FROM SOCIAL ENTERPRISE START-UP INTENTION TO BEHAVIOUR

Analysing the Intention-Behaviour Relationship and the Moderating Effects of Environmental and Personal Factors

Authors:

Irene J. Seebacher-Tomas (107580)

Hanna Taya (108092)

Supervisor:

Kai Hockerts

Copenhagen Business School

Master's Thesis - BLC Business and Development Studies (MSc)

Date of Submission: 17th September 2018

Contract Number: 10975

Number of STUs: 272,307

Number of Pages: 119

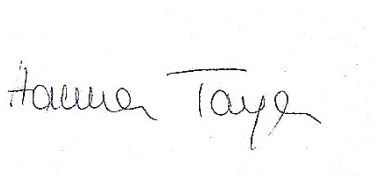
Statement of Authorship

We, Irene J. Seebacher-Tomas and Hanna Taya, hereby declare that we are the sole authors of the following thesis, titled 'From Social Enterprise Start-Up Intentions to Behaviour: Analysing the Intention-Behaviour Relationship and the Moderating Effects of Environmental and Personal Factors'.

The thesis and the work presented in it is our own and has been generated by us as the result of our original research. Where we consulted the published work of others, this is always clearly attributed.

We further declare that this thesis has not been submitted at any other institution in order to obtain a degree.

Signed:



Irene J. Seebacher-Tomas

Copenhagen, 15.09.2018

Hanna Taya

Copenhagen, 15.09.2018

Table of Contents

List of Figures

List of Tables

List of Appendices

Abbreviations

Acronym	
AVE	Average Variance Extracted
CFA	Confirmatory Factor Analysis
CR	Composite Reliability
CFI	Confirmatory Fit Index
df	Degrees of freedom
DV	Dependent Variable
EFA	Exploratory Factor Analysis
f^2	Effect size
GEM	Global Entrepreneurship Monitor
HTMT	Heterotrait – Monotrait Ratio of Correlation
IM	Integrative Model for Behavioural Prediction
IV	Independent Variable
KMO	Kaiser-Meyer-Olkin test
MSV	Maximum Shared Variance
MOOC	Massive Open Online Course
NFI	Normed Fit Index
PCLOSE	P value of Close Fit
p / p-value	Probability value
PLS	Partial Least Squares
Q^2	Cross-validity redundancy
RMSEA	Root Mean Square Error of Approximation
R^2	Coefficient of determination
SD	Standard Deviation
SEM	Structural Equation Modelling
SRMR	Standardised Root Mean Residual
t1	2014, when the 1st round of data collection was conducted
t2	2018, when the 2nd round of data collection was conducted
TRA	Theory of Reasoned Action
TPB	Theory of Planned Behaviour
χ^2	Chi-squared

Abstract

To date, researchers have investigated social enterprise start-up intentions based on the assumption of the 'Theory of Planned Behaviour' that intentions lead to subsequent behaviour. However, research from other fields has shown that although the intention-behaviour relationship may be strong, it is not perfect. Fishbein's 'Integrative Model for Behavioural Prediction' proposes to investigate environmental and personal moderators to better explain the translation of intention into behaviour. Hence, this study aims to analyse the research question: '*Do social enterprise start-up intentions lead to subsequent behaviour, and how do environmental and personal factors moderate this relationship?*'

This research tests the environmental factor of 'Institutional Support', and the personal factors of 'Self-Control' and 'Time Planning'. We hypothesise that these three factors positively moderate, and, thus, strengthen the intention-behaviour relationship. We draw on longitudinal data collected from international students who took a 'Massive Open Online Course' on social entrepreneurship. Social enterprise start-up intentions were measured at the start of this course and subsequent behaviour four years later. In total, we obtained 211 complete responses, and analysed them using 'Structural Equation Modelling'.

The findings indicate that 'Self-Control' positively moderates the intention-behaviour relationship, while neither 'Institutional Support' nor 'Time Planning' have a statistically significant effect. We conduct a post-hoc analysis by inputting Thomson Reuters' 'Country Social Enterprise Supportiveness' as an alternative environmental factor into our model, yet it neither moderates the intention-behaviour relationship. In conclusion, *our sample suggests that intention can lead to behaviour and the personal factor 'Self-Control' can strengthen this relationship*.

Words: 248

Keywords: *Social enterprise start-up behaviour, intention-behaviour relationship, intention-behaviour discrepancy, integrative model for behavioural prediction, moderator analysis.*

1 Introduction

"Social entrepreneurs have a vision of the future and

will stop at nothing to see that future come true."

(Nicholls, 2006, p. vi)

With these words, Nicholls (2006) characterises social entrepreneurs. This quote is interesting due to the following two aspects: Firstly, it highlights that social entrepreneurs are visionary and future-oriented, which underlines their importance in the future of humanity. Secondly, he claims that social entrepreneurs are unstoppable in realising their vision, which has as of yet not been investigated or proven.

1.1 The Relevance of Social Enterprises

The world population is predicted to rise to 9.2 billion people by 2050, and almost 11 billion people by 2100 (United Nations, 2015). Due to this population boom, humans are expected to face social and environmental challenges, such as poverty, malnutrition, natural resource depletion and environmental degradation (ibid.). In particular, the increase in population "*will make it harder for […] governments to eradicate poverty and inequality, combat hunger and malnutrition, expand education enrolment and health systems, improve the* ***provision of basic services and*** *[…]* ***ensure that no-one is left behind***" (United Nations, 2015, p. 4).

Against this background, one worldwide emerging phenomenon that has been discussed as a means to **effectively address sustainable development issues and humanity's most pressing needs**, are so-called '**social enterprises'** (Kachlami, 2014; Littlewood & Holt, 2015). This paper understands social enterprises as businesses driven by their social mission while pursuing commercial means (Bacq & Janssen, 2011). Key to social enterprises are their social objective, with which they generate social value (Nicholls, 2006) by fulfilling society's urgent needs (Lepoutre, et al., 2013), and satisfying the public interest (European

Commission, 2013). As can be inferred from Nicholls' (2006) quote at the start of this page, **social entrepreneurs aim at making a difference in the world for a better future**.

Since the 70s, social enterprises have been increasingly emerging (Defourney & Nyssens, 2010), and although social entrepreneurial activity rates vary across countries, about 0.02% to 7.6% of a country's working population is involved in a social enterprise (Terjesen, et al., 2012). **Social entrepreneurship is also gaining momentum** in academia, politics, and the private sector (Stephan, et al., 2015; Terjesen, et al., 2012), due to social enterprises' ability to combine a social purpose with business practices (Kachlami, 2014). Governments in particular have become increasingly concerned with creating favourable environments for social enterprises to emerge and thrive (Ferri & Urbano, 2015). Expectations are that the emergence of social enterprises leads to reduced public spending and larger tax yields (European Commission, 2013). Current supportive national policies span from financial funds, training, legislations, to market regulations (Terjesen, et al., 2012). For instance, Great Britain adapted its tax system by implementing a 30% tax break to promote social entrepreneurial activities (SEFORIS, 2014). In addition, universities are nowadays expressing their interest in social entrepreneurship by, for example, offering corresponding courses (ibid.).

1.2 Social Entrepreneurial Debates, Research Gaps & Problem Statement

With regard to academia, research on social entrepreneurship is still developing (Kachlami, 2014; Lepoutre, et al., 2013). To date, the scientific community has neither settled the **debate** on a final definition (Nicholls, 2006), nor on its delimitation from commercial entrepreneurship (Seymour, 2012). As a consequence, the social entrepreneurial literature is mainly concerned with defining the concept and determining its boundaries. In this paper, we regard social entrepreneurship as a subset of commercial entrepreneurship, with the difference being that social entrepreneurs pursue opportunities allowing for **social** value creation (Dees, 1998a; Shane & Venkataraman, 2000).

Moreover, the social entrepreneurship literature consists primarily of qualitative research in form of case studies (Lepoutre, et al., 2013). Subsequently, authors such as Kachlami (2014) and Lepoutre et al. (2013) point out the **need for quantitative studies** in this field, and for researching the **emergence and driving forces of social enterprises**. These aspects are especially relevant since politicians are already concerned with establishing an enabling environment (Hoogendoorn, 2016), as the example of Great Britain shows.

Within commercial entrepreneurship, the emergence of new ventures has been particularly investigated from a psychological perspective, through the use of theories such as Ajzen's (1991) "theory of planned behaviour" (TPB) (Van Gelderen, et al., 2015). This model explains that intentions predict human behaviour. This is reflected in recent research within social entrepreneurship, such as Hockerts (2015, 2017), who examines antecedents of intentions. His study is based on the assumption that the intention-behaviour relationship is valid, which is similar to Nicholls' (2006) statement at the beginning of the section that nothing can keep social entrepreneurs from realising their envisioned future. However, empirical evidence demonstrates that, generally, **not every intention is translated into subsequent behaviour** (Sheeran, 2002)**.** This specific phenomenon is referred to as the **intention-behaviour discrepancy** and has been found to be particularly large in complex behaviours such as commercial entrepreneurship (Shirokova, et al., 2016; Van Gelderen, et al., 2015). So far, the intention-behaviour relationship has never been studied in the field of social entrepreneurship.

1.3 Our Research: Purpose and Structure

This study fills a literature gap by investigating the translation of social enterprise start-up intentions into subsequent behaviour. Given that there is a discrepancy in the intention-behaviour relationship, this research goes one step further by applying Fishbein's (2000) 'Integrative Model for Behavioural Prediction' and by testing possible moderators. As such:

This study aims at analysing whether social enterprise start-up intentions lead to subsequent behaviour, and how environmental and personal factors moderate this relationship.

In 2014, Kai Hockerts' (2015, 2017) measured social entrepreneurial intention of participants who registered for his online social entrepreneurship course. Based on this dataset, we follow-up his research in 2018 by measuring the respondents' social enterprise start-up activities, plus the influences of two environmental factors ('Institutional Support' and 'Country Social Enterprise Supportiveness') and two personal factors ('Self-Control' and 'Time Planning') on the intention-behaviour relationship. As the analysis reveals, intention leads to behaviour and this relationship is moderated by 'Self-Control'. However, the measures of 'Institutional Support', 'Country Social Enterprise Supportiveness' and 'Time Planning' are not found to be statistically significant moderators. Furthermore, it indicates that on average, a person is more likely to translate her or his intention to start-up a social enterprise into behaviour when they have a higher level of self-control. However, it also shows that people with low/

negative intentions are more inclined to act if they possess a low degree of self-control, compared to those with a higher level of self-control.

This research paper is structured as follows: Firstly, the literature review introduces the relevant definitions of social entrepreneurship, outlines current insights of the intention-behaviour relationship from other disciplines, proposes Fishbein's (2000) 'Integrative Model for Behavioural Prediction' as a theoretical framework, and describes important influences of the intention-behaviour relationship. This review provides the necessary academic knowledge to build our own conceptual model. The hypotheses section starts by explaining the relevant terms of causal relationships. The section then continues by developing hypotheses for the intention-behaviour relationship and its possible moderators of 'Institutional Support', 'Self-Control', and 'Time Planning'. Lastly, it considers various control variables. The methodology section sheds light on the development of the study. In particular, it outlines our philosophical approach to science, the research objectives and design. This is followed by introducing the precursor study of Hockerts (2015, 2017), and the data collection methods. Subsequently, we delve into the data analysis, first by looking at the characteristics of the data sample, and then by describing the statistical analysis in terms of the measurement and structural model. As some of the hypotheses cannot be supported due to our statistical findings, we conduct further tests, such as by inputting Thomson Reuters' 'Country Social Enterprise Supportiveness' within the model as an alternative to our 'Institutional Support' variable. The following discussion section provides an overview of the key findings and sustains them with theory-related explanations. Next, we indicate limitations to the study, and derive implications for practitioners and academics from our results. We furthermore provide suggestions for future researchers and outline the contribution of this study to current academic knowledge. Finally, conclusions are drawn, and key findings are summarised.

2 Theoretical Background

Firstly, this chapter reviews relevant definitions, theories and frameworks which help structure and guide this research. Secondly, based on this academic knowledge, we build our conceptual model by developing hypotheses to answer our research question: **'Do social enterprise start-up intentions lead to subsequent behaviour, and, how do environmental and personal factors moderate this relationship?'**

2.1 Literature Review

The literature review provides an overview of both the field of social entrepreneurship, and the research on intention-behaviour relationships.

Firstly, the emergence of social entrepreneurship, and its three main 'schools of thought', are explored so as to understand the debate surrounding its conceptualisation and definition. Settling on an overarching school of thought for our study, final definitions and delimitations are given for the concepts of social entrepreneur, social entrepreneurship, and social enterprise.

Secondly, we present leading research insights on how human behaviour can be predicted, which reveals intention as a dominant determinant. Fishbein's (2000) 'Integrative Model for Behavioural Prediction' (IM) builds on this intention-behaviour relationship and introduces environmental and personal factors as moderators to it. This framework significantly shapes our research question. Furthermore, one of the main theories influencing the IM, the 'Social Cognitive Theory', and the Rubicon model of action phases provide a direction for potential environmental and personal factors to be tested within our model. Hence, we end the literature review by establishing an interest for the environmental factor of institutions, and personal factors of self-regulation and implementation intentions. Based on these concepts, the final, concrete measures are then derived in the following hypotheses section.

2.1.1 Contextualising and Defining Social Entrepreneurship

Instances of social enterprises in practice can be traced back over a century, yet the actual conceptualisation of social entrepreneurship is rather recent, appearing consistently in academic journals only since the 1990s (Bacq & Janssen, 2011; Defourney & Nyssens, 2010). Since its first conceptualisation, the investigation into social entrepreneurship and subsequent business literature has grown exponentially (Busenitz, et al., 2003; Short, et al., 2009). Social enterprises have furthermore gained support worldwide from business leaders, governments (Bacq & Janssen, 2011; Choi & Majumdar, 2014; Defourney & Nyssens, 2008), as well as a variety of organisations and institutions (Dees & Andersen, 2006; Mair, 2010). In parallel, there has been a substantial growth in the start-up of social enterprises worldwide (Kerlin, 2010).

Hoogendoorn et al. (2010) succinctly classify the reasons for the recent rise in social entrepreneurial interest as due to increased 'demand' and 'supply' factors.

Demand for social enterprises is stimulated through the rising awareness and concern for social or environmental causes. While on one hand, individuals' awareness is rising, on the other, governments are confronted by rising costs and fewer resources (Perrini & Vurro, 2006; Zahra, et al., 2009). This reduces funding for public sector interventions, and increases competition between non-profits who are consistently demanded to become as efficient and accountable as the private sector (Dees, 1998b; Defourney & Nyssens, 2008; Eikenberry & Kluver, 2004). As such, to attend the growing number of people in need, new forms of conducting business need to be developed (Boschee & McClurg, 2003).

The argument for the supply side suggests that the combination of current circumstances and arising issues allows for the development of alternative solutions, such as social entrepreneurship. Hoogendoorn et al. (2010) argue that people are becoming more proactive in finding alternatives when faced with a daunting environment in which companies are becoming increasingly powerful, while public institutions and non-profits struggle due to comparative inefficiencies. At the same time, successful social enterprises have made social entrepreneurship increasingly visible and viable, acting as role models and receiving increasing recognition for their achievements (Short, et al., 2009). Lastly, what has truly helped solidify the status of social enterprises is their legal recognition, so as to legitimising this form of doing business (Defourney & Nyssens, 2010; Rawhouser, et al., 2015). This was first achieved in Italy in 1991 and has since then led to a wave of jurisdictional changes around the world, allowing for the legal registration of social enterprises.

However, despite the increased interest in social enterprises, the field is still nascent, lacking in-depth empirical research (Dacin, et al., 2010; Dees & Andersen, 2006; Nicholls, 2010). One of the biggest challenges in the field of social entrepreneurship is a lack of consensus on the conceptual definition and boundaries (Lepoutre, et al., 2013; Zahra, et al., 2009). This lack of accord makes it difficult to legitimise the field (Short, et al., 2009) and understand how the subject should be studied (Mair & Marti, 2006; Perrini & Vurro, 2006). In fact, a large amount of the papers published on social entrepreneurship are concerned purely with its definition (Dees & Andersen, 2006; Hoogendoorn, et al., 2010; Short, et al., 2009). As this debate is so central to the field and subsequent research, the development of social entrepreneurial concepts and the main resulting perspectives will be summarised in the following section.

Social Entrepreneurial Perspectives

As can be seen in papers such as Dacin et al. (2010) and Zahra et al. (2009), which compile dozens of well-recognised definitions of social enterprises, there are a myriad of ways to approach the field. To organise these definitions and look at the overall broader views on social entrepreneurship, the leading schools of thought surrounding the phenomenon are firstly explored. This allows for an in-depth understanding of the field, and the rationale for the delimitations of our research.

Definitions of social enterprises developed in parallel, yet quite differently, in Western Europe and North America, with little transatlantic debate until the mid-2000s (Defourney & Nyssens, 2014). Although there are several differences in the understanding of social enterprises even within the regions themselves, they can be grouped into three main schools of thought, according to the large differences between the two continents (Defourney & Nyssens, 2010; Kerlin, 2006).

In the United States, commercial activities were adopted by the non-profit sector to support their activities for a long time. Social enterprises however increased in popularity in the 1970s-1980s, due to an economic downturn and subsequent decrease in federal funding for non-profits (Defourney & Nyssens, 2010; Hoogendoorn, et al., 2010). Thereby, in the American context, revenue-generating activities and a market-orientation are considered key components of the social enterprise concept (Dees & Andersen, 2006; Kerlin, 2006).

In Europe, social enterprises have their roots in cooperatives or associations related to the creation of employment, also called 'Worker Integrated Social Enterprises' (Defourney & Nyssens, 2010; Kerlin, 2006). These emerged due to the decrease in economic growth and increased unemployment which started in the 1970s, resulting in social enterprises providing jobs and filling the new 'governmental gaps' where societies' demands were not met (Hoogendoorn, et al., 2010; Kerlin, 2006).

These differing roots and approaches to social enterprises brought forth several contrasting perspectives. On the American side, there are two major schools of thought. Firstly, the 'Social Innovation' school of thought, and secondly, the 'Social Enterprise' school (Bacq & Janssen, 2011; Dees & Andersen, 2006; Hoogendoorn, et al., 2010), also named the 'Earned-Income' school of thought (Defourney & Nyssens, 2010; Defourney & Nyssens, 2014). On the European side, the main school of thought is that of the EMES International Research Network (Bacq & Janssen, 2011; Defourney &

Nyssens, 2010). It should be noted that there are other, less adopted perspectives present (Hoogendoorn, et al., 2010), but for the purpose of arriving at a concise overview of the most-cited schools of thought and their developments, the three previously mentioned schools suffice.

The 'Social Innovation' School of Thought

The 'Social Innovation' school of thought is in line with the Schumpeterian view of entrepreneurship, regarding the entrepreneur as an outstanding individual who catalyses social change (Bacq & Janssen, 2011; Dees & Andersen, 2006). The focus here is on the individual, and their particular characteristics, such as their creativity, entrepreneurial quality, and ethical fibre (Bacq & Janssen, 2011; Drayton, 2002). Entrepreneurs are seen as a 'rare breed', who are persistent and ambitious, and who will significantly revolutionise their industry (Dees, 1998a). Emphasis is put particularly on innovations which have the potential to have a transformative widespread impact (Dees & Andersen, 2006; Defourney & Nyssens, 2010; Dees, 1998a), and can also be adopted by others (Drayton, 2002).

The 'Social Enterprise/Earned-Income' School of Thought

For the 'Social Enterprise' school of thought, social entrepreneurship originally referred to the commercial activities conducted by non-profits to fund their mission (Bacq & Janssen, 2011; Defourney & Nyssens, 2010). This view has now been expanded to include all enterprises with a mission-driven approach which reinvest their profits towards that mission (Defourney & Nyssens, 2010; Hoogendoorn, et al., 2010). Unlike in the 'Social Innovation' school of thought, there is no need for systemic change, and the entrepreneur is considered secondary, understood simply as an individual who organises an enterprise which works towards supporting a social cause (Dees & Andersen, 2006). The focus here is thereby on the income generation of the social enterprise and its self-subsistence, with debates surrounding what percentage of its income should be earned to be considered socially entrepreneurial (Defourney & Nyssens, 2010; Lepoutre, et al., 2013). Although some kind of earned-income strategy is needed, this school of thought does not require that the income-earning activities be directly linked to the central social mission of the enterprise (Bacq & Janssen, 2011; Hoogendoorn, et al., 2010). This means that, for example, a charity shop selling clothes to raise funds for cancer research, would be considered a social enterprise. According to the other two schools of thought, this scenario would

typically not be considered social entrepreneurship, as a strong link between activities and mission is needed (Bacq & Janssen, 2011).

EMES School of Thought

The EMES school of thought was developed by the EMES International Research Network, which developed criteria to identify social enterprises after extensive cross-disciplinary dialogue, and consideration of traditional social enterprise types within Europe (Defourney & Nyssens, 2010). This view is thereby heavily influenced by the traditional cooperatives, which are essentially enterprises that are democratically owned and managed by a group of people for their mutual benefit. The resulting EMES school of thought prescribes economic and social criteria which describe the ideal type of a social enterprise. However, all criteria do not necessarily have to be fulfilled for an enterprise to be considered social (Defourney & Nyssens, 2008; Hoogendoorn, et al., 2010; Kerlin, 2006). Within this school of thought, social enterprises can be summarised as ''*not-for-profit private organizations providing goods or services directly related to their explicit aim to benefit the community. They rely on collective dynamics involving various types of stakeholders in their governing bodies, they place a high value on their autonomy and they bear economic risks linked to their activity*'' (Defourney & Nyssens, 2008, p. 204).

This European view assumes that a social enterprise is launched by a group of citizens, rather than a visionary, innovative individual, as suggested in the 'Social Innovation' school of thought (Defourney & Nyssens, 2010). Unlike the 'Earned Income' view, it implies that income generation is not a key criterion (Choi & Majumdar, 2014), and, reflecting traditional cooperatives, the EMES definition allows for profit distribution (Kerlin, 2006).

Applying a School of Thought

The approach to this study is based on the 'Social Enterprise/Earned Income' school of thought due to the following reasons:

The 'Social Enterprise' school of thought provides a broad definition which allows for the recognition of a wide type of social enterprises, without overly focusing on the individual entrepreneur, the 'innovativeness' of the organisation, or on European-style cooperatives. This makes it an appropriate perspective to adopt in our study, given that we aim to measure social enterprise start-up behaviour, irrespective of its innovativeness and at the same time acknowledging the international diversity of our

interviewees. As we expect our respondents' social enterprises to be at a nascent stage, it would go beyond our research scope to assess if they will have a 'transformative widespread impact' in the long-run. From a more social perspective, one could furthermore argue that social enterprises can still drive social change and have a positive impact, despite their lack of innovativeness.

Finally, the 'Social Enterprise' view is found to be most appropriate as it allows for flexibility in the choice of economic activity, be it direct or indirect to the social mission, while clearly stating that a social enterprise should earn some kind of income. This allows for broad and inclusive definitions which still clearly differentiate between social enterprises, commercial enterprises and non-profits. Nevertheless, we realise that the standard 'Social Enterprise' view may exclude cooperatives if they do redistribute profits. As we aim to be inclusive of all social enterprise types, the final definitions used within this study, although mainly rooted in the 'Social Enterprise' view, are sufficiently broad to include cooperatives.

Defining Social Entrepreneurs, Entrepreneurship and Enterprises

These diverse views show that social entrepreneurship is without a doubt a multidimensional and dynamic construct (Bacq & Janssen, 2011). For further clarity, the following section defines the different facets within social entrepreneurship, on the individual, process and organisational levels.

Social Entrepreneurship as a Process

Social entrepreneurship is both the umbrella term for the research field but can also be described as a process (Littlewood & Holt, 2018). The first issue encountered when attempting to define social entrepreneurship however, is the fact that even the concept of 'entrepreneurship' is a highly debated and multifaceted concept, with no one agreed-upon definition. Similarly, the term 'social entrepreneurship' has produced countless definitions with differing conceptual focuses, relating to the individual, the process, the organisation itself, or the social enterprise's interaction with their environment (Bacq & Janssen, 2011).

