questionnaire. If you feel that you need further clarification or details, or you wish to have a summary of the findings, you need to email the Chief Investigator.
Any data collected as a part of this project will be stored securely as per University of Southern Queensland's Research Data Management policy.

Consent to Participate

The return of the completed Consent Form is accepted as an indication of your consent to participate in this project.

Questions or Further Information about the Project

Please refer to the Research Team Contact Details at the top of the form to have any questions answered or to request further information about this project.
If you request further clarification or details of the project you may do so by indicating your contact details. If you do not wish to indicate your contact data, you will have access to the Summary of Findings at your Department Reception.

Concerns or Complaints Regarding the Conduct of the Project

If you have any concerns or complaints about the ethical conduct of the project you may contact the University of Southern Queensland Ethics Coordinator on (07) 4631 2690 or email ethics@usq.edu.au. The Ethics Coordinator is not connected with the research project and can facilitate a resolution to your concern in an unbiased manner.

Thank you for taking the time to help with this research project. Please keep this sheet for your information.

Appendix F

Skewness and Kurtosis Analysis of the Entrepreneurial Calling, Corvinus University of Budapest, 2015 Student Sample

Items	*N*	Mean	Skewness		Kurtosis	
	Statistic	Statistic	Statistic	Std. Error	Statistic	Std. Error
Occupational Self-Efficacy						
Meet The Goal	330	4.65	-.523	.134	-.191	.268
Rely On Abilities	329	4.81	-.633	.134	.420	.268
Handle	325	4.63	-.553	.135	.361	.270
Past Experience	324	4.21	-.256	.135	-.382	.270
Feel Prepared	330	4.49	-.207	.134	-.298	.268
Entrepreneurial Self-Efficacy						
Start A Firm	316	3.45	-.405	.137	-.025	.273
Start And Run	328	3.34	-.288	.135	-.160	.268
Create	329	3.27	-.137	.134	-.511	.268
Calling						
Realise Full Potential	332	4.35	-1.099	.134	1.035	.267
Passionate	334	4.25	-.970	.133	.742	.266
Identify	331	4.41	-1.552	.134	2.826	.267
Community's Benefit	333	3.83	-.512	.134	-.246	.266
Better Place	333	3.59	-.238	.134	-.503	.266
Moral Standard	332	3.87	-.673	.134	.308	.267
Inner Voice	331	3.54	-.411	.134	-.388	.267
Guidance	333	3.76	-.436	.134	-.332	.266
Destined to Job	332	3.80	-.463	.134	-.422	.267
Entrepreneurial Interest						
Professional Goal	333	3.36	-.298	.134	-.896	.266
Necessary Steps	332	3.61	-.613	.134	-.517	.267
Thought About Starting	333	3.51	-.471	.134	-.935	.266
Career Insight						
Have A Strategy	332	3.57	-.403	.134	-.277	.267
Reach Career Goals	332	3.63	-.343	.134	-.387	.267
Plan Career	332	3.55	-.461	.134	-.199	.267
Entrepreneurial Identity						
Change Agent	332	3.26	-.447	.134	.323	.267
Significant Figure	332	3.34	-.511	.134	-.333	.267
Role Model	333	3.10	-.202	.134	-.706	.266
Create Value	333	3.29	-.741	.134	.520	.266
Active Citizen	330	3.48	-1.123	.134	.455	.268

Active Citizenship Behaviour						
Civil Rights Group	332	1.73	-.875	.134	-.700	.267
Protest March	333	1.84	-.101	.134	4.984	.266
Important Role	331	3.59	-1.901	.134	3.539	.267
Political Activity	331	2.65	-.145	.134	-.829	.267
Involvement	331	3.15	-.712	.134	-.076	.267
Policy-Making	334	2.22	.272	.133	-.924	.266
Election	333	3.24	-1.020	.134	.072	.266
Obey the Law	334	3.54	-1.449	.133	1.914	.266
Opinion	333	3.80	-2.854	.134	8.305	.266
Volunteer	331	2.79	-.355	.134	-.328	.267
Outcome Expectations						
Good Career Choice	332	3.06	-.386	.134	-.060	.267
Satisfying Career	332	3.55	-1.082	.134	.569	.267
Career Success	332	3.61	-1.608	.134	2.395	.267
Solve Problems	333	2.86	-.301	.134	-.323	.266
Financial Stability	333	3.13	-.631	.134	.058	.266
Autonomy	333	3.35	-.704	.134	.259	.266
Personal Growth	330	3.57	-1.135	.134	2.107	.268
Great Respect	331	3.18	-.159	.134	-.170	.267
Flourishing						
Meaningful Life	331	5.67	-1.044	.134	1.796	.267
Social Relationship	333	5.89	-.923	.134	.649	.266
Daily Activities	331	5.62	-.723	.134	.506	.267
Others' Happiness	331	5.44	-.615	.134	.334	.267
Competent	331	5.71	-.934	.134	1.369	.267
Good Person	332	5.84	-.815	.134	.354	.267
Good Life	332	5.89	-1.209	.134	1.703	.267
Optimistic	333	5.87	-1.131	.134	1.086	.266
Others' Respect	333	5.58	-.617	.134	.035	.266
Valid *N* (Listwise)	276					