An appropriate starting point to define entrepreneurship is provided by Shane & Venkataraman (2000), who present an often cited, flexible and context-free definition. They define entrepreneurship as a process by which ''*opportunities to create future goods and services are discovered, evaluated, and exploited*" (Shane & Venkataraman, 2000, p. 218). As such, social entrepreneurship can, in turn, be defined as a process by which an opportunity for **social** value creation is identified and exploited through

commercial activities (Bacq & Janssen, 2011). Such a definition is in line with the 'Social Enterprise' school of thought, as well as the definition used in Hockerts' (2015, 2017) precursor study to our research. For the sake of consistency, this paper interprets social entrepreneurship as defined within Hockerts' (2015, p. 261) study as: ''*behaviour pursuing an explicit social mission aimed at benefiting marginalized people by applying business-inspired earned-income strategies*''.

The Social Entrepreneur

As above, even the concept of 'entrepreneur' has no one definition, yet at a very basic level, one can simply define the entrepreneur as an individual which founds a new organisation and is often considered to have some innate entrepreneurial qualities. 'Social Entrepreneurs', in turn, are considered a subset of traditional entrepreneurs (Dees, 1998a), with whom they share a number of behavioural characteristics, such as opportunity detection and risk tolerance (Peredo & McLean, 2006; Bacq & Janssen, 2011). In contrast to commercial entrepreneurs however, social entrepreneurs are considered to be highly motivated by social aims, have a clear value proposition directed towards social benefits, and are able to focus on both the social and financial outcomes (Martin & Osberg, 2007; Shaw & Carter, 2007). Generally, successful social entrepreneurs are believed to have a great ability in recognising opportunities to create social value, which they manage to 'exploit' through their commitment, determination and risk tolerance (Bacq & Janssen, 2011; Martin & Osberg, 2007).

As exemplified by the differing schools of thought, the centrality of the individual's role in the process of social entrepreneurship, or the creation of a social enterprise, is highly debated. Given that our approach is most in line with the 'Social Enterprise' school of thought, the entrepreneur is of secondary importance. We thereby define the social entrepreneur as *''any person, in any sector, who uses earned income strategies to pursue a social objective''* (Boschee & McClurg, 2003, p. 4).

The Social Enterprise

Most definitions of social enterprises refer to an organisation which balances both the social and financial activities, as they essentially span the continuum between philanthropy and business (Bacq & Janssen, 2011; Lepoutre, et al., 2013; Nicholls, 2010; Volkmann, et al., 2012). Due to this combination of financial and social purpose, social enterprises are also known as 'hybrid organisations' as they do not fit the traditional commercial or non-profit organisational category, and instead combine certain elements of

both (Austin, et al., 2006; Dees, 1998a). In this regard, we delineate key differences between social, commercial and philanthropic entities (Austin, et al., 2006; Dees & Andersen, 2006).

Social and commercial enterprises share many characteristics, regarding innovativeness, organisation, or their desire to grow (Austin, et al., 2006; Bacq & Janssen, 2011; Short, et al., 2009). This often leads academics to apply commercial entrepreneurship concepts to social entrepreneurship (Dacin, et al., 2010; Mair & Marti, 2006). Despite the debate regarding what constitutes a social or commercial enterprise, there is one key difference which is widely agreed upon: the prioritisation of social value creation (Bacq & Janssen, 2011; Mair & Marti, 2006; Stephan, et al., 2015). 'Social' thereby implies that the enterprise activities ultimately aim at the achievement of their social mission (Bacq & Janssen, 2011; Kachlami, 2014).

The boundary between social enterprises and non-profits or philanthropic entities is harder to delineate, as the aspect of earned income as a defining criterion of social enterprises is highly debated (Lepoutre, et al., 2013). On one side of the spectrum, the claim is that true social enterprises should operate exclusively on their earned income, while on the other, it can be argued that any organisation which is economically sustainable and generates value could be considered a social enterprise, regardless of its source of funding (Defourney & Nyssens, 2010; Lepoutre, et al., 2013). For the purpose of this paper, the definition of choice does include an element of earned income which is in line with the 'Social Enterprise' school of thought.

In accord with the 'Social Enterprise' view, we use Bacq and Janssen's (2011) definition which summarises that:

A social enterprise should a) have an explicit central social mission, and b) apply a business concept and have a market orientation.

We define a social enterprise within this paper according to these elements. However, it should be noted that for consistency, the social enterprise definition used in our questionnaire is the same as the one used in Hockerts' (2015, 2017) precursor to this study. This is appropriate as both definitions highlight the two same focal points. Thus, the definition of a social enterprise given to our interviewees is ''*an organization that applies commercial strategies to maximize societal benefits*''.

2.1.2 Predicting Behaviour through Intention

The following section outlines current research insights aiming at the prediction of behaviour. A common approach is to use intention as a direct antecedent (Ajzen, 2012). Depending on the study focus, researchers differentiate between motivational, behaviour enaction and multi-stage models. Furthermore, we explain how our final theoretical framework (Section 2.1.3) falls within the behaviour enaction model category due to our research focus.

Despite the novelty of social entrepreneurship as a scientific research field (Tukamushuba, et al., 2011), the interest in social entrepreneurial intention is increasing. To our knowledge, seven papers were published with this research focus in 2017, and, this year, so far eleven (see Appendix A for a list of publications). Often intention studies are based on the notion that social enterprise start-up intention leads to behaviour. In contrast, little attention has been given to actual social enterprise start-up behaviour, which is the central topic of this research paper. Therefore, this study is expected to contribute new insights to the field of social entrepreneurship by going beyond the existing literature on social entrepreneurial intentions.

Generally, human behaviour has been investigated in relation to goal striving and motivation within the field of social psychology, which attempts to understand human social behaviour and its underlying reasons (DeLamater, et al., 2015). Within social psychology, human behaviour can be defined as an equation of the social situation and a person's traits (Bordens & Horowitz, 2002). In this study, we draw on theories stemming from the field of social psychology to understand social enterprise start-up behaviour.

Moreover, some researchers differentiate between the terms "behaviour" and "action" (Achtziger & Gollwitzer, 2008). The first is defined as adopted customs and instinctive responses, whereas the latter can refer to all meaningful or sensible behaviour. Particularly, the behaviour of starting-up a social enterprise can be considered a purposeful long-term activity which qualifies as meaningful action. However, in this paper, both the terms "behaviour" and "action" are applied interchangeably. Within social psychology, it is a common approach to explain human behaviour in form of goals, which in turn are obtained i.e. through intention (Bordens & Horowitz, 2002).

Intentions are traditionally defined as ''*the cognitive state temporally and causally prior to action*'' (Krueger, 2009, p. 51), and are considered to be the key precursor to predict an individual´s behaviour (Ajzen, 1991; Sheeran, 2002). This insight stems from Fishbein and Ajzen's (1980) 'Theory of Reasoned Action' (TRA) and suggests that individuals behave in the way they intend to (Sheeran, 2002). Thus, a popular method to study behaviour has been to measure intentions, and, for several decades, academics focused on understanding how strong intentions are built (Brandstätter, et al., 2003). The most popular measurement method is Ajzen's (1991) 'Theory of Planned Behaviour' (TPB), which builds upon the TRA. The TPB examines three antecedents to an individual's intention: attitude towards the act, subjective norm and perceived behavioural control. The latter also holds as a direct determinant of behaviour. The TPB has been used in a multitude of areas to measure intention, from health and exercise related fields, to ethical consumerism. In addition, it is the most popular theory used to study entrepreneurial intentions (Wach & Wojciechowski, 2016).

Theories and frameworks explaining the intention-behaviour relationship in the existing academic literature can be categorised into three distinct categories of 'social cognitive models', as suggested by Armitage and Conner's (2000) review. In general, social cognition brings together *intra*personal, i.e. individual characteristics or cognitions, and *inter*personal, i.e. environmental or societal factors (Rhodes & Mark, 2012). Social cognitive models are essentially hypotheses about the interrelationship of these factors and how they explain behaviour (ibid.). Armitage and Conner (2000) differentiate between the motivational, behavioural enaction and multi-stage models, with each category looking at behaviour with a different focus.

Motivational Models

Motivational models, such as the TRA, TPB, or Social Cognitive Theory, attempt to explain a person's decision to enact, or not to enact, a certain action. These models put intention at the centre of attention, suggesting that intention is highly predictive of behaviour (ibid.). The TPB is also the starting point of Hockerts' (2015, 2017) research on social entrepreneurial intentions, the precursor study to this paper. However, scientific evidence demonstrates that not all intended behaviour is finally enacted (Mullan, et al., 2013; Shirokova, et al., 2016; Van Gelderen, et al., 2015).

Intention as a single variable may be important to predict behaviour, but not entirely sufficient (Gollwitzer & Oettingen, 2012; Laguna & Purc, 2016; Moghavvemi, et al., 2015). For instance, Sheeran's (2002) meta-analysis of intention-behaviour studies spans numerous research fields, and concludes that intentions on average explain 28% of the variance in behaviour. Although this can be considered a large effect size in behavioural sciences according to Cohen (1988), it raises the question about the 72% of variance in behaviour that is not explained by intentions.

Furthermore, in entrepreneurship studies, intention is found to explain less of the variance in behaviour, with the variance ranging from 9.9% (Shirokova, et al., 2016) to 13% (Van Gelderen, et al., 2015). This verifies that intentions, in spite of being an essential precursor of behaviour, only account for a small amount of variance in behaviour (Gielnik, et al., 2014; Kautonen, et al., 2013). To date, no intention-behaviour study has been conducted on social entrepreneurship, which makes this research unique.

Moreover, Sheeran (2002) sheds light on the intention-behaviour relationship by clustering actors into four categories (Figure 1). The author firstly distinguishes between individuals with a positive or a negative intention to perform a certain behaviour and, secondly, between those that act accordingly or contrary to their previous intentions. This results in four 'groups': Individuals who have a behavioural intention and either (1) act accordingly (inclined actors), or (2) refrain from behaving in the intended way (inclined abstainers); Or, individuals who have **no** intention to perform a particular behaviour and either (3) act (disinclined actor), or (4) do not act (disinclined abstainer) (ibid.).

Figure 1: Sheeran's (2002) Two-by-Two Matrix of the Intention-Behaviour Relationship

		Intention	
		Positive	Negative
Subsequent Behaviour	Acted	Inclined actor	**Disinclined actor**
	Did not act	**Inclined abstainer**	Disinclined abstainer

Designed by Irene & Hanna

Consequently, inclined actors and disinclined abstainers are associated with the term "intention-behaviour consistency" (Sheeran, 2002, p. 5): The observable action is coherent with the person's intentions. However, there is a gap or discrepancy in the intention-behaviour relation with regard to inclined abstainers and disinclined actors, highlighted in blue in Figure 1 (Allom, et al., 2013; McEachan, et al., 2011; Sniehotta, et al., 2005a). In other words, individuals sometimes act inconsistently with their cognitions and intentions (Davies, et al., 2002). Subsequently, not every initial intention is translated into behaviour. According to Sheeran's (2002) meta-analysis, it is particularly inclined abstainers that are responsible for the gap.

In conclusion, Ajzen's TPB (1991) does not account for these deviations in the intention-behaviour relationship (Mistry, et al., 2015). This apparent intention-behaviour gap justifies the research area of this study, which is to understand the factors which may influence social entrepreneurial intention-behaviour relationship.

Behaviour Enaction Models

Thereby, our research purpose falls within the second category of social cognitive models: Behaviour enaction models, which emerged in response to the criticisms of the first category of models and attempt to improve the translation of intention into subsequent behaviour (Armitage & Conner, 2000). An example of these models is Gollwitzer's concept of implementation intentions which is considered as a strategy to encourage the realisation of the intended goal (detailed explanation follows in 2.1.4).

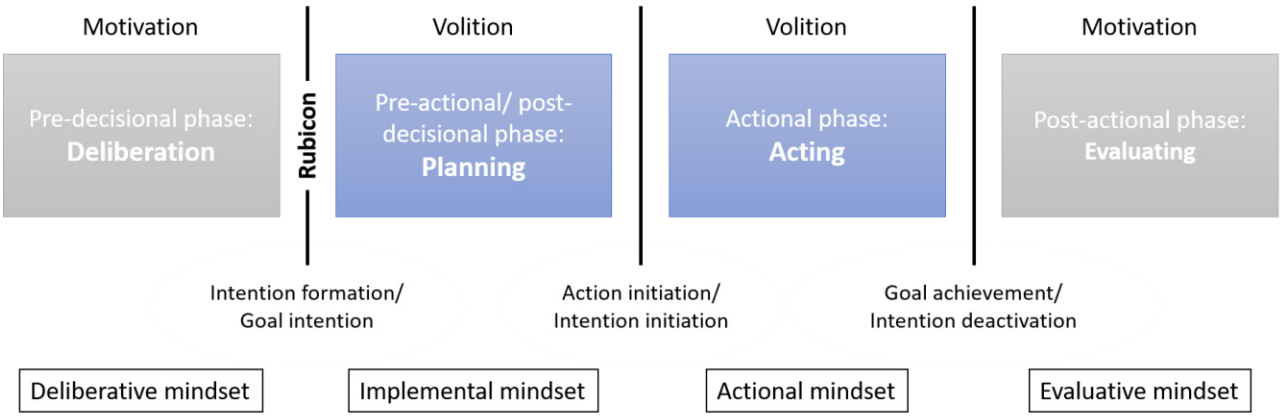
Sheeran's (2002) meta-analysis supports the view that the intention-behaviour relationship can be strengthened by adding further factors into a predictive model. For example, his data outlines two main key influencing factors: the type of behaviour, and the temporal stability of intentions. Firstly, intentions seem to better predict the realisation of a goal when the goal involves a **single activity** instead of a set of activities. For instance, a single activity goal could be reading a book, while the goal to obtain an 'A' in a specific exam consists of several activities, such as reading relevant literature and attending lectures. Secondly, another factor impacting the intention-behaviour consistency could be the **stability of intentions** over time. More precisely, intentions may change in the long run before a person engages in the corresponding activities. In sum, the type of behaviour and the stability of intentions have the

potential to explain part of the intention-behaviour gap. Nevertheless, Sheeran (2002) calls for further investigation of factors that explain the intention-behaviour gap.

Multi-Stage Models

Lastly, the multi-stage models describe the process of translating intention into behaviour in several phases and, most importantly, propose that the factors responsible for behaviour initiation differ in each phase (Armitage & Conner, 2000; Sandman & Weinstein, 1993). For instance, the Rubicon model of action phases classifies as such a model and outlines the successive steps of realising goals, from: Developing an intention, making a plan, acting, to comparing and evaluating the intended with the obtained goal. (Achtziger & Gollwitzer, 2008) (see Figure 2). This process involves four action phases, each separated by a boundary and entailing a different 'mindset'. Achtziger and Gollwitzer (2008) define a mindset as the cognitive requirement of a human being which enables them to execute the tasks required in each of the process stages.

Figure 2: Heckhausen and Gollwitzer's (1987) Rubicon Model of Action Phases



Combination of visualisations of Achtziger & Gollwitzer, 2008; Brandstätter et al., 2003; Heckhausen & Gollwitzer, 1987

Designed by Irene & Hanna

The Rubicon model starts with the **pre-decisional or deliberating phase** in which the individual compares potential actions, including their positive and negative effects, and selects one action to pursue (Achtziger & Gollwitzer, 2008; Spiess & Wittmann, 1999). Thus, this decision-making procedure involves taking into account the desirability and feasibility of the alternative actions and finishes by forming a 'goal intention', which means to set and commit to a specific result or performance (Gollwitzer, 1999;

Gollwitzer & Schaal, 1998). This stage has been addressed in the precursor study by Hockerts' (2015, 2017). Therefore, our focus of interest lies in the stages that follow the intention formation.

Researchers label the transition to the next phase as the "**Rubicon crossing**" to highlight the transformation from a multitude of wishes to a commitment, in form of a self-determined goal (Achtziger & Gollwitzer, 2008). Subsequently, the **pre-actional or planning phase** determines concrete actions and strategic steps of when, where and how to take action (Laguna & Purc, 2016) and, thus, draws upon Gollwitzer's concept of implementation intentions (as is explained later in this section). The Rubicon model promises that by following these methodical stages of putting the goal into practice leads to higher implementation rates (Greif & Benning-Rohnke, 2015).

After an adequate opportunity arises, the **action phase** follows by realising the action plans and, thus, the intended behaviour (Achtziger & Gollwitzer, 2008). The **actional mindset** is characterised by being closed-minded regarding information that could result in re-thinking the goal intention or the implementation intentions. More importantly, "*they [the individuals] are totally absorbed in the actions being executed. Accordingly, they only attend to those aspects of the self and the environment that sustain the course of action, and ignore any potentially disruptive aspects*" (Achtziger & Gollwitzer, 2008, p. 277). In other words, any kind of diversion from achieving the goal is neglected. At the end of this stage, the previous aim is deactivated and ends with the enactment of the particular behaviour.

Lastly, in the **post-actional or evaluation phase**, the individual assesses the results against the goal set in the deliberation phase. In case the intended goal is not satisfactorily met, the individual may lower her or his initial aspiration, or the person restarts the action phases by approaching the aim with intensified effort, or alternatively replacing it with a new aim (Achtziger & Gollwitzer, 2008; Spiess & Wittmann, 1999). This phase is not further explained as it goes beyond our research focus, the intention-behaviour relationship.

In general, the process of translating intentions into corresponding behaviour varies in time (Achtziger & Gollwitzer, 2008) and can be discontinued during any of these phases (Laguna & Purc, 2016). A crucial contribution of Heckhausen and Gollwitzer's (1987) research on the Rubicon model is that human behaviour consists of two cognitive processes (Heckhausen & Heckhausen, 2018): Firstly, **motivation** during the pre-decisional state, and secondly, **volition**, starting after the decision has been taken (see

Figure 2). While motivation plays a role in goal setting, volition is considered to be the type of motivation necessary for goal striving (Achtziger & Gollwitzer, 2008). Kuhl (1983) distinguished the first as "*choice motivation*" from the latter as "*control motivation*" (Achtziger & Gollwitzer, 2008, p. 276). Throughout these two inner states, thoughts and the manner of dealing with information differ (Heckhausen & Gollwitzer, 1987). Before deciding on a goal intention, the individual should be concerned with determining the likelihood of accomplishing the objective, and hence be open-minded and receptive to information. In contrast, within the post-decisional stage the mind should be occupied with finding a strategic path to realise the goal, and the person should be narrow-minded, solely absorbing information relevant for the action plan. As pointed out earlier, this decision-making process and transition from the motivational to a volitional psychological state is called the "Rubicon crossing" (Heckhausen & Gollwitzer, 1987).

Overall, the Rubicon model of action phases contributed to the academic world by delineating the differences between motivational and volitional psychological states, and by merging them in a successive process to explain the intention-behaviour translation (Achtziger & Gollwitzer, 2008; Heckhausen & Gollwitzer, 1987). These insights from the Rubicon model are particularly relevant within our research, as the sequence of stages allows to contextualise our study. While past research, including Hockerts' (2015, 2017) precursor study, focused on the pre-decisional motivational phase of the Rubicon model (i.e. social entrepreneurial intentions) (Brandstätter & Hennecke, 2018), **the present study focuses on the volitional phase** (as highlighted in blue in Figure 2). Generally, the concept of volition is regarded as directing and controlling the translation of intention to behaviour (Broonen, 2010; Hikkerova, et al., 2016).

In conclusion, Armitage and Conner's (2000) review classifies the three categories of social cognitive models and delineates them based on their different focuses, purposes and levels of explaining the intention-behaviour relationship. Motivational models primarily focus on intention formation and, hence, do not provide a perfect explanation of the intention-behaviour relationship. Based on this, behavioural enaction models attempt to account for the intention-behaviour discrepancy and improve the explanatory power of the relationship by taking further variables into consideration. In comparison, multi-stage models provide a general description of the translation of intention into behaviour and the

differences between the stages, but give less insights into the processes of the individual stages (Armitage & Conner, 2000).

This reflection explains our approach in terms of going beyond the TRA and TPB, both motivational models, and instead analyse the translation of intention into behaviour more in depth. Thereby we attempt to improve this understanding by drawing on the second category, that of behaviour enaction models. Understanding the underlying causes of why individuals might have the intention to start-up a social enterprise, but not carry out their intentions is an important aspect for research as the "*lack of action then means that potentially fruitful entrepreneurial initiatives are not realised*" (Van Gelderen, et al., 2015, p. 656). Lastly, the Rubicon model, an example of the third category, delineates the volitional from the motivational phase. This allows for a focus on the volitional stage, in which intention is translated into behaviour.

2.1.3 The Integrative Model for Behavioural Prediction

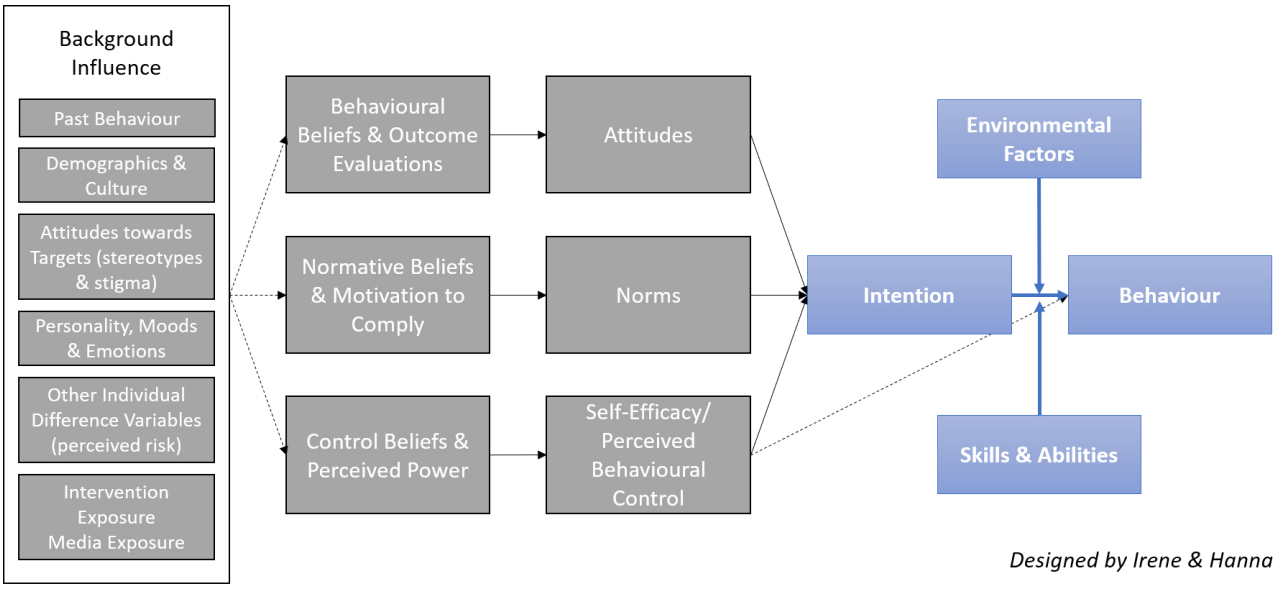
As outlined in the previous section, several researchers emphasise that intention alone does not sufficiently predict behaviour (Gollwitzer & Oettingen, 2012; Laguna & Purc, 2016; Moghavvemi, et al., 2015). In order to improve the understanding of the intention-behaviour relationship and the factors that may impact this causal link, this study draws upon Fishbein's (2000) '**Integrative Model for Behavioural Prediction'** (IM), which attempts to predict and explain human behaviour. Within the literature, researchers refer to the IM also as the 'Reasoned Action Framework' (Fishbein & Ajzen, 2011) and the 'Integrated Behavioural Model' (Montaño & Kasprzyk, 2008). The following section outlines the framework, its development, as well as its purpose within our study.

After several main behavioural theorists, such as Bandura and Fishbein, had identified specific factors relevant for any type of behaviour, they did not agree on one conceptual model (Fishbein & Ajzen, 2011; Fishbein, et al., 2001a; Montaño & Kasprzyk, 2008). Therefore, Fishbein (2000) built upon these variables and combined them, with minor adaptions, in his IM (see Figure 3). Due to this development process, several key behavioural theories influenced this framework (Fishbein, 2000; Fishbein & Ajzen, 2011). In particular, the TRA and TPB both significantly contributed to the IM with their claim that intention best predicts behaviour, and that attitude, norms and perceived behavioural control determine intentions (Ajzen, 1985; Ajzen, 1991; Ajzen & Fishbein, 1980). In addition, elements from other theories were

applied, such as the '**Social Cognitive Theory'** (Fishbein & Cappella, 2006), which originates from the field of social psychology. The Social Cognitive Theory rests on Bandura's (1986) notion that a person's functioning can be understood through the interdependency between personal, environmental, and behavioural factors.

Overall, the IM attempts to enhance the understanding of human behaviour and contains factors that are supposed to explain a significant amount of "*variance in any given behavior*" (Fishbein, 2008, p. 834). According to our understanding, the IM looks at two parts: Firstly, the grey variables in Figure 3 determine the development and degree of intentions (Fishbein, et al., 2001a). In particular, Fishbein and Cappella (2006) propose to examine a person's attitude, perceived norms and self-efficacy in order to clarify why the person has a positive or negative intention. While being a valid part of the IM, the intention formation is not key to our research, as it has been studied, in the precursor study of Hockerts (2015, 2017) in a slightly modified manner. In contrast, this research concentrates on the second part of the model, highlighted in blue in Figure 3. It depicts factors which affect the probability of individuals translating their intentions into behaviour (Fishbein, et al., 2001a). Intention, environmental factors, and skills and abilities are considered variables that are "*necessary and sufficient for producing any behavior*" (Fishbein, et al., 2001a, p. 5). Following this reasoning, individuals are most likely to engage in a certain behaviour if they have strong positive intentions, possess the required traits and capabilities to perform this activity, and if the environment is supportive, and/or not restrictive (Fishbein, 2000; Fishbein & Cappella, 2006). Generally, research focusing on this part of the IM is concerned with finding environmental barriers and facilitators, as well as personal characteristics which reduce or augment the probability of initiating a particular behaviour (Fishbein, et al., 2001a). Hence, selecting Fishbein's (2000) IM as a theoretical framework for our study allows us to focus on the translation of social enterprise start-up intentions into subsequent behaviour, plus the influencing effects of environmental factors, and skills and abilities, to which we refer to as personal factors.

Figure 3: Fishbein's (2000, 2008) 'Integrative Model for Behavioural Prediction' (IM)



According to Fishbein (2000), analysing a certain behaviour based on the IM can be particularly helpful in order to create effective interventions to promote or change a particular behaviour. Reviewing the current scientific literature reveals that the IM has been mainly adopted to better understand underlying beliefs and intentions, and then propose effective interventions to change or promote a certain behaviour. This is particularly the case in the areas of medicine and health, as the IM has been successfully applied to, for example, HIV prevention (Fishbein, et al., 2001b), eating and exercising (Middlestadt, 2012) and sleeping habits (Robbins & Niederdeppe, 2015).

Furthermore, Fishbein (2000) notes that the intervention type depends on the result of the analysis. For example, a different type of intervention is required if an individual has no intention at all, compared to a situation in which an intention is formed, but the individual is not able to perform the intended behaviour. In this regard, Fishbein (2008) specifies that some people may find themselves unable to behave as intended due to lacking relevant capabilities or environmental obstacles, despite positive intentions. While if no intention has been formed, the intervention should address the particular belief systems, if the case is the latter, it may be necessary to create an intervention that targets skill development or eliminating environmental barriers (ibid.). Fishbein and Ajzen (2011) prompt future researchers to identify environmental factors and skills and abilities which may be most relevant for the specific behaviour studied.

Thus, it is these influencing factors that have to be taken into account in order to better predict behaviour (Fishbein & Ajzen, 2011). In other words, the present research draws upon Fishbein's (2000, 2008) framework to examine the social enterprise start-up intention-behaviour relationship. The IM contributes to this study by providing a testable framework and determining the scope of variables that could potentially influence the intention-behaviour relationship. More precisely, it narrows down our research focus to environmental and personality effects which may facilitate or impede the realisation of the social enterprise start-up intention. Thereby, our focus is to better understand the translation of intention into behaviour, and, hence, improve the TPB by accounting for influencing factors.

We selected this theoretical framework to guide our research due to several reasons. First, according to Ajzen (2012, p. 11), the IM is "*the **dominant** conceptual framework for **predicting**, [and] explaining […] human social behaviour*". Second, the model is supposed to hold for **any** kind of behaviour (Fishbein, 2000), even though it was mainly applied in the context of health-related behaviour and developed within Aids prevention research. Third, the IM **unifies** insights and variables from prior **leading** behavioural theories, such as the TRA, TPB and 'Social Cognitive Theory' (Fishbein & Ajzen, 2011). Fourth, the respective theorists **approved** and agreed upon these general factors (Fishbein, 2008). Fifth, the model can be applied to **any culture** (Fishbein, 2000), which is a relevant requirement with regards to our global sample. Lastly, the IM allows our study to be **consistent** with Hockerts' (2015, 2017) precursor study which expanded on the TPB as well.

In conclusion, this study builds upon Fishbein's IM which assumes that individuals engage in a certain behaviour due to (a) their positive intentions, (b) the absence of environmental constraints, and (c) their relevant skills and abilities (Fishbein & Ajzen, 2011). This theoretical framework substantially shapes the direction of this study, resulting in the following research question:

'Do social enterprise start-up intentions lead to subsequent behaviour, and how do environmental and personal factors moderate this relationship?'

2.1.4 Factors Influencing the Intention-Behaviour Relationship

As outlined in the section before, Fishbein's (2000) 'Integrative Model for Behavioural Prediction' (IM) guides our research by providing a framework and suggesting the exploration of environmental and personal factors. The IM generally posits that the choice of these factors should depend on the behaviour

(Fishbein, et al., 2001a). This consideration, the Rubicon model, as well as the 'Social Cognitive Theory', which substantially influenced the IM (Fishbein, 1995), facilitate our search for potential environmental and personal factors, as follows:

Environmental Factors

"[*E]ntrepreneurs do not operate in vacuums – they respond to their environment*" (Gartner, 1985, p. 700). This environmental influence on human behaviour is considered within the Social Cognitive Theory and may be crucial for both the decision-making process (Kachlami, 2014), and for behaviour initiation when starting a social enterprise. In fact, several researchers call for further investigating the significance of the environmental context within the field of social entrepreneurship (Bacq & Janssen, 2011; Haugh & Kitson, 2007; Littlewood & Holt, 2015).

While Fishbein et al. (2001a, p. 10) broadly describe the environment as "*factors that are external to the individual*", one key author of the Social Cognitive Theory, Albert Bandura (1986), provides a more specific approach when considering the environment as an influence on human behaviour. Among other things, Bandura (1998) refers to 'facilitators' and barriers which are "*the provision of new structures or resources that enable behaviours or make them easier to perform*" (McAlister, et al., 2008, p. 174). Adapting and pursuing Bandura's thinking may be insightful to the translation of social enterprise start-up intention into behaviour. Following Bandura's distinction and Fishbein's (2000) IM, our focus is not to understand how to manipulate motivation, but to understand which environmental factors may constrain or facilitate social enterprise start-up behaviour.

A wide-spread approach to account for the external environment is the **institutional theory** (Kachlami, 2014). According to one of the key authors, North (1990, p. 3), "*[i]nstitutions are the rules of the game in a society*". They guide human behaviour through means of regulations, norms and values (Scott, 2005). North (1990) and Scott (2005) use different terminologies to distinguish between distinct subsets of institutions. The first refers to **formal** institutions for written rules, and to **informal** institutions regarding societal conventions (North, 1990). In contrast, Scott (2005) distinguishes between (1) the **regulative** pillar, which involves national, legal regulations; (2) the **normative** pillar, which consists of societal obligations, values and norms; and, lastly, (3) the **cognitive** pillar, which relates to individual skills and

knowledge (Peng, et al., 2009). In comparison, North's formal institutions and Scott's regulative pillar are complementary, as are North's informal institutions and Scott's normative and cognitive pillars.

The selection of the institutional theory to account for environmental factors is based on a myriad of reasons. Firstly, the institutional approach includes several dimensions of the **external environment**: political, economic, socio-cultural and legal aspects. Secondly, several researchers (Pathak & Muralidharan, 2016; Pathak & Muralidharan, 2018; Urbano, et al., 2010; Stephan, et al., 2015) emphasise that institutions actively shape, enable and restrict **human behaviour** through explicit and implicit action guidelines. Thirdly, "*SE [social entrepreneurship] is context embedded, which implies that the emergence and implementation of SE varies according to the socioeconomic and cultural environment*" (Urban & Kujinga, 2017, p. 639). In this regard, some articles stress that institutions play a key role in **social entrepreneurship** as social entrepreneurs and their enterprises attempt to address unmet social needs (Ferri & Urbano, 2015). In fact, some researchers go as far as to consider the institutional context part of the nature of social enterprises, and, thus, incorporate it in the definition of social enterprises: As pointed out in Dacin et al. (2010, p. 46) "*[s]ocial ventures, by definition, […] deal with the institutional voids common to emerging or failed economies*". In addition, the institutional environment is considered highly relevant for the social entrepreneurship field due to policies enabling the emergence of social enterprises (Roy, et al., 2015). Against this background, it seems relevant to examine whether institutions as part of an individual's surroundings exert a substantial influence on the process of translating social enterprise start-up intentions into behaviour.

Despite the proposition that a person's actions are moulded by formal and informal institutions (Stephan, et al., 2015), this research does not consider the effects of informal institutions, but only of **formal, regulative institutions** on the intention-behaviour relationship. This decision is based on the fact that informal institutions have already been studied and found significant as a predictor to social entrepreneurial intentions, as for example in Hockerts (2015, 2017), the precursor to this study. This leads us to assume that informal institutions may be more important when forming intentions (see IM, Section 2.1.3; see Rubicon model, Section 2.1.2), rather than when translating intentions into behaviour. On the other hand, it is yet to be demonstrated whether **formal** institutions affect either social enterprise start-up intention or the subsequent behaviour. Existing evidence suggests that government activism and rule of law does influence social entrepreneurship rates (Hoogendoorn, 2016; Stephan, et al., 2015),

yet, to date it has not been applied to intention or intention-behaviour studies within social entrepreneurship. Thereby, as part of our focus, we delve into the effects of formal regulative institutions further in the hypotheses, Section 2.2.3.

Personal Factors

"*People do not simply react to their immediate environment*" (Bandura, 1986, p. 19).

In general, the Social Cognitive Theory acknowledges that a person's character can shape her or his behaviour (Bandura, 1986). Hence, we provide an overview of some of the theory's key concepts regarding personal factors and decide to further investigate, 'Self-Regulation' and 'Implementation Intentions'. The following hypotheses section then reveals the exact measures that reflect these two personal factors.

Personal Factors within the Social Cognitive Theory

The Social Cognitive Theory is based on an 'agentic' view of human functioning, which means that human agency describes a person's power to actively guide her or his cognition as well as impact on her or his life and environment (Bandura, 1999; Bandura, 2012; Bandura, 2018). Thus, *"[t]he human mind is generative, creative, proactive, and self-reflective not just reactive*" (Bandura, 1999, p. 156). As recently pointed out by Bandura (2018), human behaviour can be described through a multitude of determinants. However, within the Social Cognitive Theory, there are three particular personal factors: forethought, self-regulatory and self-reflective determinants. These are repeatedly investigated in academic papers, and closely linked to personal agency.

Firstly, the majority of purposeful actions is steered by **forethoughts** (Bandura, 1986): Individuals are able to animate themselves through the means of plans, goals, or envisioning future outcomes (Bandura, 2012; Bandura, 2018). Forethought can serve as guidance and provide a purpose to one's actions and is based, on the one hand, on **goal aspirations** and, on the other hand, on **outcome expectations** (Bandura, 2018). However, both concepts refer to the intention formation, which is why forethoughts are not further investigated as a moderator to the social enterprise start-up intention-behaviour relationship.

Secondly, another key concept of the Social Cognitive Theory is **self-regulation** (McAlister, et al., 2008) which is the capability to control behaviour (Bandura, 2012) and forms the foundation for purposeful

behaviour (Bandura, 1991; Bandura, 2012). The self-regulative mechanism includes developing personal standards and regulating one's activities by 'self-sanctions' which involve the comparison of the behaviour to personal standards (Bandura, 2018). The purpose of 'self-sanctions' is to ensure an alignment between actions and moral standards. Thus, self-regulation entails several cognitive processes: (a) Self-monitoring one's actions; (b) Comparing the behaviour to one's own moral standards; and (c) Self-reacting based on self-sanctioning in case the behaviour breaches these standards (Bandura, 1986; Bandura, 1991; Bandura, 1999). Particularly, self-reactiveness connects the mind and its thoughts to subsequent behaviour as it determines appropriate activities, and stimulates and controls their enactment (Bandura, 2001). Thus, agents self-regulate their behaviour by conducting satisfying activities and refraining from those that lead to censure (Bandura, 2012).

Moreover, self-regulation could be a relevant personal factor for overcoming the following difficulties of translating intention into behaviour: "*[G]etting started with goal striving, staying on track, calling a halt [to vain goals], and not overextending oneself*" (Gollwitzer & Oettingen, 2011, p. 167). In addition, Heckhausen (2007) recognises that this personal factor is particularly useful for long-term goals, as these goals coexist besides a person's daily obligations, and thus self-regulation has the potential to ensure refocusing on the long-term objective despite recurring distractions. Past research revealed that self-regulation is an important aspect of purposeful behaviour, such as physical activity (Hagger, et al., 2010). In this regard, self-regulation could play a crucial role, i.e. by influencing the probability that individuals change their intentions before acting, and, thus, shed light on the intention-behaviour discrepancy.

Thirdly, **self-reflection** is another cognitive determinant of human behaviour. Self-reflection refers to the process of thoroughly thinking about and reviewing one's behaviour and thoughts (Bandura, 2018). Based on reflecting on oneself, individuals assess the adequacy between their thoughts and actions, form an opinion, and, if necessary, attempt to improve. Within the Social Cognitive Theory, this personal factor is related to self-efficacy, which is defined as a person's perception about her or his personal abilities to achieve a desired outcome (Bandura, 1999; Bandura, 2012). "*Unless people believe they can produce desired effects by their actions, they have little incentive to act or to persevere in the face of difficulties*" (Bandura, 2018, p. 133). Past research demonstrated that self-efficacy is an antecedent of social entrepreneurial intentions (Hockerts, 2017). As a consequence, this personal factor is not examined with regards to the intention-behaviour relationship.

Personal Factor of Planning

To identify further key personal factors that may affect the intention-behaviour relationship, we turn for inspiration to the Rubicon model, delved into in section 2.1.2. As explained, the Rubicon model provides an overview of an individual's process of translating intentions into behaviour. Particularly the concept of implementation intentions stands out as part of the volitional phase in this multi-stage model.

Implementation intentions determine when, where and through which means a certain behaviour is enacted (Brandstätter, et al., 2001; Gollwitzer, 1993). Several health-related studies revealed that people with implementation intentions such as "*I intend to do y when situation z is encountered*" (Gollwitzer & Brandstätter, 1997, p. 187) are more likely to pursue their goals effectively (Aarts, et al., 1999; Gollwitzer, 1993; Sniehotta, et al., 2005b), especially when the aim is difficult (Brandstätter, et al., 2001; Gollwitzer & Brandstätter, 1997). Forming implementation intentions helps people realise their intentions (ibid.) and, hence, individuals could benefit from action planning.

Generally, the **propensity to plan** is found to explain the intention-behaviour discrepancy (Conner, et al., 2010). Lynch et al. (2010) define planning as the self-regulative process of specifying a set of actions in order to realise a particular objective. Planning can be subcategorised into 'coping planning' and 'action planning' (Sniehotta, et al., 2005b). While coping planning refers to building strategies in order to deal with expected barriers, action planning is used interchangeably with Gollwitzer's concept (1993) **of implementation intentions**. Thus, implementation intentions are a subcategory of planning and may comprise another relevant moderating personal factor to the social enterprise start-up intention-behaviour relationship.

In conclusion, we find the Social Cognitive Theory and the Rubicon Model to be insightful in order to derive at concrete concepts for environmental and personal factors in line with Fishbein's (2000) IM. We draw on the Social Cognitive Theory, as it is one of the theories that significantly influenced the IM, and on the Rubicon model as it puts emphasis on behaviour as a volitional decision by which a person commits to a certain goal and strategy prior to acting. Overall, we derive at the concepts of: Institutions as a moderating environmental factor, and self-regulation and implementation intentions as moderating personal factors of the social enterprise start-up intention-behaviour relationship.

2.2 Hypotheses

The main purpose of this chapter is to develop a conceptual model that can be tested statistically. Therefore, we first introduce the relevant terminology to build a causal model. Secondly, based on the concepts we derived at in the previous section: Institutions, self-regulation and implementation intentions, we now deduce concrete measures. Eventually, we arrive at our conceptual model which includes the environmental factor of 'Institutional Support', as well as the personal factors of 'Self-Control' and 'Time Planning' as moderators to the social enterprise start-up intention-behaviour relationship.

2.2.1 Building a Conceptual Model

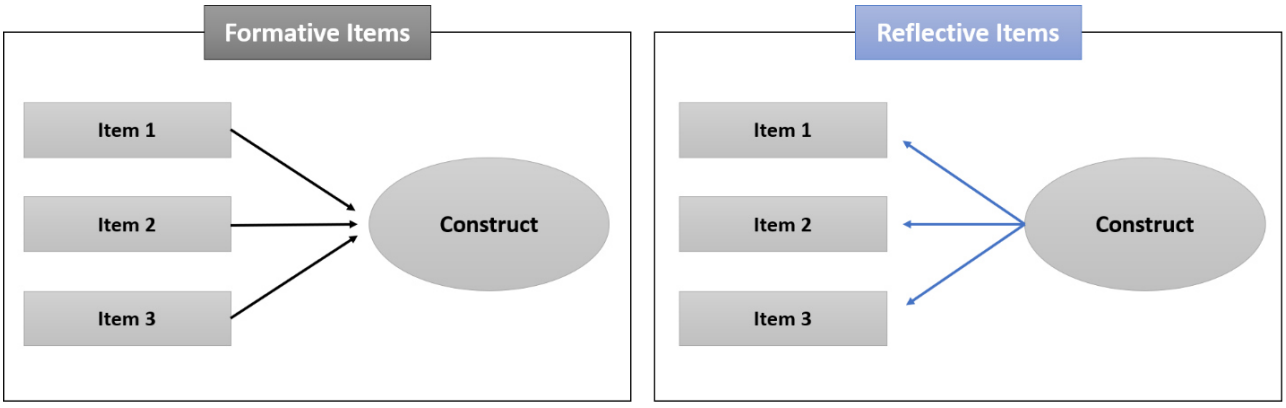
To succinctly describe the theoretical framework, this section first delves into the differences between reflective and formative measurement models, and the meaning of items and constructs, which are the key building blocks of such models. Thereafter, the types of variables one can find within a causal model are explored and contrasted for further understanding of the subsequently built theoretical model.

Reflective and Formative Models

Within a measurement model, there are both items and constructs, while the structural model only looks at the relationships between the constructs, which are also known as variables (Diamantopoulos, et al., 2008). We first look at the measurement model, the relationship between items and constructs. Each item is the resulting set of answers to one of the asked questions from our questionnaire. An overall construct is thereby the sum of the items which are meant to represent that said construct.

However, items and constructs can be 'reflective' or 'formative', and both types of relationships are often present within a single model (see Figure 4). The main difference between these two types of relationships is that reflective items are caused by the construct, while formative implies that the items are producing the construct (Hair, et al., 2014b). This is essentially the 'direction' of the relationship, either from construct to the item (reflective), or from the items to the construct (formative) (Garson, 2016). Within our drawn measurement model, this is represented by the direction of the arrows as follows:

Figure 4: Distinction between Formative and Reflective Models



Designed by Irene & Hanna

It is important to understand the key differences between reflective and formative relationships, as the resulting constructs are fundamentally different, and as such analysed in their specific respective manners.

Formative items are assumed to encompass the entire domain of the construct measured. As the **construct only exists as a result of the items**, it is a construct created as a result of the researcher's interpretation (Colman, et al., 2008). As such, if a key item representative of the construct is not included, this may change the construct entirely (Diamantopoulos, et al., 2008). Items thereby should, as a rule, not be removed from a formative model, as this would be comparable to ignoring part of the construct (Hair, et al., 2014b). To evaluate formative item-construct relationships, statistical tests to assess convergent validity, collinearity and level of significance are conducted (Diamantopoulos, et al., 2008).

Reflective items should theoretically be representative of ''*all possible items within the conceptual domain of a construct*'' (Hair, et al., 2014b, p. 111). This means that reflective items should be highly correlated with one another, and thereby interchangeable, or even removable if necessary, without affecting the overall significance of the construct. This is because **the construct itself exists**, irrespective of the items used to reflect the variable (Colman, et al., 2008). As such, it is the approach used when measuring respondents' attitudes, beliefs or personality, meaning that practically all business research is built on reflective items (ibid).

Within such models, reflective items are linked to their construct with a so-called 'loading', which is the regression coefficient between an item and its construct. Reflective relationships are tested for statistical

validity and reliability through the use of calculations such as Cronbach's alpha, Composite Reliability, Average Variance Extracted, and other methods which will be expanded upon in Section 4 (Hair, et al., 2014b). As reflective items are interchangeable and removable, they may be found to be internally inconsistent when tested statistically if they do not factor together sufficiently. The suggestion is to remove those items to result in a consistent construct, also known as a 'latent variable'.

Conclusively, given that we assume our constructs do exist, and that we ask about respondents' opinions and personality, our model constructs are a result of **reflective items**. As such, the items used to reflect a latent variable have to correlate strongly together or can otherwise be deleted.

Variables

In research, variables are varying and measurable factors. Within a conceptual causal model, the types of variables one encounters include the independent, dependent and control variables, as well as the mediating and moderating variables. A causal model can be understood as having the underlying assumption that within the model, variations in one variable will cause changes in another (Wu & Zumbo, 2008).

Independent Variables

The independent variable (IV) is a variable which is not influenced by any other variable within the model and is hypothesised to cause subsequent change in the dependent variable. In a 'cause and effect' model, the IVs would be the supposed 'cause'.

Dependent Variables

Dependent variables (DVs) are those that are influenced by the other variables within the model and are thereby presumed to respond to changes in the other variables (Hair, et al., 2014a, p. 2). The DV is the subsequent 'effect' observed within the framework.

Control Variables

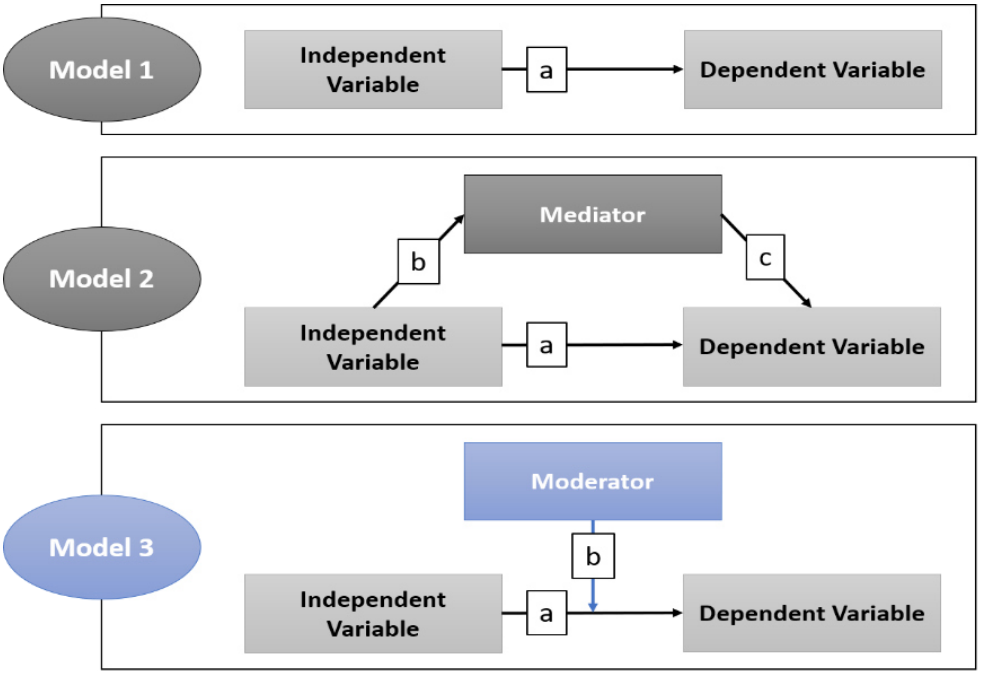
Control variables are independent variables which are not central to the study, yet cannot be ignored as they may have an effect on results. Typically, control variables used in the social sciences are aspects such as age, gender, minority status, or education (Shirokova, et al., 2016). To increase the internal validity of the study, such variables are thereby typically controlled for in a model, as these may provide

alternative explanations for the DV outcome. For example, a researcher investigating the relationship between peoples' age and height, will have to add control variables which could relate to height, such as gender.

Moderating and Mediating Variables

Moderators and mediators are both ''*theories for refining and understanding a causal relationship*'' (Wu & Zumbo, 2008, p. 367), meaning they are separate variables which attempt to further understand the nuances within a causal relationship. They are based on two very different concepts which should be understood and not be misapplied (Garson, 2016), as the type of variable applied in a model affects the entire research and data analysis process. As such, we now explain with examples the differences between mediators and moderators, and our reasoning for investigating potential moderators of the intention-behaviour relationship.

Figure 5: Distinction between Mediators and Moderators



At the very basic level, we have a relationship (depicted as **'a'** in all three models of Figure 5) between the IV and DV. As an example, let's assume that the IV is 'gym membership', and the DV is 'fat loss'. We assume that '**a**' is positive, indicating that an individual's fat percentage decreases once they join a gym.

However, signing up to the gym does not automatically make an individual lose a few kilos. This is because the relationship is **mediated** by 'exercise'. Mediators, as shown in Model 2 (Figure 5), are an in-between link in the cause- and effect-relationship, they explain why and how the IV affects the DV (Baron & Kenny, 1986). Within a simple full mediation model, it is thereby assumed that the IV causes the mediator, depicted as relationship '**b**' in Model 2, and that the mediator subsequently causes the DV, relationship '**c**' (Wu & Zumbo, 2008). For our example case, the gym membership leads to exercise, which in turn leads to fat loss. It should be however noted that mediators do not necessarily have to be 'full' mediators, but can be 'partial' mediators. This simply means that the variable does, to some extent, act as a mediator, but that the IV and DV still have a partially direct relationship.

Moderators, also known statistically as an 'interaction effect', modify the direction and/or strength of the relationship between an IV and DV, between the 'cause' and 'effect' (Baron & Kenny, 1986). Essentially, a moderator specifies for whom, or when, an IV has a stronger or weaker effect on the DV (Wu & Zumbo, 2008). Within Model 3 of Figure 5, the effect of the moderator '**b**', affects the relationship '**a**'. For example, let's assume that the IV is exercise, and the DV is fat loss. This relationship is assumed to be positive, as one would think that exercise leads to a caloric deficit, and thus weight loss. However, we may find inconsistent results because the relationship is moderated by 'caloric intake'. Caloric intake can make the relationship between exercise and fat loss weaker or stronger, as if no overall caloric deficit is created through exercise, there is no fat loss.

In line with our aim, we respond to previous calls in the academic literature to test variables which affect the intention-behaviour relationship strength (Fishbein & Ajzen, 2011; Sheeran, 2002). Our theoretical framework, stemming from Fishbein's (2000, 2008) IM, states that "*a person […] [may intend] to perform a given behaviour but when attempting to do so may find that he or she does not have the necessary skills or abilities or may encounter unanticipated barriers or environmental constraints*." (Fishbein, 2008, p. 838). Hence, it is **moderators** which we apply within our conceptual model, and in particular environmental and personal factors which may moderate the social enterprise start-up intention-behaviour relationship. We are thereby **not** looking at potential mediating variable 'links' which explain why or how intention influences behaviour.

2.2.2 The Intention-Behaviour Relationship

As described in the literature review, the TRA, TPB and IM posit that intention predicts behaviour (Ajzen, 2012; Fishbein, 2007), forming the starting point of this thesis. So far however, no researcher has ever examined the intention-behaviour relationship within the social entrepreneurial context. Despite its principal tenet, TPB has solely been applied to social entrepreneurial *intentions*, such as in Hockerts' (2015, 2017) study. As Shinnar et al. (2017, p. 63) note, intentions and their "*antecedents are only important if they lead to meaningful outcomes, that is, start-up behaviours*". Hence, this research is novel and overdue for the social entrepreneurship discipline.

Within other scientific fields, Sheeran's (2002) meta-analysis finds a moderate relationship between intentions and subsequent behaviour, indicating that the stronger a person's intentions, the higher the likelihood of taking respective actions (Kautonen, et al., 2015). Besides classifying intention as a predictor of behaviour, further meta-analyses (Rhodes & Dickau, 2012; Webb & Sheeran, 2006) conclude that "*a medium-to-large-sized change in intentions led to […] a small-to-medium-sized change in behaviour*" (Sheeran & Webb, 2016, p. 3). For example, Sheeran (2002) shows that overall, intentions on average account for 28% of the variance in behaviour for the included studies. This is similarly echoed by the findings of Armitage & Conner (2001), whose meta-analyses of intention-behaviour studies results in a 22% average variance explained.

However, intention's ability to predict behaviour varies from field to field. Most of the studies within the intention-behaviour field included in these meta-analyses are simple single acts, such as exercising or taking one's medication. In this respect, Sheeran et al. (2003) propose that the probability of intentions resulting in behaviour is higher for easily performed tasks (Sheeran & Webb, 2016). In contrast, creating a new social venture can be considered a large and complex goal, which is why there is reason to expect a weaker intention-behaviour relationship compared to Sheeran's (2002) results. Another consideration is the time interval between the measurement of intention and behaviour. In regard to our study, almost four years passed between measuring intentions in 2014, and the corresponding action in 2018. As Shirokova et al. (2016) point out, the larger the time difference, the higher the probability of unexpected events changing the initial intention, and the less variance the original intentions explain.

For a better comparison, we refer to results obtained by recent intention-behaviour research within commercial entrepreneurship. For example, Shirokova et al. (2016) find intention to account for 9.9% of subsequent action with a one-year time interval between entrepreneurial intention and behaviour measurement. Furthermore, Van Gelderen et al. (2015) find that entrepreneurial intention alone accounts for 13% of the variance in start-up behaviour with a three-year time interval. Thereby, we assume that social enterprise start-up intentions explain a similar amount of the variance in behaviour.

In conclusion, the TRA, TPB and IM and past academic research, including from the field entrepreneurship, determine that intention does predict behaviour, and so we hypothesise that:

H1. Social enterprise start-up intentions significantly predict subsequent behaviour.

2.2.3 Environmental Factor of Institutional Support

As part of the literature review on environmental factors, we explained and justified our focus on formal, regulatory institutions. To date, there is an on-going debate within the academic community regarding their effects on social entrepreneurship. Firstly, the '**institutional support' perspective** claims supportive institutions can help social enterprise start-ups through the provision of resources, while also making the process of legitimising a start-up both easier and cheaper (Korosec & Berman, 2006; Stephan, et al., 2015; Zahra & Wright, 2011). Secondly, there is the '**institutional void' view**, which sees social enterprises as arising due to gaps in their governments provisions, so as to cater to the unmet needs of society (Dacin, et al., 2010; Stephan, et al., 2015).It has widely been accepted that formal institutions can have both a supportive and hindering role in **commercial entrepreneurship**.

Generally, having a government which is supportive of entrepreneurship means stability, access to resources and support, and ease of legalisation (Bruton, et al., 2010). The **'institutional support' view** thereby implies that social enterprises and governments work together to achieve social goals, and that a strong government can make more resources available for social enterprises pursuing their mission (Santos, 2012).

Unsupportive or weak governments, on the other hand, increase the uncertainty and risk for entrepreneurs, and may create entry or expansion barriers, such as making the legislative process overly long and complicated (Bruton, et al., 2010; Mair & Marti, 2009). Findings such as that from Djankov et

al. (2002) and Stephan et al. (2015) support the **'institutional void' view**. For example, Djankov et al.'s (2002) data shows that countries where business regulations made it a slow and difficult process to start-up social enterprises were more likely to have high levels of corruption and informal economies. Stephan et al. (2015) present a particularly interesting case, as they test both the paradoxical 'institutional support' and 'institutional voids' theories through the use of proxies. They find a positive correlation between government activism and social enterprise activity, **meaning that the statistical evidence points towards the institutional support view.**

In addition, Puumalainen et al.'s (2015) study points towards the need for formal institutions: Their results indicate that institutional voids or unmet societal needs do not correlate with more social enterprise start-ups unless the formal institutions are sufficiently established and developed. Furthermore, Urbano et al. (2010) conclude that regulatory, financial support facilitates the implementation of social enterprises. The view that a favourable formal environment can promote and encourage social enterprise start-ups is echoed by Estrin et al.'s (2013a) research, which indicates that strong property rights enable social enterprises' market entry. Hoogendoorn (2016) complements this by verifying that the relative number of social enterprises positively correlates with high public spending, safe property rights and a dependable law system. Against the backdrop of these findings, which suggest that institutions are able to promote, provide resources for and support social enterprise start-ups, we are inclined to take a positive view. Hence, we expect and hypothesise that:

H2a. Perceived availability of institutional support positively moderates the social enterprise start-up intention-behaviour relationship.

2.2.4 Personal Factor of Self-Control

As outlined in the literature review, the Social Cognitive Theory considers self-regulatory capabilities as a particularly important personal factor. Furthermore, Hagger et al. (2010) point out that the intention-behaviour discrepancy could be explained by a person's degree of **self-regulation**.

Generally, academic researchers disagree on delineating the concept of self-regulation from self-control (Murtagh & Todd, 2004; vanDellen, et al., 2012). Some consider it as two distinct concepts (Hanfstingl, et al., 2010; Kuhl & Fuhrmann, 1998), while others use the terms interchangeably (Baumeister, et al., 1998; Muraven, et al., 1999). For instance, Kuhl and Fuhrmann's (1998) volition theory posits self-

regulation and self-control as two distinct types of volition with different functions. The authors describe self-regulation as a concept of 'self-maintenance', in which a person's actions are aligned with its self in terms of inner principles, experiences and desires. In contrast, self-control is depicted as 'goal maintenance' and, thus, relates to evaluating facts, enacting plans and sustaining goals (Hanfstingl, et al., 2010).

In this paper, both terms are distinguished as well, nevertheless, self-control is seen as a subcategory of self-regulation (Baumeister, et al., 2007). Thereby, vanDellen et al.'s (2012) view is adopted. Self-regulation can be described as "*an individual's ability to direct or control their behaviour*" (Van Gelderen, et al., 2015, p. 660). Self-control, being a subset of self-regulation, is defined as "*a conscious process in which people are aware that they are doing something they would not like to do or not doing something they would like to do*" (vanDellen, et al., 2012, p. 898). VanDellen et al.'s (2012) distinction is applied due to two reasons. Firstly, it allows to focus only on **conscious** behaviour, which can be assumed to hold for social enterprise start-up activities. Secondly, doing something even though it was initially undesired resembles to a certain degree Sheeran's (2002) category of disinclined actors, who act even though they previously did not have the intention. Similarly, refraining from a desired behaviour resembles Sheeran's (2002) inclined abstainers, who refrain from acting despite their positive intentions. Therefore, it seems as if self-control could accurately target the intention-behaviour discrepancy and, thus, be an important variable within this research.

Traditionally, self-control is treated as a relatively static personal factor within psychology (Rabinovich & Webley, 2007). Although some research suggests that this factor can be improved through training (Elster, 1977; Rabinovich & Webley, 2007), we consider self-control as a static variable, in line with the traditional psychological view. Self-control is now measured in t2 based on the assumption that it is relatively stable and has not varied in the 4 years since t1.

With regards to translating intention into behaviour, considering that individuals struggle to act upon their intentions and rather procrastinate (Brandstätter, et al. 2001), self-control could play an important role, especially for aims entailing sacrifices (Van Gelderen, et al., 2015). As such, Van Gelderen et al. (2015) point out that it is self-control ensuring that intention does not remain a wish. In fact, the likelihood to effectively enact a specific behaviour is higher if a person is able to self-control her or his

action (Mullan, et al., 2013). This in turn means that a lack of self-control may be one reason why a person is unable to enact an intended behaviour (Baumeister & Heatherton, 1996; Hagger, et al., 2010).

Several papers investigate the effects of strong self-control, which is found to positively moderate health-related intention-behaviour relationships, such as the intake of vitamin and mineral supplements (Allom, et al., 2018), physical activity (Pfeffer & Strobach, 2017), healthy snack consumption (Weijzen, et al., 2009), and dieting, exercising and smoking (Schroder & Schwarzer, 2005). Other researchers indicate that students with higher self-control achieve better grades in school (Mischel, et al., 1988; Shoda, et al., 1990; Tangney, et al., 2004) and at university (Wolfe & Johnson, 1995). Furthermore, research from the entrepreneurship field shows that the higher the degree of self-control, the higher the likelihood of translating the intention to create a new venture into corresponding behaviour (Van Gelderen, et al., 2015). Therefore, we expect that the higher a person's self-control, the stronger the social enterprise intention-behaviour relationship.

H2b. Self-control positively moderates the social enterprise start-up intention-behaviour relationship.

2.2.5 Personal Factor of Time Planning

As mentioned in the literature review, academic evidence suggests that planning in general, and implementation intentions in particular, are important for translating intentions into subsequent behaviour and goal realisation (Conner, et al., 2010; Gollwitzer & Sheeran, 2006). In t2, we determine our respondents' social enterprise start-up behaviour. As a consequence, measuring implementation intentions now would mean to test this construct retrospectively. Generally, retrospective studies run the risk of being biased (Everitt, 2007) due to their dependence on respondents' memories of past events, and, thus, generate less reliable results than prospective study designs (Agresti & Franklin, 2013). The more time passes after the occurrence of the event, the more likely it is that respondents remember events incorrectly (Hassan, 2005). For example, it has been shown that one year after an event, people already forget 20% of the core details (Bradburn, et al., 1987). In order to prevent this so-called 'recall bias', we refrain from testing implementation intentions retrospectively to ensure a research design with high internal validity.

Nevertheless, due to the well-recognised importance of the effect of implementation intentions on the intention-behaviour relationship (Aarts, et al., 1999; Gollwitzer & Sheeran, 2006), we decide to test **time planning** as a moderator. Time planning could be regarded as the "*when*" determinant of implementation intentions. According to the study of Lynch et al. (2010), it can also be considered as a proxy of implementation intentions as they are found to strongly correlate together. Moreover, time planning can be tested with the t2 dataset as a personal capability. As opposed to self-control, time management is not a static factor, but can be trained and developed (Inyang & Enuoh, 2009). If it proves to be statistically significant, this factor could be introduced into social entrepreneurial university courses to enhance students' time planning capabilities, and thus potentially fostering the translation of social enterprise start-up intentions into behaviour.

In this study, time planning, or time management, is defined as the self-regulated attempt to use one's time in a subjectively efficient manner in order to obtain intended outcomes (Kleinmann & König, 2018). Most importantly, this definition includes a goal orientation as it is concerned with how individuals address and achieve their goals within a given period of time (ibid). This means one determines when or in which order to conduct one or several activities; however, it does not imply the need to write down the time frame for each activity (Theurer, 2014). For long-term time planning, such as in the case of starting-up a social enterprise, it is more important to set goals than to determine the single activities (ibid.).

Moreover, studies show the relevance of time planning in the achievement of goals. For example, Crossman (2016) determined time planning as a relevant factor to achieve the goal of health-related behaviour change. In addition, planning was found to moderate the intention-behaviour relationship within the field of physical activity (Norman & Conner, 2005). So far however, time planning has **not** been tested regarding its impacts on the social enterprise start-up intention-behaviour relationship. Since individuals tend to procrastinate after having developed a certain goal intention (Brandstätter, et al., 2001), time planning has the potential to ensure the initiation of the intended social enterprise start-up behaviour.

Since time often is considered a valuable and limited resource, time management becomes a highly necessary personal factor and enables one to spend time efficiently (Inyang & Enuoh, 2009). Generally,

time planning has been investigated as a self-regulatory behaviour change strategy (Olander, et al., 2013; Silfee, et al., 2016), as a key factor for successful leadership (Fatoki, 2014), and as an important quality of successful entrepreneurs (Duchesneau & Gartner, 1990; Inyang & Enuoh, 2009). Based on these insights, we derive that a high propensity to plan time supports the translation of social enterprise start-up intention into behaviour, and, therefore, we expect that:

H2c. Time-planning positively moderates the social enterprise start-up intention-behaviour relationship.

2.2.6 Control Variables

As mentioned in the beginning of this chapter (Section 2.2.1), the control variables are those which are not central to the study, but may affect the results, and thereby should be controlled for. Through a review of the literature, the importance of an individuals' **gender, age** and **education level** on their entrepreneurial propensity was highlighted.

One of the variables most controlled for in entrepreneurship studies is **gender.** This is because traditionally, women have been found to have lower general entrepreneurial intentions than men (Joensuu, et al., 2013; Schlagel & Koenig, 2014), and are subsequently less likely to engage in entrepreneurial activities (Langowitz, et al., 2005; Kelley, et al., 2017). However, the Global Entrepreneurship Monitor (GEM) 2009 study on social entrepreneurship indicates that although men are more likely to engage in social entrepreneurial activities than women worldwide, this gap is smaller than for commercial enterprise start-ups (Terjesen, et al., 2012, p. 21). Indeed, this same study found that in some countries, such as Malaysia, Iceland and Argentina, women are actually more likely than men to start a social enterprise. In contrast, men are more likely than women to engage in commercial entrepreneurial activity in each and every country included in the GEM studies (Langowitz, et al., 2005). Furthermore, according to the precursor to this study, no significant differences in social entrepreneurial intentions were found between men and women (Hockerts, 2017). This indicates that although gender might have an effect on the rates of social enterprise start-up activity, and should be controlled for, the gender gap will most likely be less pronounced than would be expected within commercial entrepreneurship.

The second controlled variable is that of **age,** as it is found to be one of the most statistically significant determinants of entrepreneurial activity (Van Gelderen, et al., 2015). In general, research points towards an inverted 'u-shaped' relationship between an individual's age, and their likelihood to both intend to (Schlagel & Koenig, 2014), and eventually start, an enterprise (Kautonen, et al., 2015; Levesque & Minniti, 2006). Essentially, an individual's propensity to engage in start-up activities increases each year until the entrepreneurial peak of 35-44, and then gradually decreases (Levesque & Minniti, 2006). This is because the perceived feasibility of starting-up a venture is lower, and increases as one gets older and gathers experiences (Kautonen, et al., 2015). By the time individuals reach their mid-30s, they are more likely to enact their entrepreneurial intentions due to their higher knowledge and determination, plus having larger networks to draw from (Shirokova, et al., 2016). The reason for the downturn in entrepreneurship after the age of 45 is theorised to be due to a change in the opportunity costs, as peak income levels are typically reached around this age. Thereby, leaving a steady job for a start-up entails a higher risk than before, and is thereby a less attractive opportunity (Kautonen, et al., 2015).

In regards to social entrepreneurship, some scholars find the same u-shaped relationship (Estrin, et al., 2013a), while others find evidence that the typical social entrepreneur will engage in start-up activities at a younger age than their commercial counterparts (Lepoutre, et al., 2013; Van Ryzin, et al., 2009). Indeed, according to the GEM study on social entrepreneurship, the group most likely to start-up a social enterprise is those aged 25 to 34, followed by those between the ages of 35 and 44 (Terjesen, et al., 2012). In fact, their findings suggest that the youngest individuals surveyed, those aged 18 to 24, are the group most likely to be involved in social enterprises within 'innovative economies', such as in the USA or Switzerland. Thus, although the evidence appears to be rather conflicting as to which age groups are most likely to be involved in a social enterprise start-up, age does determine social entrepreneurial activity to some extent, and therefore should be controlled for in the study.

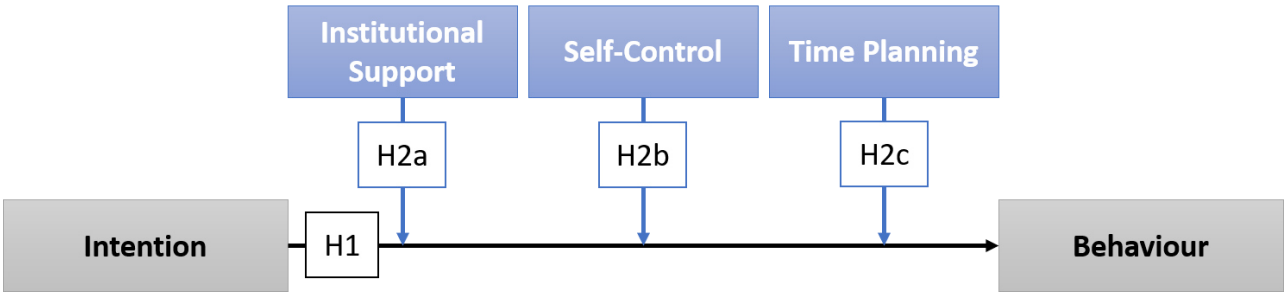
Lastly, we use our respondent's **education level** as a final control variable. Within social entrepreneurship, it has been found that the higher the level of education, the more likely it is that the individual will engage in social enterprise start-up activities (Estrin, et al., 2013a; Van Ryzin, et al., 2009). This is again supported by the social enterprise-specific GEM study which finds a strong correlation between an individual's level of education and their propensity to be involved in a social enterprise start-

up (Terjesen, et al., 2012). One argument for this is that education improves one's skills, network, and ability to identify and exploit business opportunities (Kautonen, et al., 2015).

2.2.7 Visual Representation of the Final Conceptual Model

To summarise, we hypothesise that 'Institutional Support', 'Self-Control' and 'Time Planning' moderate the social enterprise start-up intention-behaviour relationship. Due to our literature review, we assume the moderation effects to be positive, and thereby increase the variance explained in behaviour. The final conceptual model that we aim to test through our research is thereby shown as:

Figure 6: Our Final Conceptual Model



3 Methodology

The methodology chapter explains the development of the study based on our philosophical point of view, our research aim and objectives. The first few sections shape this research by determining methodological decisions, such as the decision to follow a mainly deductive research approach, and to pursue an explanatory research design. These sections are followed by outlining how we construct a longitudinal study following-up on Hockerts' (2015, 2017) research and a reflection on the importance of a reliable and valid data collection approach which ensures the reliability and validity of our final results. Finally, we delve into our quantitative data collection method, detailing our pilot study, and the final questionnaire with its relevant items. Overall, the present chapter reveals the concrete path selected to find empirical answers to our research question of '**Do social enterprise start-up intentions lead to subsequent behaviour, and how do environmental and personal factors moderate the relationship?**'

3.1 Philosophy of Science

The following section outlines the philosophical point of view which underlies this research. First of all, a brief introduction to philosophy of science in general is provided. Secondly, we adopt the scientific realist view, explain its belief system, and how its philosophical assumptions impact this research.

Philosophy of science describes the view taken when approaching scientific research. Thus, the philosophical perspective guides the knowledge development and determines what theory and science, and in particular, existence and reality, as well as knowledge and truth are according to that approach (Bechara & Van de Ven, 2007; Lane, 1996; Saunders, et al., 2016). These philosophical assumptions tend to direct research (Hunt, 2018; Ladyman, 2002) and help to reflect on one's own ideas and tenets (Kuada, 2012; Lane, 1996). Moreover, philosophy of science shapes research in terms of the research questions, the problem formulation, theories, research methods (Pedersen, 2005; Saunders, et al., 2016) and, lastly, the understanding and justification of the results (Lane, 1996).

The present study is based on a scientific realist point of view, which is nowadays the leading philosophical approach, and stems from realism (Haig, 2013). **Scientific realism** represents the belief that: (1) There is a world external to, and independent of, the individual's mind; (2) Theory is able to describe approximate truth (Bechara & Van de Ven, 2007); and (3) Observable, as well as unobservable objects, such as molecules or bacteria, exist within the world (Devitt, 2007; Haig, 2013; Lane, 1996).

The first assumption implies that a person's cognition and experience does not affect or determine the world's existence. Even without human beings on the planet and their capacity to perceive e.g. a table, the object is nevertheless there, and hence exists (Ladyman, 2002). In other words, "***there is only one true […] reality experienced by all […] actors***" (Saunders, et al., 2016, p. 128).

The second statement on the beliefs of scientific realism refers to the view that science is only able to provide theoretical and empirical statements which **approximate** the truth (Chakravartty, 2007; Saunders, et al., 2016). This assumption relates to scientific realism as "*the only philosophy that does not make the success of science a miracle*" (Chakravartty, 2007, p. 4). In the academic literature, this is labelled the 'no-miracles argument', reasoning that the success of scientific theories is attributed to the fact that they reflect at least approximate truth, otherwise their success could only be described as a miracle (Lyons, 2016, p. 564). Against this backdrop, scientific realists consider the 'no-miracles

argument' as the best explanation of a theory's success. Moreover, this philosophy acknowledges that science may produce right or false statements about phenomena, which is a driving force to proceed with research (Hunt, 2018; Psillos, 1999; Wight & Joseph, 2010). Scientific realists consider latest theories as a point of departure for research, even though their only purpose may be to disprove them (Wight & Joseph, 2010). Thus, despite the purpose of science to produce knowledge, **no one can know the truth with absolute certainty** (Hunt, 2018). Nonetheless, "*mature and predictively successful scientific theories [are viewed] as well-confirmed and approximately true of the world*" (Psillos, 1999, p. xvii).

Lastly, the third tenet of scientific realism helps to differentiate it from other philosophies. **Scientific realists believe in the existence of both observable and unobservable entities.** In contrast, other philosophies accept solely the existence of the observable, considering the unobservable as fictious and regard theories about the unobservable as a mere instrument to better grasp the observable entity (Bechara & Van de Ven, 2007; Mäki, 1984).

The scientific realist point of view impacts and guides our research substantially. Firstly, scientific realism is one of three main philosophies of science concerned with psychology. Therefore, it is coherent with our focus on the intention-behaviour relationship and the selected social cognition models, such as TPB and Fishbein's (2000) 'Integrative Model for Behavioural Prediction' (IM). Secondly, scientific realists attempt to explain causal entities underlying behaviour (Cherryholmes, 1992; Lane, 1996). This is key to our research, as the selected moderators are examined as causal entities, so as to clarify the discrepancy between social enterprise start-up intentions and behaviour. In this context, scientific realism focuses on structural forces and their explanatory power. Hence, according to this philosophical angle, scientific findings should, among other things, explain and identify effects and mechanisms of observed events, but **not** predict or generate universal laws (Lane, 1996; Wight & Joseph, 2010). Thirdly, scientific realism considers contextual factors, such as institutions, as mechanisms and explanations for why individuals act upon their goals (Lane, 1996). Thus, this view supports the inclusion of a framework that takes situational factors into account when explaining behaviour, such as Fishbein's IM.

3.2 Research Aims and Objectives

This section clarifies the aim and objectives which should be fulfilled at the end of the data collection and analysis. The research question, plus the research aim and objectives serve as the 'red thread' to this

study, guiding the development of the research design, methods and instruments. While the aim represents the overall purpose and mission of this study, the objectives set the concrete steps of the research process and specify how to achieve the aim (Kumar, 2014; Saunders, et al., 2016). In accordance with Saunders et al. (2016), the research aim maps out the subject of the study, and, thus, is complementary to the research question:

The aim of this thesis is to analyse whether social enterprise start-up intentions lead to subsequent behaviour, and how environmental and personal factors moderate this relationship.

To ensure the realisation of the overall aim, respective objectives are required to provide specific and relevant actions to clarify the overall research process and finally answer the research question (Saunders, et al., 2016). Our objectives are to:

(1) Identify whether social enterprise start-up intentions predict behaviour within our sample;
(2a) Assess whether specific environmental factors moderate this intention-behaviour relationship;
(2b) Assess whether specific personal factors moderate this intention-behaviour relationship;
(3) Draw conclusions for practice and theory on how to facilitate the translation of social enterprise intentions into subsequent behaviour.

3.3 Research Approach and Design

This section describes the approach of the study based on the research aim and the type of knowledge which we intend to generate.

According to Flyvbjerg (2006), the main purpose of science is to develop knowledge. Generally, there are different ways of approaching and initiating scientific research. One is the inductive research approach, which explores a certain field by starting with specific observations through data collection, and then generating general theories or frameworks based on the data findings (Saunders, et al., 2016).

In the present study however, we deploy a primarily **deductive** approach which some researchers refer to as the "*hypothetico-deductive method*" (Kuada, 2012, p. 74). A deductive approach implies that the current academic literature determines the research topic or field (Saunders, et al., 2016), and **existing theories induce the hypotheses to be tested** (Kuada, 2012). This holds true for the beginning of our research, where we develop specific hypotheses based on the general existing knowledge (Saunders, et

al., 2016). After the data analysis, we however change the perspective to a certain degree by critically discussing our findings against the backdrop of existing theories. Thereby, we attempt to understand why our sample shows certain causal relations. This means we go beyond the general process of a deductive approach, as it usually only involves the confirmation or rejection of a theory based on the research outcomes (Blaikie, 2010).

One of the properties of the deductive approach is that it typically attempts to understand causal models (Saunders, et al., 2016). In this regard, this study is concerned with the causal link between intention and behaviour, and how its discrepancy can be explained by moderating variables, both a person's internal and external factors. The corresponding hypotheses are tested based on primary, quantitative data. In fact, deduction is often associated with quantitative methods (Saunders, et al., 2016). As a consequence, this research deploys highly structured methods (i.e. online survey), which ensures the quality of this study by enabling its replication, and, thus, producing reliable findings (further explained in Section 3.5) (ibid.).

Furthermore, Flyvbjerg's (2006) statement that scientific research aims at knowledge development also relates to the selection of a research design, which is here defined as the type of knowledge that is being produced (Kumar, 2014; Flick, 2015). Research can be designed in different manners. Some studies may be 'descriptive' and accurately outline and describe a particular phenomenon (Kuada, 2012; Saunders, et al., 2016). Other researchers may aim at 'normative' studies that guide decision-makers and provide recommendations for dealing with a particular situation or issue (Kuada, 2012).

The purpose of this research however, is mainly of **explanatory** nature, as the focus lies on **analysing a cause-and effect relationship** (Kumar, 2014). This refers back to the research question and aim (Saunders, et al., 2016), where we specify that at the core of this research is the causal relationship between intention and behaviour, and the factors which may impact its strength. Explanatory research attempts to derive at explanations for 'how' questions by examining the variables that interact within a model, so as to establish a causal relationship (Murray, 2003; Ruane, 2016). In other words, it looks at the processes behind a studied phenomenon (Chapman & McNeill, 2005; Matthews & Ross, 2010). Lastly, explanatory research can be easily combined with a deductive approach and typically also makes use of questionnaires (Saunders, et al., 2016).

To summarise, this research follows a mainly deductive approach by building on existing theory to develop hypotheses to be tested. Given our focus on these hypotheses, and the causal relationship between social enterprise intention and subsequent behaviour, we primarily follow an explanatory design.

3.4 Constructing a Longitudinal Study: The t1 and t2 Sample

This section on methodology explains how we follow-up Hockerts (2015, 2017) study on social entrepreneurial intentions, and, as a result, conduct a longitudinal study by measuring social enterprise start-up behaviour. Moreover, we provide background information about our chosen sample.

This research is a continuation of the study conducted by Hockerts (2015, 2017), which investigates five possible determinants of social entrepreneurial intentions. These determinants include empathy, societal moral obligation, self-efficacy, societal support and experience. As part of the study, Hockerts (2015, 2017) collected several sets of data at different points in time, and from diverse groups of people. Nevertheless, only one of the datasets from Hockerts' (2015, 2017) study is used as a precursor for this investigation. This dataset was collected in 2014 from a sample of individuals who signed up to take Kai Hockerts' online Cousera course on social entrepreneurship.

Coursera is an online learning platform offering 'Massive Open Online Courses' spanning all fields, from Computer Science, to Maths, or the Humanities. Kai Hockerts, a professor at Copenhagen Business School, offers a 'Social Entrepreneurship Specialisation'. Individuals can choose to do the course for free or can pay for the course to receive feedback on the work they hand in, as well as receive an official accreditation. 28,967 individuals enrolled into the first course on social entrepreneurship and received the questionnaire at the beginning of the course (Hockerts, 2018, work in progress). 2,790 individual responses were gathered in 2014, to which we refer to as t1. This present study collected data in 2018, which is referred to as t2.

The t1 dataset is chosen for various reasons. Firstly, is the availability and suitability of the data, as Kai Hockerts provided access to his raw data, which has clear items for intention, as well as the respondents' email addresses. Secondly, is the fact that the individuals had already, to some extent, shown an interest in social entrepreneurship, as they had signed up for the course. Lastly, measuring behaviour requires a reasonable time gap between the intention and behaviour measurement in order to give the

respondents sufficient time to act upon their intentions. The data in t1 was collected in September of 2014, and t2 was collected at the end of March 2018, equalling to a time interval of approximately three and a half years, which we reasoned would be sufficient time to possibly take action. What made the t1 dataset further attractive is the relative rarity of longitudinal studies within the intention-behaviour field with such a large time gap between measurements.

3.5 Validity and Reliability

Throughout the project, considerations were taken to ascertain the validity and reliability of our methods, the data collected, its subsequent interpretation, and our conclusions.

Validity

Validity refers to the extent to which constructs successfully measure and represent the intended variables, free from non-random errors (Balnaves & Caputi, 2001; Hair, et al., 2014a). References to validity can be found throughout the following chapters, yet to introduce the concept we first delve into three facets of validity to show how validity is consistently considered and implemented into our process. The three facets of validity explored are: construct validity, internal validity, and external validity (Balnaves & Caputi, 2001).

Construct validity is the testing of the **internal consistency** of the used scales. Borsboom et al. (2004, p. 1061) explain in simple terms that a construct can be considered valid only if *''(a) the attribute exists, and (b) variations in the attribute causally produce variations in the outcomes''.* Essentially, if through our statistical tests it is clear that something is being measured, it must exist. Ascertaining this variable exists, yet finding it has no effect on the dependent variable, one could assume that nothing, or an entirely different construct, is measured. Thereby, to test construct validity, one can look at '**trait validity**' which is done by comparing one's scale to other established scales, or through **'nomological validity**', which tests the construct validity statistically, for example through Cronbach's Alpha (Campbell & Russo, 2001). For this study, all constructs were tested mainly for nomological validity, except for 'Institutional Support', which is in addition thoroughly tested for trait validity, as explained in Section 4.4.3. 'Nomological validity' is the more modern method of validity confirmation, and as most of our items are drawn from well-established scales or from the t1 dataset, this was deemed the most appropriate approach (Campbell & Russo, 2001). 'Institutional Support', being an entirely new scale, and

presenting unexpected results, is therefore the only construct further checked for trait validity in a comparative manner.

Internal validity refers to the **overall quality of the project**, the extent to which our research design allows for the drawing of conclusions from the relationships observed (Balnaves & Caputi, 2001). As explained in Section 4.4.3, we test for internal validity through path analysis. To ascertain validity, we check for the strength and significance of the intention-behaviour relationship and the effect of the moderators, to assure that the results are not a result of coincidence or errors. It should, however, be noted that although we may find a significant relationship, there are many factors that still threaten internal validity. For example, the passing of time, the respondent's motivations to answer the survey in one way or another, or researcher bias (Campbell & Russo, 2001). Being aware of such limitations aids in their mitigation, and as researchers we attempted to control for bias or errors whenever possible.

Lastly, **external validity** refers to the **generalisability of results**, asking to which extent our conclusions can be applied to different situations, and if our results are truly representative of our given population. Here, as researchers we must consider how the restrictions put on our target population may limit the generalisability of our study, or how those who answered our questionnaire may be different from those who were invited to, but did not (Campbell & Russo, 2001). One must keep in mind however that, in line with our scientific realist point of view, we do not aim at generating universal laws, and realise that our results represent approximate truth.

Reliability

Reliability refers to how the measurements are conducted, referring to the **accuracy and consistency of the data collection methods** used (Hair, et al., 2014a). The data collection instrument and methodology should be sufficiently consistent that if the study were to be repeated, the exact same results should be attained. Essentially, reliability is necessary to assure that the results are not random coincidence or error, and that the results are representative of the given situation.

When selecting already-established scales, as well as constructing our new scales, we closely considered how questions may be worded and understood so as to give consistent and reliable results. While for statistical reliability, for example, we made sure that each construct had at least three items, as the

variables with multiple items are considered more reliable than single-item constructs (Pole & Lampard, 2002).

The items constructed for the study were then assessed for '**internal consistency reliability'**, meaning that the **items strongly correlate internally to represent their intended construct**, while not correlating extensively with other construct items (Viswanathan, 2005). Statistical checks for internal consistency reliability were conducted extensively throughout the process of 'Structural Equation Modelling', as is further expanded upon in Chapter 4, Data Analysis.

3.5.1 Constructing a Valid and Reliable Survey

In regards to the questionnaire, the main validity issues faced were response and nonresponse bias, as well as 'common method bias'. We however take certain steps to both mitigate and statistically test these biases to ascertain that they do not have an undue effect on our results.

Response bias refers to the subliminal influence of a question's wording on the respondent's answers (Agresti & Finley, 2014). This is mitigated through careful consideration and the use of a pilot study for the analysis of the preliminary data and the collection of feedback. Furthermore, the Exploratory Factor Analysis (EFA) conducted with the pilot data initially confirmed the internal validity of the scales, which is further explored for the final data in Section 4.

Nonresponse bias on the other hand, refers to the individuals who were initially approached, but did not respond to the questionnaire (Agresti & Finley, 2014). It cannot be assumed that the percentage of people who answered are representative of the entire t1 sample population, indicating that the 'external validity' and generalisability of the study should not be overestimated. It might, for example, be that those with higher intention were more engaged in the 'Massive Open Online Course', and thereby more likely to answer our questionnaire.

In terms of reliability, the methodology is clearly reported and kept track of, so that theoretically it could be replicated to achieve the same results. Testing the same instrument, a second time would allow for test-retest reliability, however, a tight schedule did not allow for such a retest at this point in time. The language used in the wording of the questions was improved so as to make them easier and more understandable, and furthermore the platform SurveyMonkey was instructed to randomise the order of the questions in each section, so as to prevent leading thought patterns which may skew results. Internal

consistency validity is furthermore tested in Chapter 4 to check our constructs, and to statistically ascertain our findings so as to reject that they are the result of a random error (Viswanathan, 2005).

Common method bias refers to the systematic bias which influences the data due to the ''*variance attributable to the measurement method rather than the construct of interest*'' (Baggozi, et al., 1991, p. 421). In other words, common method bias may result in an **increase or decrease in the strength of variable correlations due to a fault in the measurement method** (Podsakoff, et al., 2003). However, there are several ways we can mitigate the occurrence of such issues by taking certain precautions with the questionnaire. For example, although not an issue for this study, using the same source to construct both the independent (IV) and dependent variable (DV) scale is one major source of common method bias (ibid). All our scales are derived from different sources, and the IV and DV are even collected almost four years apart, indicating that this is most probably not an issue for this study. Other potential factors are harder to control for, such as the social desirability of answering questions in a certain manner (Koch, 2015), or that individuals answer in an automatic manner without giving consideration to their answers (Podsakoff, et al., 2003). To mitigate these possible sources of bias, we ascertain to our interviewees that the questionnaire is anonymous, and at points use different types of scales formats (i.e. by adding qualitative questionnaires) so as to keep the interviewees engaged. Furthermore, to assure that the study is not suffering unduly from common method bias, we statistically check for convergent and discriminant validity and run a full collinearity test (Koch, 2015) in Chapter 4.

3.6 Methods

Based on, and in line with, the mainly deductive research approach and the primarily explanatory research design, the following section outlines the data collection methods in detail. It points out which methods we chose to collect our data and evaluates their strengths and potential pitfalls. Furthermore, we explain how we construct our pilot study, and lastly, present and justify the items for our final questionnaire.

3.6.1 Data Collection Method

The following section explains our choice of quantitative data collection in form of an online questionnaire. Moreover, we present why approaching our sample through an online survey is an appropriate method for our study.

To conduct our research, we selected **quantitative methods** as they fit with our deductive approach of testing theory-driven hypotheses (Rahman, 2017). Quantitative approaches are the primary method used when testing a 'cause and effect' relationship as the data is numerical, allowing for objective statistical analysis and testing of hypotheses. Essentially, only quantitative methods can statistically ascertain if the conceptual model explains some of the variance in the dependent variable. As such, Moreover, applying a deductive approach to intention-behaviour studies is often combined with quantitative data collection.

We realise that there are pitfalls of conducting a purely quantitative questionnaire, as the results may not explore the underlying meaning of the observed phenomena (Rahman, 2017). As this is outside of our scope, it is a limitation that one should be aware of, but does not necessarily call for a mixed methods approach. A few qualitative questions were added, in case the quantitative data was not sufficient for statistical analysis.

For this study, we collected our quantitative data through an **online questionnaire**. This was considered the most efficient way to reach our geographically spread target audience, comprised of 2,718 individuals, to collect the maximum amount of responses. Apart from being a cheap and fast way to reach the target audience (Wright, 2005), online questionnaires have further aspects which make them an ideal tool for data collection. For example, online questionnaires allow for increased design flexibility, such as randomising the order of the questions received by each participant, as we did for our survey, and so enhancing survey quality (Fielding, et al., 2017).

Another attractive feature of online questionnaires is that they provide a certain sense of anonymity and confidentiality, which allows for individuals to answer without repercussions or fear that their personal results become public (Pole & Lampard, 2002). Ensuring confidentiality was an ethical consideration that we took very seriously. We did not have the names of any of our participants, and the only identifier of the individuals, their email, was always removed from our datasets to preserve anonymity.

Furthermore, given that our sample participated in an **online** course and has previously answered the t1 questionnaire, it can be assumed that they are able to respond to further online surveys. These considerations, plus the fact that our potential respondents are spread around the globe, led to the conclusion that an online questionnaire is the optimal tool to reach our sample.

As in the t1 data collection, we used the **online platform, SurveyMonkey,** to construct the questionnaire. To test our questionnaire, we first conducted a pilot study, as explained in the following section. Based on the feedback collected through the pilot study, we developed the final questionnaire. We also tested the pilot results statistically with a preliminary 'Exploratory Factor Analysis' (EFA) in the program SPSS 24, to check which items factor together.

Furthermore, when constructing a questionnaire, the consistency of the scales used to collect the data is a key consideration to arrive at a statistical analysis which is valid and reliable. In t1, the quantitative survey was conducted asking respondents to answer on a **five-point Likert scale** to what extent they 'strongly disagreed' or 'strongly agreed' on a series of statements. Intention, the dependent variable of the t1 study, was ranked on such a five-point scale. As the same variable from t1 is our independent variable in t2, we maintain the five-point Likert scale for ease of statistical analysis and consistency. Only a few questions did not comply with this format, such as asking about the country of residence, and the qualitative questions mentioned above. Likert scales are a standard tool used in behavioural research, allowing for sufficient variation and consistent statistical calculations (Hair, et al., 2014a). As in the t1 survey, the scale allows the respondent to choose to what extent she or he disagrees or agrees with a statement.

In conclusion, we have chosen a quantitative approach to collect our data in t2. For statistical simplicity and given our sample's specific characteristics, we construct an online survey comprised mainly of five-point Likert scales.

3.6.2 Pilot Study

This section describes how we derived at the constructs and scales we test in the pilot study. We draw conclusions based on the pilot study results for the construction of the final questionnaire.

Pilot studies are customarily run to test the feasibility of the research questions and scales, so as to construct a final study which collects reliable and valid data (Pole & Lampard, 2002). The main aims of our pilot study were to firstly, gain feedback on the formulation and logic of the questions and overall survey, and secondly, to check if the items 'factored together' statistically to produce a consistent variable.

To develop a pilot study, preliminary reflective items were constructed for our dependent variable (DV), and the variable of 'Institutional Support'. 13 items (seen under Appendix B: Q4,5,7,12-22) were developed to reflect the DV, 'behaviour'. As explained in-depth in the following section (3.6.3), the items area customised variation of part of the 'Panel Study of Entrepreneurial Dynamics II' (PSED, 2005). As we adapted the original PSED II questionnaire to our purpose, the testing of these items was key, as without a good set of items to reflect our DV, the whole questionnaire would be void.

For the measurement of 'Institutional Support', originally, two different constructs with separate items were built up and tested. The first one investigated access to finance, as we theorised that the different sources of finance one used to start-up a social enterprise would reflect how supportive different groups within a person's environment were. The ten questions developed can be found under Appendix B, Section 4. They were inspired by typical sources of finance widely used in literature and worldwide entrepreneurship studies such as the Global Entrepreneurship Monitor (GEM) and the PSED. Theoretically, our 'access to finance' approach would essentially demonstrate how social enterprises shape their model according to their environment, as it is in great part the environment that has shaped the current differing schools of thought in social entrepreneurship, as discussed in Section 2.1.3. The aim with this approach is to see if an environment which has a lack of public funding would prevent a person to start-up a social enterprise, or if they would find alternative funding sources. For example, if a respondent states that their funding mainly came from friends and family, this could indicate that the formal institutions, such as the government or banks, are not supportive of starting-up a social enterprise, while informal institutions are. We also theorised that questions into sources of funding would give an insight into how individuals may interact with their given environment, showing how different the support systems are from one country to another.

Furthermore, a second set of items to measure institutional support was constructed to look at the formal, regulative institutional support. These items were developed as a result of an extensive literature review, as few studies in the intention-behaviour literature ask respondents to evaluate their own environment, and none were found which ask individuals to assess the 'regulative' institutions. As the focus is on the regulatory support, our questions were developed to reflect this focus. As guidance, we used studies such as that of Griffiths et al. (2013) and Hoogendoorn (2016), which investigate through proxy measures how institutional factors affect social entrepreneurial rates. As seen in Appendix B,

Section 7, the items Q43 & Q47-50 refer to a country's supportiveness of social entrepreneurs, the perceived corruption in their given country, and the ease of legal registry for a social enterprise. In addition to these items, we added control variable questions, such as marital status and children living in the household, as well as some general comment boxes to the pilot for enabling direct feedback. In order to mitigate the risk of collecting insufficient quantitative data, qualitative questions asking individuals to reflect why in their opinion they did or did not start-up a social enterprise were added to the survey.

In mid-February of 2018, we distributed our pilot questionnaire to friends and family. To have more statistical variation, individuals were asked to either answer as themselves, or imagine themselves to be the founder of a social enterprise and living in a different country. The pilot study was closed after two weeks. Out of 58 participants 60% completed the entire survey. This made it very clear to us that we needed a questionnaire which was as precise and short as possible. Thereby, questions which were not central to our research aims or complicated the survey, were removed. To further judge which questions to keep in our final survey, the pilot data was assessed through the use of SPSS 24, by conducting an 'Exploratory Factor Analysis' (EFA). The EFA gave an overview of which items factored together statistically to create a consistent construct, and which not, allowing for the further deletion of items which were not relevant to our final constructs. Nevertheless, we did consider the fact that our pool of interviewees is mainly Western, and highly educated, so as to not remove questions which may be answered differently by international respondents with more diverse backgrounds.

3.6.3 Final Study Constructs and Items

Within this section, we explain how we derived at the items for each construct for our final study and provide an overview of the items. For a full overview of the final questionnaire, refer to Appendix C.

Behaviour – Dependent Variable

What social enterprise start-up behaviour is, and at what point an intention becomes action which can be considered measurable 'behaviour', is a rather new and debated concept. For guidance as to how the dependent variable should be constructed, the first point of inspiration is the widely recognised '**Global Entrepreneurship Monitor'** (GEM), and more specifically the GEM 2009 report specific to social entrepreneurship (Terjesen, et al., 2012). The data collected for the GEM Social Report has been widely

used by scholars (Estrin, et al., 2013a; Hörisch, et al., 2016; Stephan, et al., 2015), and represents one of the few globally tested methods to measure social entrepreneurship. The study measures 'Social early-stage Entrepreneurial Activity' which asks individuals whether they are involved in the starting-up of a social enterprise, ascertains if the enterprise is actually social in nature, and investigates the enterprise's goals, plus its revenue model, innovativeness, and its industry (Terjesen, et al., 2012). Many of the GEM questions are not relevant to our study as our research goal is not to identify the specific goals, revenue model or innovativeness.

As no further globally tested measures of social enterprise start-up behaviour were found, attention was turned towards commercial entrepreneurship studies. One of the most well-recognised methods of data collection on entrepreneurship is the '**Panel Study of Entrepreneurial Dynamics**' (PSED) which is both globally tested and adaptable. The PSED interviews started with the aim to *''develop reliable empirical descriptions of the business creation process''* (Curtis & Reynolds, 2007a) by asking a series of questions about every imaginable aspect regarding the start-up and consolidation process of businesses: From their industry, to finance, to marketing.

The PSED, and its newer and improved version, the PSED II, are longitudinal studies. Both consist of several questionnaires, one for the initial scanning of potential nascent enterprises, and further questionnaires to track the development of those enterprises (Curtis & Reynolds, 2007b). For the purpose of this study, only the first questionnaire concerned with recognising nascent enterprises, also named 'Wave A' of the PSED II (PSED, 2005), is necessary. From Wave A we found only the questions specific to measurable behaviours to be central to our study, those being: Section D, titled 'Start-up Activities', and Section E, called 'Start-up Finances' (PSED, 2005, pp. 13-24). The questions in the PSED II itself are numerous and rather lengthy, asking for the time-frame in which each of the activities have been started or completed. Thereby, many researchers (Gartner, et al., 2004; Manolova, et al., 2009; Reynolds, 2017) have simplified the evaluation of start-up activities when applying the PSED II questionnaire.

The PSED II is furthermore globally adaptable, as evidenced by its successful application to countries ranging from the USA, to Norway (Alsos & Kolvereid, 1998), China (Zhang, et al., 2011) and Latvia (Dombrovsky, et al., 2011). Many of these studies also reduce the number of items used to identify start-

up behaviours. Zhang et al. (2011) for example successfully cut down the original 34 start-up activities included in the PSED II, to 16 start-up activities which are more developing-country inclusive. Using Zhang et al.'s (2011) and Reynolds' (2017) modified scales as inspiration, we resulted in the 10 PSED II-based questions (Appendix C, Q3, Q7, Q9-16). Upon further consideration, consultation with beneficiaries (Q.8) was added to account for a social enterprise start-up dimension.

We furthermore added two screening questions (Q2 & Q3), so that individuals which answered 'Strongly disagree' or 'disagree' would be able to skip the questions on the individual start-up activities. The resulting final 13 questions for the measurement of behaviour thereby included:

Q2. Since the completion of the online MOOC on social entrepreneurship, I have been involved in the founding of a social enterprise start-up.

Q3. Since the MOOC on social entrepreneurship, I have taken concrete steps to start-up a social enterprise.

Q4. I have invested money in a social enterprise.

Please indicate if you have taken any of the following steps towards a social enterprise start-up since the completion of the MOOC course. If you have started several social enterprises, please indicate for that which you consider most established.

Q7. Saving money for a social venture

Q8. Consulted with beneficiaries regarding the social enterprise

Q9. Applied for funding

Q10. Received funding

Q11. Opened a bank account for the start-up

Q12. Determined regulatory requirements

Q13. Legal form of entity registered

Q14. Began to promote goods or services

Q15. Have a web presence

Q16. Received income from goods or services

Intention – Independent Variable

For the t1 study, social entrepreneurial intention was measured based on four reflective items with a five-point Likert scale. As a result, Hockerts (2015, 2017) received 2790 answers. The items used for the Hockerts' (2015, 2017) study are adaptations of previously tested entrepreneurial intention scales. The items included were:

1) I expect that in the next five years I will be involved in launching a social enterprise.
2) I have a specific idea for a social enterprise, on which I plan to act.
3) I do not plan to start-up a social enterprise.
4) I have identified a social problem that I would like to address through a social enterprise.

It should be noted that in Hockerts (2017) only the first three items were used as markers of intention. However, we decided that all four items would be tested initially, as they do appear to factor together in the initial 'Exploratory Factor Analysis' (EFA). If items do not factor together in the assigned construct, one can remove the particular item later on, as they are reflective items.

Institutional Support – Moderating Variable

Considering the aim is to construct a **concise** questionnaire **applicable** to other scenarios, we decided to use the questionnaire for 'Institutional Support' tested in our pilot study. These questions were constructed as a result of our reviewal of studies which investigate which country-specific factors may have an effect on social enterprise start-up rates. The studies used as inspiration look at the effects of factors such as 'rule of law' (Hoogendoorn et al., 2016; Stephan et al, 2016), corruption (Griffiths, 2015), and 'constraints on a government's arbitrary power' (Estrin et al., 2013a). Based on this review we narrow down our focus from formal institutional factors to direct governmental and legal support. As these studies (Estrin, et al., 2013a; Griffiths, 2015; Hoogendoorn, et al., 2016; Stephan, et al., 2016) use proxy measures, mainly country-wide statistical data, we developed our own items for institutional support in our pilot. Conducting an EFA with the pilot data allowed for the identification of items which did, and those which did not, factor together into one construct, resulting in the following four items for our final survey:

Q28. My government supports social entrepreneurs.

Q31. It is easy to legally register a social enterprise in my country of residence.

Q32. The institutional context in my country is very supportive of starting-up a social enterprise.

Q33. There is a lot of corruption in my country.

It should however be noted that the pilot EFA indicated that the first three items (Q28, Q31, Q32) strongly factored together, yet that the fourth item (Q33) factored as a separate construct. Nevertheless, the question was kept for the final survey considering that the respondents of our pilot study were mainly from developed countries, which typically experience less corruption (Griffiths, 2013) and may have skewed the data.

Self-Control – Moderating Variable

Tangney et al.'s (2004) well-recognised article sheds light on the comprehension of self-control. The authors developed a new scale of how to measure self-control, which is the ability of an individual to defy, alter, disturb or omit inner behaviours, impulses, thoughts and emotions. This conception is in line with vanDellen et al.'s (2012) definition adopted in this study.

This standard and widely adopted measure of self-control is that developed by Tangney et al. (2004). Originally constructed as a 36-item questionnaire with a five-point Likert scale, it was shortened by the same authors to the '**Brief Self-Control Scale'**, containing 13 items. As the difference in measurement accuracy between the full and brief scale is minimal, the Brief Self-Control Scale is most often used in behavioural studies. As such, the brief version is deemed sufficient for the purpose of our study. The items of the scale have been found to be generally consistent in studies spanning several fields. Items strongly factor together, and produce a reliable self-control measure with a Cronbach's Alpha between 0.82-0.88 found in most studies (Nebioglu, et al., 2012; Tangney, et al., 2004; Van Gelderen, et al., 2015), well above the 0.7 cut-off point needed for internal consistency (Hair, et al., 2014a).

Furthermore, the Brief Self-Control Scale has also been used to measure self-control as a moderator in an entrepreneurial intention-behaviour context by Van Gelderen et al. (2015). Ascertaining that this scale has been successfully used in a similar scenario, we included the entire Brief Self-Control Scale in our final questionnaire, as follows:

Q40. I am good at resisting temptation.

Q41. It is difficult for me to get rid of bad habits.

Q42. I am lazy.

Q43. I say inappropriate things.

Q44. I do things that are bad for me, if they are fun.

Q45. I should have more self-discipline.

Q46. I abstain from things that are bad for me.

Q47. People think I have iron self-discipline.

Q48. Pleasant and fun things sometimes prevent me from getting work done.

Q49. I have difficulties concentrating.

Q50. I can work effectively to reach long-term objectives.

Q51. Sometimes I cannot prevent myself doing things I know are wrong.

Q52. I often act without closely considering the alternatives.

Time Planning – Moderating Variable

As explained in the section on hypotheses building, **'Time Planning' is used as a proxy for Gollwitzer's 'Implementation Intention'**, as the study of Lynch et al. (2010) show that implementation intentions can be strongly related to time planning scales. Indeed, Lynch et al.'s (2010) measures were developed for the purpose of further investigating intention-behaviour relationships. In addition, they had already tested their scales for internal consistency, demonstrating a very good Cronbach's Alphas ranging from 0.88-0.92. Furthermore, Lynch et al. (2010) constructed both long-term and short-term time planning scales. As the starting-up of a social enterprise is an extensive project which necessitates a long-term commitment, we thereby focused on the long-term scales.

The items developed by Lynch et al. (2010) and used in our survey are as follows:

Q34. I set long–term goals for what I want to achieve with my time.

Q35. I decide beforehand how my time will be used within the next months.

Q36. It makes me feel better to have my time planned out in the next months.

Q37. I actively consider the steps I need to take to stick to my time schedule.

Q38. I consult my planner to see how much time I have left for the next few months.

Q39. I like to look to my planner for the next 1–2 months in order to get a better view of using my time in the future.

4 Data Analysis

The data analysis chapter provides a detailed overview of how we collected our data and as a first analytical step screened for missing values. This is followed by outlining the descriptive statistics of our sample. Subsequently, we analyse the measurement model through an 'Exploratory Factor Analysis' a 'Confirmatory Factor Analysis', to ascertain the internal consistency and validity of our items and constructs. Thereafter we test the entire structural model, plus alternative models, through 'Partial Least Squares' to arrive at our final statistical results.

4.1 Data Collection and Screening

As a test run, 100 invitations were first sent on the 15th of March through the online survey platform SurveyMonkey. Of those 100 first subjects, five of the emails were no longer in existence or did not accept surveys from SurveyMonkey. The remaining 2,623 invitations were sent out on the 16th of March. The 95 initial, plus the 2,623 subsequent invitations, equal to 2,718 total email invitations.

Two further email reminders were sent out, on the 20th and 26th of March, to both those that had not started and those who had partially completed the survey.

Of the 2,718 individuals contacted, 1,467 (54%) individuals had opened at least one of the emails sent, and 210 emails were either no longer in existence or the user had blocked emails from SurveyMonkey. This left a total of 1,041 (38.3%) questionnaire requests unopened. As this survey is conducted nearly four years after the first round of questionnaires, some of the emails may no longer be used by the subjects. This may reflect on both the amount of individuals who opened the email requests, and subsequently completed the survey.

Between the 20th of March and 1st of April, we received a total of 254 unique responses, of which 211 were complete and valid after data screening. 211 respondents correspond to a 7.8% overall response rate when considering 2,718 individuals were asked to complete the survey. This response rate entails

several quality considerations for our primary data. It could be reflective of a possible 'nonresponse bias' (see explanation Section 3.5.1, p.53), meaning that we are underrepresenting certain groups of people who are less likely to respond, while overrepresenting others (Agresti & Finley, 2014). In our case, it is most likely that those that acted on their intention may be more likely to engage with the survey than those that did not. However, as the application of Sheeran's (2002) 'two-by-two matrix' on our dataset shows (Figure 8), we do have variation in our data, getting responses from people with and without intentions, and from those who acted or did not.

Data Screening

Before analysing the data, we first check data validity by ensuring that the requirements for multivariate data analysis are met, and that any issues are corrected before they can cause errors and issues in the analysis (Hair, et al., 2014a).

Missing Values

The first step is to check for missing data, as we allow for no missing values for our five constructs. We designed our questionnaire so that respondents could not skip single questions, but were forced to either answer all questions, or skip a whole question section. As a result, some individuals would skip an entire section. Consequently, these respondents were excluded from the study, as including individuals with many missing values would have caused substantial problems, as Structural Equation Modelling (SEM) may not be applicable if missing data exceeds 15% (Hair, et al., 2014a). After deleting respondents who were missing values, we resulted in 212 valid responses from the original 254.

The questions on control variables were asked in the t1 study, based on a design which did not insist respondents answer all questions. Therefore, a few missing data points were found: three for gender, and two for age and education. As these are very few missing values, they should not cause significant issues, and we input the mean average into the missing data points for the functioning of the statistical programmes (Hair, et al., 2014a).

Unengaged Responses

A visual scan of the data, and a check of standard deviation for each individual's answer set pointed out one individual whose answers had no variation and replied consistently 'strongly disagree' to each question, even for reverse coded questions (e.g. Q44 and Q46 in Appendix C). It seems that the individual

did not take the time to answer the questions in an engaged manner, and so his responses were removed to result in the final sample of 211.

Skewedness, Kurtosis and Outliers

Next, we look at measures of skewedness and kurtosis for all our variable items, to see the level of variability in the dataset distribution. Skewedness shows if the dataset is symmetrical or not, and how 'normal' the distribution of the data is. Kurtosis refers to the outliers relative to the dataset, and so a large kurtosis would be indicative of several significant outliers, which could subsequently affect estimates and overall fit (Bagozzi & Yi, 1988). A perfectly symmetrical dataset thereby would have a skewedness and kurtosis value of 0, but values of -2 and +2 are considered acceptable (Byrne, 2016). Checking the 211 responses for skewedness and kurtosis for each item shows values within this range, indicating decent symmetry and univariate distribution in the dataset. Gender was the exception with 2.01, simply pointing out that more women than men answered the questionnaire.

Sample Size Adequacy

A result of 211 complete responses is well above the suggested minimum for our SEM analysis method, which necessitates a sample of at least 100 respondents for a conceptual model with five constructs (Hair, et al., 2014a). This is a relevant requirement to ensure that the statistical programme of SmartPLS 3 is able to proceed the analysis effectively without running the risk of random error, and, thus, ensure reliable and valid statistical findings.

Data Statement

It should be noted that all the data shown from here onwards includes only the final items which are statistically approved through SEM and, thus, used in our final study analysis. Initial statistical checks were done throughout the process with all items, but these checks are no longer relevant as some of the original items were removed. As such, the data analysis uses and presents only the most current data. For a summary of the items and questions used for each of our constructs, please refer to Appendix D, or Appendix E for an overview of the items constructing our dependent (DV) and independent variables (IV).

Validity and Reliability Check

The AVE or 'Average Variance Explained' in Table 1 looks at the shared variance between constructs and their items so as to test for further structural validity. AVE should be above 0.5, as an AVE of 0.5 indicates that the variable explains more than half the variance of its items, and so ascertaining convergent validity (Hair, et al., 2014b). The AVE shows slight validity concerns in regards to the measure of 'Self-Control', highlighted in red, which is slightly below the 0.5 cut-off point. This could be either because a) the items within the 'Self-Control' construct do not correlate internally, they do not have 'convergent validity', or b) they correlate with items of other constructs, then they may not have 'discriminant validity'. Here, we first investigate the discriminant validity of the items by looking at the Maximum Shared Variance (MSV). If the MSV is higher than the AVE, the items would be correlating higher with another construct (Hair, et al., 2014a). Nevertheless, the MSV (0.087) is smaller than the AVE (0.441) of 'Self-Control'. This indicates that there are no issues with discriminant validity, implying that items may not be correlating particularly well to produce the IV of 'Self-Control'.

However, Fornell & Larcker (1981) specify that if AVE is less than 0.5, but 'Composite Reliability' (CR) is higher than 0.6, the convergent validity can still be considered acceptable. With this consideration in mind, 'Self-Control' can be considered adequate. All variables have a CR well above the 0,7 traditional cut-off point (Fornell & Larcker, 1981; Hair, et al., 2014a).

Correlations between Variables

Correlations between constructs should be kept to a minimum, as moderators in particular should not correlate with the DV and IV, if we want to arrive at a clear moderating effect (Baron & Kenny, 1986). Bivariate correlations between the constructs can be seen off-diagonally to the right of the AVE, MSV, and CR in Table 1. Here, one can see that 'Time Planning' and 'Self-Control' statistically correlate with both 'Intention' and 'Behaviour'. Although some of the constructs may correlate with one another, this is not necessarily an issue, as correlation does not have to indicate causation or direct relationship, or a too close similarity in items. Straight-forward correlations are only a superficial overview, without an explanation of why or how the variables interact.

One can furthermore look at the square root of the AVE, shown in bold above the bivariate correlations in Table 1. According to the Fornell-Larcker criterion (1981), the structural validity of the model can be

verified if all the correlations within a construct are below the square root AVE of the variable. As Table 1 shows, all our variables fulfil this requirement. Further steps are taken in the next section as part of the 'Structural Equation Modelling' to ascertain that the variables do not correlate too strongly with one another, and that the model is indeed structurally valid.

Table 1: Descriptive Statistics and Correlations of the Study Variables

	Mean	Std. Dev.	CR	AVE	MSV	Age	Gender	Education	Behaviour	Intention	Inst. Support	Self - Control	Time Planning
Age	41.74	11.122											
Gender	1.52	0.501				0.054							
Education	3.53	0.734				0.015	0.111						
Behaviour	2.67	1.214	0.946	0.641	0.164	0.031	-.137*	0.005	**0.801**				
Intention	3.91	0.743	0.805	0.591	0.164	0.074	-0.111	-.195**	.384**	**0.769**			
Inst. Support	3.03	0.993	0.838	0.641	0.003	0.044	0.102	-0.055	-0.026	-0.061	**0.801**		
Self-Control	3.65	0.730	0.825	0.441	0.087	0.042	0.128	0.020	.183**	.160*	-0.014	**0.664**	
Time Planning	3.62	0.757	0.855	0.544	0.087	-0.034	0.060	0.024	.183**	.189**	-0.001	.258**	**0.738**

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

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

Bold diagonal elements represent the **square root of AVE**

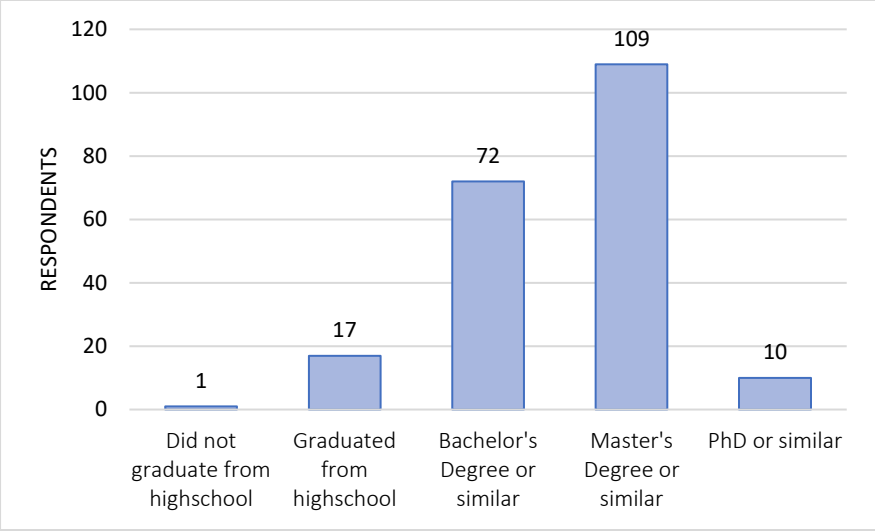
Note. N=211, except Gender N=208, and Education Level N=210

4.2 Descriptive Statistics

Now that the data has been cleaned and verified, this section gives a brief overview of the descriptive findings of the dataset, which are also statistically outlined in Table 1.

108 of the respondents were female, which equals a percentage of 51.2 of the total sample. Respondent age ranged from 20 to 72, with the mean age being 41.7. Education levels among respondents were on average high, with the majority having either a bachelor or a master's degree (Figure 7).

Figure 7: Education Level of Respondents in t1



A total of 71 countries worldwide were represented, with the biggest groups of respondents coming from the USA (14.2%), India (8,1%), Nigeria (5.7%), Denmark (4.7%), and Canada (4.3%). Furthermore, 44 of the respondents, or 21%, considered themselves to be from a minority group.

Findings indicate that 146 (69.2%) out of the 211 individuals who completed the questionnaire were involved in some kind of social enterprise start-up activity. A reason for this distribution could be that those who did become involved in the starting-up of a social enterprise may have in turn been more motivated to respond to the questionnaire. In this case, results may be less representative of those that did not act. Average intention of respondents was also slightly higher in the t2 dataset (3.91) than in t1 (3.71), which may indicate that those with higher intention were more likely to answer the t2 questionnaire.

A further interesting aspect to look at is Sheeran's (2002) 'two-by-two matrix' applied to our intention-behaviour relationship (Figure 8). As explained in the literature review (see Section 2.1.2), the matrix looks at the proportion of individuals who were inclined to start-up a social enterprise, versus those who were disinclined, and their subsequent behaviours. The discrepancy between intentions and behaviour is attributed to the groups of individuals who did not act as intended, the 'inclined abstainers' and 'disinclined actors'. These two groups are highlighted in blue in Figure 8 and constitute of 62 (29.4%) of our respondents. Generally, it has been found that it is 'inclined abstainers' who are mainly responsible for the intention-behaviour gap (Sheeran, 2002), and this is also true for our data, although a surprising seven individuals acted despite having no previous intention. In contrast, 149 (70.6%) individuals acted consistent with their initial intention.

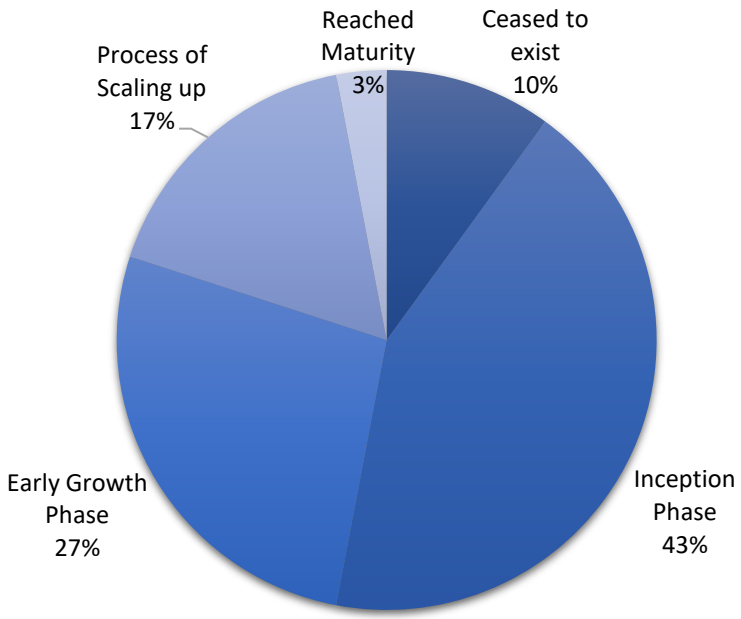
Figure 8: Application of Sheeran's (2002) 'Two-by-Two Matrix': Inclined Abstainers and Disinclined Actors

		Intention		Total Behaviour
		Positive	Negative	
Subsequent Behaviour	Acted	139 (65.9%)	**7 (3.3%)**	146 (69.2%)
	Did not act	**55 (26.1%)**	10 (4.7%)	65 (30.8%)
Total Intention		194 (92%)	17 (8%)	211 (100%)

According to the data, most of the social enterprise start-ups were either started by individuals (19,2%) or were considered to have two (21,2%), three (18.5%) or four (20.5%) founders. A remaining 16.5% of respondents had five or more founders. A further six individuals (4.1% of respondents) were no longer involved with their previously founded social enterprise.

In regards to the growth phase, the majority of social enterprise start-ups (70%) were in the inception or early growth phase. This is to be expected, as the questionnaire asked only about the involvement of individuals in social enterprise start-ups within the last four years. 17% of the social enterprise start-ups were in the process of scaling up, and 3% of the social enterprises had impressively managed to reach maturity in this short time period. 10% of the social enterprises started within this time had however ceased to exist.

Figure 9: Social Enterprise Growth Phase in t2



4.3 Measurement Model

The measurement model in Structural Equation Modelling (SEM) relates to the relationships between the variables and their items. These relationships are examined firstly through an 'Exploratory Factor Analysis' (EFA), secondly through a 'Confirmatory Factor Analysis' (CFA).

4.3.1 Introducing Structural Equation Modelling

Structural Equation Modelling (SEM) is chosen as the most logical and appropriate statistical confirmatory method for **testing our final conceptual model** (see Section 2.2.7). Simpler techniques for relationship testing, such as multiple regression or factor analysis, were found to be insufficient, as those are only able to test one relationship at a time, rather than an entire model (Hair, et al., 2014a). SEM is based on conducting several consecutive data analyses which verify and build upon each other so as to result in a complete, valid and testable model. As we are testing several interrelated variable relationships, a multivariate technique is necessary to test the entire model together simultaneously. Although there are a few other multivariate approaches available, SEM is by far the most-used approach in the field of social and behavioural sciences, with several hundreds of papers published using SEM for data analysis (Hair, et al., 2014a). Similarly, the study of Hockerts (2015, 2017) analysed the t1 sample through SEM, and so for consistency and validity purposes SEM seems the most appropriate approach.

What makes SEM particularly convenient is that it **allows for flexibility**. The aims of the study guide the necessary SEM procedures, and in turn, SEM allows for the systematic identification of possible modification which may strengthen a model and increase 'model fit' (Hoyle, 1995).

For the purpose of the study, firstly an 'Exploratory Factor Analysis' (EFA), and thereafter a 'Confirmatory Factor Analysis' (CFA) is performed with the programmes SPSS and Amos 24. Factor analyses are statistically based methods which are used to develop a model where several items are conjoined into distinct variables. The EFA first considers the internal validity of the scales, while the CFA then analyses the external consistency across the items of the differing constructs (Viswanathan, 2005). Their aim is to test the validity and reliability of the variables and the items which are meant to represent that variable. This procedure allows for the development of an appropriate and valid final model with good 'model fit'. 'Model fit' refers to the fit between the model and the data it is meant to represent, i.e. does the model match the observed data?

A 'good model fit' would thereby indicate that the model is 'plausible', and that it reasonably consistent with the data (Schermelleh-Engel, et al., 2003). On the other hand, if the tests indicate 'poor model fit', then the model has to be rejected and cannot be used to test the hypotheses. As the EFA and CFA are used to analyse reflective measurement models, the control variables are not included initially. The term 'latent variable' refers to those variables which are not directly observed or measured but are created mathematically from other variables measured. In this study, all the variables are latent variables, as they combine various items, except for the control variables.

Having achieved good 'model fit', our final conceptual model (inclusive now of the control variables) is ready for path analysis. This model, plus alternative variations of it, are subsequently drawn up in the program SmartPLS 3 (Ringle, et al., 2015), for the final path analyses. Conducting a path analysis allows for the final testing of the strength and significance of our hypothesised relationships.

Issues with Factor Analysis

One of the largest pitfalls of a factor analysis is that it assumes that there is an underlying relationship between the items and their constructs. This would mean that although some items may correlate together, they might not necessarily be indicative of the intended construct (Hair, et al., 2014a). As

researchers, we in turn have to determine if the items, that are correlating together, can be appropriately combined into a construct or not. EFA and CFA require a lot of a researcher's interpretation, which might even result in a misleading analysis (Fabrigar, et al., 1999).To mitigate this, the study aims to follow well-recognised papers using SEM (Hair et al. 2011, 2014a, 2014b) and established statistical parameters.

4.3.2 Exploratory Factor Analysis

KMO and Bartlett's Test of Sphericity – Measures of Sampling Adequacy

As a first step, the **Kaiser-Meyer-Olkin (KMO)** is calculated so as to **determine sampling adequacy**. In other words, it is used to ascertain that a proportion of the variance in the variables is due to some underlying common factor. The KMO value ranges from 0-1, and the sought after KMO value should be above 0.8 to be suitable for factor analysis.

Secondly, **Bartlett's test of Sphericity** is performed, which **tests the hypothesis that the data is related** and can be factored into a number of variables, so as to conduct factor analysis. Since it tests a hypothesis, the resulting p-value should be below the 0.05 cut-off point to be significant (Hair, et al., 2014a).

For our final items, the KMO is an adequate 0.861, and Bartlett's test (χ^2 4160,39, $p < 0.000$). These indices show acceptable sampling adequacy and that conducting a factor analysis is appropriate (Hair, et al., 2014a).

Exploratory Factor Analysis

Exploratory Factor Analysis (EFA) provides an overview of all the items used in the study and indicates **whether the items factor together within the intended construct**. This allows the researcher to remove reflective items that do not factor together internally as expected, or overly factor with other variables, to result in a reliable and valid model which can be tested through further multivariate methods.

An EFA consists of certain validity and reliability checks, such as eigenvalues, and Cronbach's alpha, as well as a 'component matrix', which gives an overview of how the items are interrelated. For the purpose of the study, a rotated component matrix is used for better and simpler interpretation in comparison to un-rotated factors (Yong & Pearce, 2013). More specifically, the rotation is a Varimax rotation, a standard

'orthogonal' method which assumes the factors are uncorrelated, and is considered to be the improved version of previously used rotations (Costello & Osborne, 2005; Fabrigar, et al., 1999).

To interpret the resulting factors of the rotated component matrix factors, one looks at the loadings to determine the strengths or weaknesses of the item-relationships. The closer to 1, the stronger the internal relationship. Initially, all possible items are inputted into the correlation matrix. From there it is up to the researcher's discretion to decide whether to **keep or remove certain items. Items can be dropped** if they **load insufficiently with a single factor**, **or** if the item is **highly cross-loading.** Within our EFA we removed items due to both reasons.

Firstly, we follow the advice of Hair et al. (2014a) and keep only items with a loading of over 0.6 for a variable. In complying with this criterion, we remove, for example, the item from Q34, 'I set long–term goals for what I want to achieve with my time' (see Appendix C). This is the first item in the scale which should be indicative of 'Time Planning'. Yet even when introduced into the final EFA, it only had a loading of 0.578 with its fellow items for the construct of 'Time Planning', below the 0.6 cut off point.

Secondly, an item can also be removed if it 'cross-loads'. This means that an item loads highly with two or more factors, indicating that the item is correlating too highly with items outside of its intended variable. A high cross-loading can be considered at 0.32 according to Costello & Osborne (2005), or a more conservative at 0.30 (Robinson, et al., 1991). When this happens, if it fits with the study design, and one has sufficient items per variable, the suggestion is to drop the cross-loading items (Costello & Osborne, 2005; Yong & Pearce, 2013). Conclusively, the overall aim is that each variable optimally has a minimum of three items with a communality over 0.6, and a cross-loading below 0.3, so as to have items which produce a strong and valid overall variable (Hair, et al., 2014a).

Due to high cross-loadings we removed several items, such as those that did not correlate with the construct of 'Self-Control' as initially assumed. Although we use a previously tested and verified scale, several items have high cross-loadings or load as entirely separate factors. For example, one could argue that Q43, 'I say inappropriate things' does not necessarily indicate a lack of self-control, but possibly rather personal preference. Indeed, in the original EFA, this item separates from other 'Self-Control' items to become its own construct. Another discrepancy is shown in the resulting answers to Q47, 'People think I have iron self-discipline'. Opposite to all the other 'Self-Control' questions, it asks the

individual about what **other** people think of them, rather than being self-reflective, and so it understandably appears as a separate construct. Furthermore, a few items of 'Self-Control' also correlate with 'Time Planning', such as Q50, 'I can work effectively to reach long-term objectives'.

Table 2 shows the resulting EFA after having conducted the Confirmatory Factor Analysis (CFA) and path analysis which further reduce the items, as explained in the following sections. The matching question for each coded item can be found under Appendix D. As can be seen in Table 2, all final items have a communality of over 0.6 with their intended construct (highlighted in blue), and each variable has a minimum of three items, following the guidelines of Hair et al. (2014a) and Pole & Lampard (2002) to result in a reliable construct. Additionally, there are no cross-loadings of over 0.3.

Eigen values and Percentage Variance

When deciding what variables to retain for factor analysis, the **eigenvalues** indicate which variables **account for sufficient variance** to be included in the factor analysis. Generally, Kaiser's criterion is used as a rule of thumb, suggesting that all constructs which have an eigenvalue of 1 should be retained (Yong & Pearce, 2013). However, some argue that that this cut-off point may overestimate the number of factors one should use (Costello & Osborne, 2005). As seen in Table 2, the eigenvalues are well above Kaiser's criterion of 1, which, thus, approves the inclusion and choice of the five constructs.

Percentage variance indicates how much each variable contributes to the total variance, which is important as a low percentage variance indicates a high amount of random error. Thereby, according to Hair et al. (2014a) in social sciences, one should aim at a resulting **cumulative percentage variance** above 60. As can be seen in Table 2, the five factors explain a cumulative variance explained of 66%, meeting the set criterion.

Table 2: Exploratory Factor Analysis - Varimax Rotated Component Matrix

Items	1	2	3	4	5
Behaviour 1	**,833**	,116	,121	-,026	,183
Behaviour 2	**,856**	,082	,074	-,043	,187
Behaviour 3	**,674**	,154	,040	,113	,056
Behaviour 4	**,768**	,051	,076	,032	,104
Behaviour 5	**,666**	-,102	,135	,033	,027
Behaviour 6	**,838**	,115	,126	-,010	,079
Behaviour 7	**,872**	,042	,037	-,073	,106
Behaviour 8	**,889**	,120	,043	-,070	,163
Behaviour 9	**,849**	,016	,002	-,001	,101
Behaviour 10	**,841**	,029	-,049	-,046	,006
Self-Control 1	,071	**,719**	,212	-,003	,020
Self-Control 2	,154	**,717**	,166	-,013	,124
Self-Control 3	,095	**,700**	,100	-,160	-,078
Self-Control 4	,006	**,759**	-,061	,068	,105
Self-Control 5	-,033	**,727**	,016	,082	,138
Self-Control 6	,105	**,691**	,116	-,001	-,063
Time Planning 1	,082	,134	**,706**	,068	,190
Time Planning 2	,045	,007	**,806**	,042	,058
Time Planning 3	,096	,125	**,773**	-,030	,007
Time Planning 4	,072	,149	**,743**	-,038	,045
Time Planning 5	,077	,084	**,865**	-,030	,030
Institutional Support 1	,014	,049	-,066	**,874**	-,023
Institutional Support 2	-,060	,019	,096	**,800**	-,075
Institutional Support 3	,026	-,079	-,024	**,905**	,003
Intention1	,224	,181	,153	-,057	**,622**
Intention2	,244	,021	,070	-,008	**,853**
Intention3	,164	,013	,082	-,045	**,886**
Eigenvalue	**7.732**	**3,631**	**2.452**	**2.312**	**1,692**
% of Variance	28.634	13.450	9.082	8.565	6.267
% of Cumulative Variance	28.634	42.087	51.169	59.734	66.000
Cronbach's Alpha	**0.946**	**0.825**	**0.851**	**0.830**	**0.784**

Cronbach's Alpha

Cronbach's alpha coefficient is customarily used to assess **internal consistency and reliability** of the variables, ranging from 0 to 1. The higher Cronbach's alpha, the higher the internal consistency of the items, and a value above 0.6 or alternatively 0.7 is generally found to be acceptable (Hair, et al., 2014a, p. 90). For our study, we followed De Von et al.'s (2007) suggestion by aiming for a Cronbach's alpha of above 0.7 to accept the internal consistency of our newly constructed questions for social enterprise start-up behaviour and 'Institutional Support'. The Cronbach's alphas for the final constructs are above the mentioned thresholds, indicating an acceptable internal consistency and establishing convergent validity (see Table 2).

4.3.3 Confirmatory Factor Analysis

The Confirmatory Factor Analysis (CFA) tests the model proposed by the EFA. Essentially, the EFA explores how well the measured items represent the constructs, and then guided by the statistical data, arrives at a suggested model. This model is then input into the program Amos 24, to arrive at a CFA with which we can confirm the item and construct interrelationships. However, the CFA is unable to examine relationships beyond simple construct correlations (Hair, et al., 2014a), making the CFA a precursor to the final structural model analysis. The CFA essentially checks that the items and constructs are valid, and that the theorised model has a good model fit. Thereby, several 'goodness of fit' indicators are looked at, as follows;

How to Interpret Confirmatory Factor Analysis

Standardised Factor Loadings

The first thing to look at when conducting a CFA are the standardised factor loadings, which are the bivariate correlations between the reflective items and the construct (Hair, et al., 2014b). As can be seen in the CFA illustration, Appendix F, the loadings are the numbers stated between the lines connecting items to variables. The loadings should all be statistically significant, meaning above a cut-off point of 0.7, or a less conservative cut-off of 0.5 (Hair, et al., 2014a). The initial CFA pointed out one issue – namely that the 'Intention' item of 'I do not plan to start a social enterprise' has a low loading of 0.44 with its corresponding construct. We removed this item from the model, as the loading is below the 0.5 cut-off point, and more than three items remain in order to create a strong and valid variable (Hair, et al., 2014a.

Appendix E gives a final breakdown of the items which construct our independent and dependent variables.

Chi-squared (χ^2), Degrees of Freedom (df), and normed Chi-squared (CMIN/DF)

Chi-squared (χ^2) is the basic statistical measure to quantify the differences between the observed and estimated covariance matrices (Hair, et al., 2014a). The χ^2 value is in turn divided by the degrees of freedom, to produce 'normed Chi-squared' (χ^2/df), fit index which should have a value below three to be acceptable (Hu & Bentler, 1999), but ideally below 2 for good model fit (Schermelleh-Engel, et al., 2003). Our final model shows a good χ^2/df value at 1.529, as seen in Table 3.

Normed Fit Index (NFI)

NFI is an 'incremental fit index', meaning it assesses to what extent the estimated model fits in relation to an alternative standard model, a 'null model', which assumes that all variables are uncorrelated (Hu & Bentler, 1999, p. 2). NFI ranges from 0 to 1, and a value of 0.9 or higher should be aimed for a good model fit (Hair, et al., 2014a). However, it should be noted that NFI can be affected by sample size. For smaller samples, the NFI might be lower than expected, even if the model is valid (Bentler, 1990). Our CFA produces a NFI nearly approaching the cut-off point, at 0.865. This is still very close to the ideal NFI, and so not particularly worrisome.

Comparative Fit Index (CFI)

Nevertheless, we check the CFI, which is the modern version of the NFI and also the most widely used 'incremental fit index'. Values again range from 0 to 1, with higher values demonstrating a better fit. Historically, the lower cut-off point for an acceptable model has been 0.9, but researchers should ideally aim for a CFI value above 0.95 so as to prevent incorrect models from being accepted (Hair, et al., 2014a). Our model's CFI, 0.948, is close to this upper value, meaning our model does have good model fit, which confirms that our NFI is acceptable.

Root Mean Square Error of Approximation (RMSEA)

RMSEA is a commonly used 'absolute fit index', which automatically measures to what extent the model reflects the actual data. Ranging from 0 to 1, the optimal RMSEA values would be below 0.05 (Hu & Bentler, 1999), although below 0.08 can be considered acceptable (Schermelleh-Engel, et al., 2003). Our resulting RMSEA, as seen in Table 3, is just on the first threshold at 0.05, indicating good fit.

Standardised Root Mean squared Residual (SRMR)

SRMR is a second 'absolute fit index', meaning that as above, perfect fit would be represented by a value of 0. According to Hu & Bentler (1999), the ideal SRMR should be below 0.08. The CFA shows that our model has a SRMR value of 0.058, below the threshold, signifying adequate overall fit of the model representing the data.

Modification Indices for Cross-Loading Estimates

Modification indices indicate the covariance between a model's constructs, and how the overall model χ^2 value would decrease by including a particular path that is not included in the current model (Hair, et al., 2014a). When high modification indices are evident, it is up to the researcher's discretion to either delete the item, or alternatively to covary it within the model. Generally, we follow the suggestion that if the deletion of an item increases model fit indices, it should be removed, but otherwise we attempt to covary items. The items however can only be covaried when it logically makes sense, i.e. when the two items are very similar and also reflective of the same construct.

Covariance issues were observed within the measures of 'Behaviour'. As we have many items representing the variable, the item with the largest modification index, asking if the social enterprise founders had 'Determined regulatory requirements' (Q12), was deleted. Checking Cronbach's alpha, CFI, RMSEA and PCLOSE showed that this improves the model.

The next biggest offender is 'Behaviour 6', which asked if the respondent has 'Opened a bank account for the start-up' (Q11). However, upon its deletion, model fit indices do not improve, and so it is instead covaried with 'Behaviour 8', as these are the items which show the highest covariance. Additionally, it makes logical sense to covary them, as 'Behaviour 6' asks if a bank account was opened, while 'Behaviour 8' asks if the business has been legally registered, and often one has to have a business legally registered before one can open a bank account in the business' name.

This change again increases the model fit values, with the final numbers presented in Table 3:

Table 3: Model Fit Thresholds and Final Model Values

	Threshold	Final Model Values
Chi-square		478,5
Degrees of Freedom		313
Chi-square /Degrees of freedom	< 3	1.529
CFI	> 0.9, ideally > 0.95	0.948
NFI	> 0.9	0.865
RMSEA	< 0.05	0.050
SRMR	< 0.08	0.058
PCLOSE	> 0.05	0.478

Conclusively, these values overall indicate that the variables and items are sufficiently valid to move on to the next step, that of constructing a structural model to test our hypotheses.

4.4 Structural Model

In this section, we continue the data analysis by doing a final check of the measurement model, and finally analysing the structural model. This comprises the path analysis, a comparison of alternative models and an extended analysis of our moderators.

4.4.1 Path Analysis

Having confirmed that we have adequate items and variables to construct a consistent model, the final structural model is set up to test the relationship between our constructs. After conducting the EFA and CFA, there are two main statistical SEM approaches when estimating the relationships in a complete model, the 'Covariance Based' and the 'Partial Least Squares' (PLS) approach. Although there is a debate regarding which approach is the most statistically correct, the choice of approach should be guided by the characteristics of the data, and the aim of the study. As such, **we apply PLS to our data**, as we find it the more appropriate tool for the purpose to our study. This is because PLS methods are **easier** to apply when investigating moderation models, and **work better** than Covariance Based models when the sample is smaller or has an increased complexity (Hair, et al., 2011). The main issue with PLS is that the measures of model fit are as of yet not as developed as those of the Covariance Based method. However, we do test for model fit in the previous EFA and CFA, and also apply a newly developed model fit test, the Heterotrait-Monotrait (HTMT) criterion to ensure there is no discriminant validity (Hensler, et al., 2015). The program used for the following calculations is SmartPLS 3 (Ringle, et al., 2015), chosen due to

its graphic interphase and ease of use, plus its ability to achieve good statistical results for moderation models.

PLS works similarly to a multiple regression analysis. The results show if there is a relationship between constructs, and what percentage of the variance can be explained by the model or construct using R^2 (Hair, et al., 2014b). As mentioned however, simple multiple regression approaches do not calculate all the relationships within a model simultaneously (Hair, et al., 2014a), which is why methods such as PLS are more appropriate than multiple regression.

PLS is used, firstly, to check the final structural model fit to judge if the model can be accepted, and, secondly, to analyse the structural variance explained (Hair, et al., 2014a). When conducting PLS modelling, the resulting model can be analysed in two stages, looking separately into the measurement 'outer' model, and the structural 'inner' results, following the suggestion of Hair et al. (2014b).

The outer part of the model is essentially the measurement model which we have previously tested in the EFA and CFA (Garson, 2016). This includes the relationships between our reflective items and their corresponding constructs (Hair, et al., 2014b). The outer model in PLS-SEM essentially re-confirms the significance of the items in relation to the constructs, as was done with the EFA and CFA. Appendix G, Figure 1, depicts a graphic representation of our final model. The outer model are the relationships between the constructs (in circles) and their respective items (in rectangles).

The inner model, also called the 'structural model' on the other hand, are the relationships between constructs, the relationships which essentially build up and test our theoretical structural model. Appendix G, Figure 2, visually depicts our inner model without the outer model. This distinction between the inner and outer model is important, as their evaluation methods are rather different, as is shown.

'Outer' Measurement Model Analysis and Reliability and Validity Check

As can be seen in Appendix G, Figure 1, all the arrows in the outer model point from the construct towards the item, indicating that all our items are reflective. This means that the items are a partial representation of all the possible items which could reflect the construct.

As with the CFA, the items are again connected to their constructs through loadings. As before, the aim is to have a loading of above 0.7, but overall loadings above 0.5 can be considered acceptable (Hair, et

al., 2014a). As shown in Appendix G, Figure 1, all loadings between the items and their respective constructs are above 0.6, exceeding the 0.5 threshold, thus providing adequate model fit.

To further assess reliability and validity, one looks again at the Cronbach's alphas and Composite Reliability (CR), as well as Average Variance Explained (AVE) for each of the final constructs. For convergent validity, Cronbach's alpha and CR should be above 0.7, while AVE should be higher than 0.5 (Hair, et al., 2014b). Checking these values for our model, below in Table 4, shows that all these criteria are met, and validity is sufficiently established.

Table 4: Validity Measures of the Final Model.

	Cronbach's Alpha	CR	AVE
Behaviour	0,946	0,954	0,678
Intention	0,780	0,873	0,697
Institutional Support	0,831	0,812	0,602
Self-Control	0,825	0,867	0,522
Time Planning	0,853	0,894	0,629

Next, we conduct a Heterotrait-Monotrait ratio of correlations (HTMT) test, a new and improved method of checking discriminant validity (Hensler, et al., 2015). Discriminant validity tests how different the constructs are from one another, and that the construct indeed measures what it intends to (Hair, et al., 2014a). With HTMT, a value below 0.9 is aimed for to establish that there is no discriminant validity between the constructs (Hensler, et al., 2015). As shown by Table 5, the HTMT test confirms that there is no discriminant validity between our variables.

Table 5: Heterotrait-Monotrait Ratio of Correlations (HTMT)

	Age	Behaviour	Education	Gender	Inst. Support	Intention	Self-Control
Behaviour	0.046						
Education	0.019	0.093					
Gender	0.023	0.078	0.040				
Inst. Support	0.176	0.070	0.123	0.026			
Intention	0.175	0.443	0.125	0.062	0.092		
Self-Control	0.054	0.214	0.033	0.115	0.101	0.218	
Time Planning	0.085	0.208	0.082	0.142	0.087	0.279	0.315

Common Method Bias

Lastly, as previously mentioned in Section 3.5.1, one main concern when conducting studies is **common method bias**. This bias is defined as an **increase or decrease in the strength of construct correlations** due to a fault in the measurement method (Podsakoff, et al., 2003). Basic checks included the previously conducted convergent and divergent validity checks, but to truly ascertain that the common method bias is minimal, we look at the 'Variance Inflation Factors' of the inner model. Factors above 3.3 between an IV or moderators and the DV would indicate that there is too much collinearity and that the model is subject to the common method bias (Koch, 2015). Looking at Table 6 however, we can see that this is not the case, and that all the Variance Inflation Factors are well below this cut off point.

Table 6: Variance Inflation Factors' Values for Inner Model

VIF Values	Behaviour
Age	1.066
Education	1.050
Gender	1.136
Institutional Support	1.096
Intention	1.161
Self-Control	1.157
Time Planning	1.145

'Inner' Structural Model Analysis

Having confirmed the reliability and validity of the model, we can use the inner or structural model to assess our hypothesised relationships, drawn up in Section 2.2.

PLS SEM is quite different in its approach to 'model fit' statistics when analysing the structural model, as one customarily does not use several of the previously mentioned 'goodness of fit' indicators, such as CFI, PCLOSE or RMSEA. Instead, the model is evaluated based on its competency in predicting the DV. Thereby, the suggestion is to look at the coefficient of determination (R^2), the cross-validity redundancy (Q^2), path coefficients and t-statistics, and the effect size (f^2) (Hair, et al. 2011 & 2014b). SRMR, previously used in CFA, is added as an absolute fit index.

Coefficient of Determination (R^2)

R^2 represents the combined effect of the IV and moderators on the DV. The R^2 values are calculated to assess the predictive accuracy of the model, and range from 0 to 1. A higher number indicates a stronger predictive accuracy (Hair, et al., 2014b). It should be noted that R^2 values are used throughout many fields, which subsequently require higher or lower R^2 values to accept the predictive accuracy of the model. This leads to a myriad of recommendations regarding what an acceptable R^2 value is. Some suggest that values over 0.1 are sufficient (Falk & Miller, 1992), while others, such as Hair et al. (2014b) suggest that values of 0.25, 0.5 and 0.75 should be considered, respectively, as weak, medium and strong R^2 values. For social sciences, where it can be assumed that a variety of factors besides those tested affect the results, the 'rule of thumb' should allow for this consideration. Thereby, we are guided by Cohen's (1988) proposal, as he specifically refers to behavioural sciences, and is also the first to specify the calculations for effect size (f^2). Cohen (1988) suggests that R^2 values of 0.02 are weak, 0.13 are moderate, and those of 0.26 or above, are large.

Cross-Validity Redundancy (Q^2)

Q^2 assesses the 'inner models' predictive relevance, without referring to the quality of that prediction (Hair, et al., 2014b). A Q^2 above 0 indicates that the model is relevant in predicting the dependent variable, i.e. it affirms the R^2 is valid.

Standardised Root Mean Squared Residual (SRMR)

SRMR, as previously presented in the CFA analysis, indicates absolute fit, where perfect fit is 0. The aimed-for SRMR value should be below 0.8 (Hu & Bentler, 1999).

Path Coefficients

The path coefficients are the hypothesised relationships between our variables, depicted in Appendix G, Figure 2, as the arrows and their adjacent values. The values range from -1 to +1 to indicate the direction of the relationship, and the further from 0 the path coefficient is, the stronger the relationship (Hair, et al., 2014b). This is not to say that the coefficients obtained are necessarily significant, as they could be random occurrence. Thereby a 'bootstrapping test' is run to test for the significance (or *p-values)* of the path coefficients. The p-values indicate how confidently one can reject the null hypothesis, i.e. in this case, that the relationships tested do not have an effect on the DV. The closer the resulting p-value is to

0, the more confidently one can reject the null hypothesis. As a general rule, a value below 0.05 is required to consider the path coefficient statistically significant, as a value of 0.05 would indicate a 5%, or 1 in 20 chance of the relationship being random coincidence.

T-Statistics

T-statistics are calculated to assess the level of significance of each relationship (Hair, et al., 2011). The higher the value, the higher the significance level. The critical t-value cut-off point is 1.96, which indicates a confidence level of 95%. The t-values are not as straight-forward to understand as some of the other measures, so for further assessment guidance, it should be noted that a value of 1.65 indicates a 90% confidence level, and a value of 2.58, indicates a confidence level of 99%.

Effect Size (f^2)

Cohen's (1988) f^2 shows the effect size of each path and is calculated as the change in R^2 when a construct is systematically removed from the model (Hair, et al., 2014b). The higher the resulting value, the stronger the construct's effect. Using Cohen's (1988) parameters for consistency, the f^2 values can be considered strong if above 0.35, moderate at 0.15, and weak at 0.02.

4.4.2 Comparison of Alternative Models

Now that the method of analysis for PLS has been established, we can test our hypotheses through a series of models, as seen under Table 7 (p.88), with the according f^2 values under Table 8 (p.89). Although the overall aim is to test the full model and the simultaneous moderating effects, we first test each of the intervening constructs separately, as a comparison of models allows for a much stronger overall analysis (Hair, et al., 2014b).

'Model 1' tests only the relationship between 'Intention' and 'Behaviour' with the addition of the control variables. The path coefficient between 'Intention' and 'Behaviour' is significant (0.411, *p=0.000)*, indicating that H1 is supported by the data. The R^2 shows that **'Intention' alone explains 16.8% of the variance in 'Behaviour'**, and the Q^2 value affirms the validity of the R^2. Furthermore, the f^2 and the t-value (7.196) confirm that the intention-behaviour relationship is indeed significant, while none of the control variables appear to have a significant effect on 'Behaviour'. This lack of control variable effect on social enterprise start-up behaviour simply implies that individuals are equally likely to start-up a social enterprise irrespective of their age, gender, or education.

'Model 2' tests the supposed moderators first as IVs, or in other words, **as direct predictors of 'Behaviour'**. The results again indicate a clear intention-behaviour relationship, as well as the significance of the 'Self-Control' construct as an IV (path coefficient of 0.136, *p*=0.036). The increase in R^2 0.195 implies that to some extent, the constructs we assume to be moderators have an effect independently on 'Behaviour' as separate IVs.

Models 3a-3c test each of our hypothesised moderators individually for their moderating effects on the intention-behaviour relationship.

- 'Model 3a' tests the effect of **'Institutional Support'** as a moderator, yet it does not appear to be statistically significant (0.083, *p* =0.564). The data thereby does **not support H2a**.
- 'Model 3b', testing H2b, that **'Self-Control' positively moderates the intention-behaviour relationship**, is supported by our results (0.164, *p* =0.022). The t-statistics indicate a value of 2.213, meaning that it can be assumed with an over 95% confidence level that the relationship is statistically significant. However, it should be noted that 'Self-Control' is also a significant IV (0.136, *p* =0.021, t-value = 2.407), although the effect size is slightly smaller than as a moderator when comparing path coefficients and f^2. The overall variance explained when adding the variable 'Self-Control' increases to 19.5%.
- 'Model 3c' looks at how '**Time Planning'** affects the intention-behaviour relationship. 'Time Planning' as a moderator is clearly **not significant** (-0.036, *p*= 0.675).

The final model, '**Model 4' tests the conjoint moderation effects**. The R^2 for our final model is 0.236, indicating that **our model explains almost 24% of the variance in 'Behaviour'**. Applying Cohen's (1988) criteria this variance suggests that the model predicts a medium-large amount of the variance in behaviour. A check of the Q^2 value (0.138) shows it is clearly above zero, demonstrating that the model is indeed predictive of 'Behaviour'. SRMR furthermore shows adequate model fit with a value of 0.61. Path coefficients, seen in Table 7 on the following page or in Appendix G, Figure 1, indicate that some of our hypothesised relationships are clearly stronger than others, and that some appear to be statistically significant, while others not. The path coefficients of the final model thereby indicate that:

- **H1**: 'Intention' has a clear effect on 'Behaviour' with a path coefficient of 0.339 (p = 0.000). There appears to be a clear relationship between 'Intention' and 'Behaviour', and the 'null hypothesis' for H1 can be confidently rejected.
- **H2a:** 'Institutional Support' does not appear to have a moderating effect on the intention-behaviour relationship, as according to our data the p-value for the relationship is 0.530.
- **H2b**: 'Self-Control' does have a significant moderating effect on the intention-behaviour relationship, having a path coefficient of 0.178, with a p-value of 0.007. This indicates that the path coefficient is significant, and the 'null hypothesis' can be rejected.
- **H2c: '**Time Planning' does not seem to have a significant moderating effect on the intention-behaviour relationship (p = 0.521).

Furthermore, the t-statistics of the final inner model, shown in Appendix G, Figure 3, confirm that the following relationships are statistically significant:

1) The intention-behaviour relationship, with a t-value of 5.342, shows a significant relationship;
2) 'Self-Control' as a moderator, with a t-value of 2.882, indicates that the relationship is indeed significant with a confidence level of over 99%; and
3) 'Self-Control' as an IV, with a t-value of 1.833, indicates that it has an effect on behaviour with a confidence level between 90-95% (Hair, et al., 2011).

Checking effect sizes (f^2) in Table 8, under 'Model 4', we see that 'Intention' has a moderate effect size (0.131), and 'Self-Control' as a moderator has a weak-moderate effect size (0.041) on 'Behaviour'. All other variables were below the 0.2 'weak' effect size threshold, although 'Self-Control' as an IV (0.017) approaches the threshold. This indicates that self-control has a direct effect on behaviour, but that it's moderating effect on the intention-behaviour relationship is stronger.

Table 7: Comparison of Alternative Models

Model Fit	Model 1	Model 2	Model 3a	Model 3b	Model 3c	Model 4
SRMR	0.054	0.061	0.057	0.060	0.056	0.061
Behaviour R^2	**0.168**	**0.195**	**0.175**	**0.217**	**0.182**	**0.236**
Behaviour Adjusted R^2	0.152	0.167	0.150	0.194	0.158	0.198
Behaviour Q^2	**0.102**	**0.116**	**0.103**	**0.130**	**0.109**	**0.138**
Age	-0.034	-0.036	-0.034	-0.039	-0.033	-0.034
Education	-0.105	-0.097	0.113	-0.098	-0.101	-0.103
Gender	0.021	-0.004	0.013	0.009	0.008	-0.005
Main Variables						
Intention	0.414***	0.362***	0.401***	0.368***	0.372***	0.339***
Institutional Support		-0.023	-0.022			0.006
Self-Control		0.136*		0.136*		0.123 †
Time Planning		0.066			0.093	0.059
Moderators						
Institutional Support			0.083			0.074
Self-Control				0.164*		0.179**
Time Planning					-0.069	-0.092

Statistical significance of correlation coefficients: †<0.1, *<0.05, **<0.01, ***<0.001

Table 8: Alternative Model Effect Size (f^2)

	Model 1	Model 2	Model 3a	Model 3b	Model 3c	Model 4
Age	0.001	0.002	0.001	0.002	0.001	0.001
Education	0.013	0.011	0.015	0.012	0.012	0.013
Gender	0.001	0.001	0.001	0.000	0.000	0.000
Main Variables						
Intention	0.191	0.145	0.187	0.163	0.153	0.131
Institutional Support		0.001	0.001			0.001
Self-Control		0.021		0.023		0.017
Time Planning		0.005			0.006	0.004
Moderators						
Institutional Support			0.008			0.007
Self-Control				0.035		0.041
Time Planning					0.010	0.011

As a final step, we check if some of the variables have a mediating effect to assure that we are not misinterpreted our variables. Thereby, we test for mediation with SmartPLS 3, following the procedure suggested in Garson (2016), by comparing the strength of the intention-behaviour relationship with and without the mediating effect. If the strength of the intention-behaviour relationship changes, this would indicate that the construct does have a mediating effect. When testing the variables as mediators both separately and conjointly, the intention-behaviour relationship changed marginally (from 0.362 to 0.361) or not at all, indicating that none of the variables is a significant mediator.

4.4.3 Further Analysis

In this section we attempt to further understand the statistical results. We test an alternative measure for 'Institutional Support' from the Thomson Reuters foundation, given that the results do not appear to be in line with our hypothesis. Furthermore, the statistically significant moderator of 'Self-Control' is analysed through a simple slope analysis, and a statistical explanation as to the non-significance of Time Planning is proposed.

Institutional Support

Surprisingly, our findings indicate that institutional support seems not to have an effect on the intention-behaviour relationship. Rationalising that our results may reflect an individual's subjective experience or lack of knowledge, rather than the actual social enterprise start-up support, we test our model with a second measure of social enterprise support. We decide to implement an external, objective evaluation of social enterprise support, to also make sure that our results were not subject to 'common method bias' or other evaluation issues.

As the Thomson Reuters Foundation (2016) specifically assesses a country's institutional supportiveness for social enterprises(and which are 'The best countries to be a social entrepreneur' in), we select their country rating as an alternative measure In particular, Thomson Reuters' study encompasses areas such as government policy, ease of transactions, as well as access to funding and non-financial support for social enterprises in each given country. To assess these criteria, Thomson Reuters approached 20 social enterprises experts in every one of the 45 countries surveyed. The resulting responses are calculated into country ratings ranging from 0 to 100, with the average mean rating being 54.76 (SD 7.54).

Since only the largest 45 economies are surveyed in this study, inputting the ratings for each respondent's country revealed that, 46 individuals within our study did not have an equivalent country rating. These individuals come from both less economically developed countries such as Bolivia, Peru, Zimbabwe, Niger and Afghanistan, but also smaller, more economically developed countries such as New Zealand, Portugal, or Hungary. Inputting the average would skew the data, and calculating an average value of similar countries is not an option, as countries which one would assume to have a similar rating, do not. For example, the UK is ranked as the third most supportive social enterprise country with a rating of 60.6, while Ireland is in 44th place with a rating of 35.1. However, as the aim is just to retest our results, we went forward in the testing of this variable despite the almost 20% missing data. Both the SPSS 23 and SmartPLS 3 programmes 'delete case-wise' those individuals without a rating.

The first step is to check whether there is a correlation between Thomson Reuters' 'Country Social Enterprise Supportiveness', as we call it, and the results for our 'Institutional Support' variable. Going back to our introduction to 'Validity and Reliability' (Section 3.5), one can see that we originally checked all our constructs for ´nomological validity'. Yet, finding that our measurement for 'Institutional Support',

which we ourselves created for this survey, has neither an effect as a mediator nor as an IV, one could argue that we cannot be sure if we are measuring our intended construct. Thereby, checking 'Institutional Support' results against Thomson Reuters' scale could provide additional 'trait validity'. Indeed, when conducting a Pearson correlation with the two 'Institutional Support' variables, a statistically significant relationship of 0.311 (p-value below 0.01) is found, indicating that these two variables highly correlate.

Next, an EFA is conducted to test if it factors as a separate variable. In fact, 'Country Social Enterprise Supportiveness' factors rather strongly with our measurement of 'Institutional Support', at 0.465. This indicates that our construct of 'Institutional Support' appears to be in line with the Thomson Reuters' measure, adding credibility and trait validity to our measurement method. However, when checking Cronbach's alpha (0.317), it becomes clear that the item for 'Country Social Enterprise Supportiveness', although correlating highly with 'Institutional Support', is not part of the same variable. Thereby, it is worth testing Thomson Reuters' alternative construct for 'Institutional Support' as although they may be similar, they are not the same.

As the Thomson Reuters variable does not have to be tested for internal consistency (as it consists of only one item), it is directly input and tested in the final model with SmartPLS 3 and replaces our construct of 'Institutional Support' (Ringle, et al., 2015). As above, we test alternative models to thoroughly investigate the construct of 'Country Social Enterprise Supportiveness' (see Models 2.1; 3.1a; 4.1). In Table 9, we show the results of inserting the 'Country Social Enterprise Supportiveness' highlighted in blue and compare them to the original models.

The alternative models (see Models 2.1; 3.1a; 4.1 in Table 9) with Thomson Reuters' 'Country Social Enterprise Supportiveness' again shows that our environmental factor does not seem to have a significant effect on 'Behaviour', neither as an IV, nor as a moderator of the intention-behaviour relationship.

Table 9: Comparison of Models with the Alternative Measure of 'Country Social Enterprise Supportiveness'

Model Fit	Model 2 (Original)	Model 2.1:	Model 3a (Original)	Model 3.1a:	Model 4 (Original)	Model 4.1:
SRMR	0.061	0.059	0.057	0.052	0.061	0.059
Behaviour R^2	0.195	0.195	0.175	0.174	0.236	0.240
Behaviour Adjusted R^2	0.167	0.168	0.150	0.150	0.198	0.202
Behaviour Q^2	0.116	0.116	0.103	0.104	0.138	0.141
Age	-0.036	-0.038	-0.034	-0.035	-0.034	-0.035
Education	-0.097	-0.100	0.113	-0.105	-0.103	-0.096
Gender	-0.004	-0.016	0.013	0.024	-0.005	0.007
Main Variables						
Intention	0.362***	0.0368***	0.401***	0.405***	0.339***	0.339***
Institutional Support (Original)	-0.023		-0.022			
Country Social Enterprise Support		0.040			0.006	0.051
Self-Control	0.136*	0.132*			0.123†	0.108†
Time Planning	0.066	0.070			0.059	-0.106
Moderators						
Institutional Support			0.083		0.074	
Country Social Enterprise Rating				-0.074		-0.096
Self-Control					0.179**	0.189**
Time Planning					-0.092	-0.106

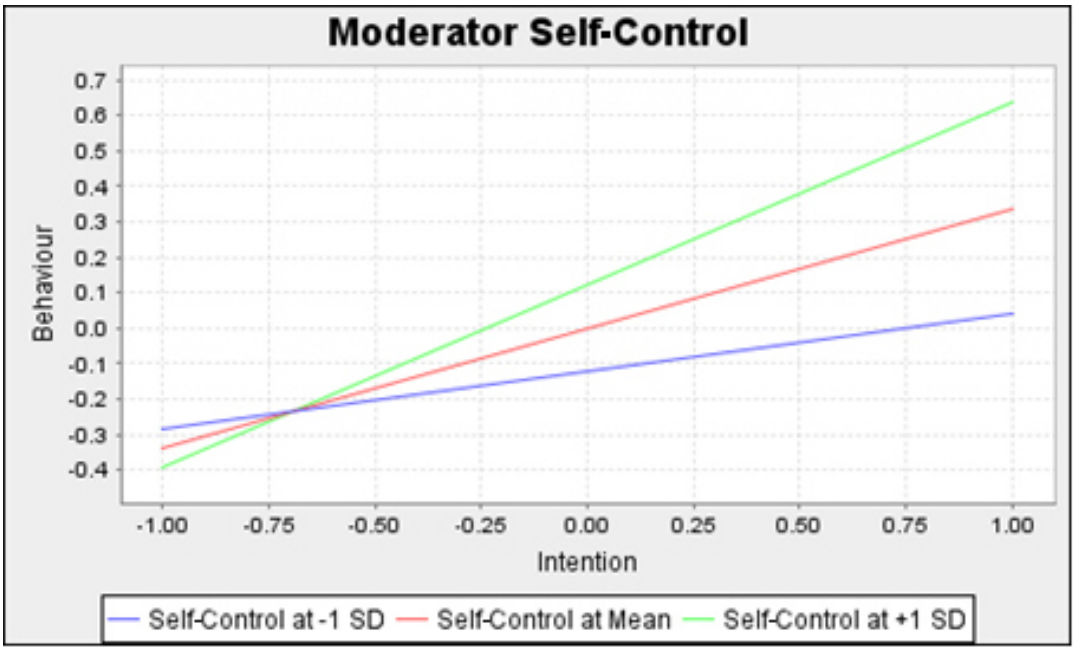
Models 2.1, 3.1a and 4.1 include Thomson Reuters' measure of 'Country Social Enterprise Supportiveness'.

Self-Control

'Self-Control' is the only tested moderator which the data indicates to have a significant effect on the intention-behaviour relationship. It also has a significant effect as an IV, which is of note, but which is not directly relevant conceptually to the testing of hypothesis 2b (Baron & Kenny, 1986). This finding simply indicates that 'Self-Control' also has a direct positive effect on social entrepreneurial behaviour, irrespective of intention.

A simple slope analysis (Figure 10), constructed with SmartPLS 3, shows how 'Self-Control' at the mean, and at +/- 1 standard deviation (SD), moderates the intention-behaviour relationship. The mean slope clearly shows that the higher the 'Self-Control', the more likely the individual will act as intended and start-up a social enterprise. Interestingly however, the 'standard deviation' slopes are not parallel, as might be expected, but cross over. Essentially, this indicates that an individual who both has high self-control (pictured in green as +1 SD in Figure 10) and does not intend to start-up a social enterprise, is less likely to start-up a social enterprise than an individual who also has not the intention, but has low self-control (the line in blue, -1 SD).

Figure 10: Simple Slope Analysis of Self-Control as a Moderator



Time Planning

According to our data, 'Time Planning' appears to have no effect neither as a moderator of the intention-behaviour relationship, nor as an IV. An argument for why it may not be having a moderating effect is its correlation with 'Self-Control' (0.258**, significant *p*-value at the 0.01 level), as seen in Table 1. This correlation may have an effect of cancelling out 'Time Planning' within the model. Such an effect can happen when two constructs represent the same variable or one construct reflects a particular facet of the other overall construct and variable. This then causes one construct to become statistically obsolete as otherwise the model would be measuring the effect of that one same variable twice.

Applied to our study, 'time planning' could be assumed to just be a subset of self-control. However, having gone through and presented validity and reliability checks throughout each stage of the SEM, we can assure that they are indeed two separate constructs which do not excessively cross-load. Furthermore, as was done in the 'alternative models' with the original construct (Table 8), we checked if 'Time Planning' was significant when tested as a single moderator without the possible influence of 'Self Control' (Table 8, Model 3c), which it was not. Conclusively, we measured and applied 'Time Planning' and 'Self Control' as two different variables.

5 Discussions

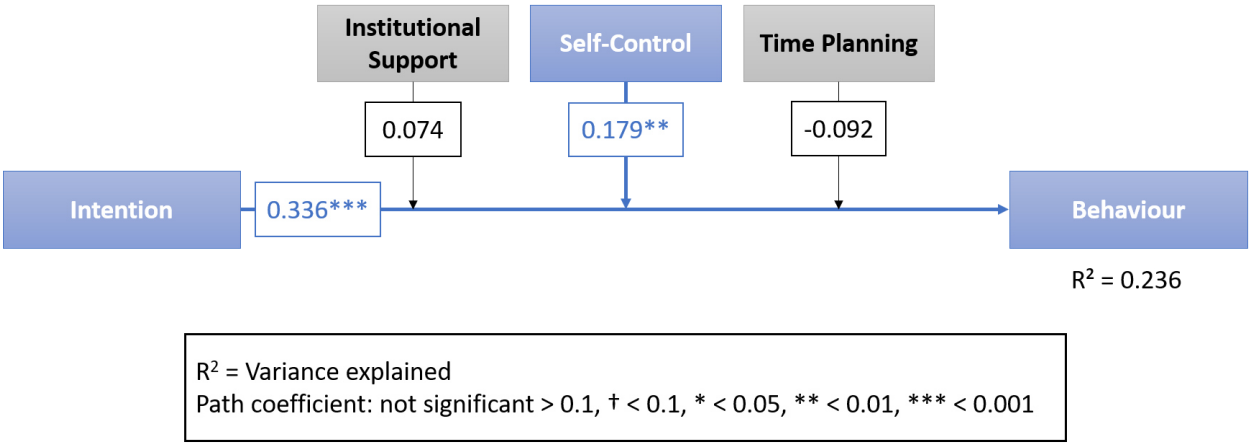
This section starts with an overview of our findings, going into the results for each hypothesis, their meaning, and how the literature may explain the findings. We follow this up with the possible theoretical and methodological limitations, as well as generalisability considerations of our study. Thereafter, the implications for practitioners and academics and are explored, and recommendations for future research are given. Lastly, reflecting upon what we have gleaned from this study, we point out its contributions to the scientific literature.

5.1 Overview of Findings

In summary, we applied Fishbein's (2000) 'Integrative Model for Behavioural Prediction' (IM) to better understand the intention-behaviour relationship. Our data indicates that intention is a predictor of social enterprise start-up behaviour, and that self-control is a moderator. In other words, the relationship between social enterprise start-up intention and behaviour is found to be statistically significant and, thus, H1 is supported by our data. However, institutional support appears not to be a significant

moderator of the intention-behaviour relationship, both when testing our own measure, and the 'Country Social Enterprise Supportiveness' from the Thomson Reuters Foundation (2016). H2a thereby is not supported by our data. H2b, which hypothesises that the personal factor of self-control is a moderator of the intention-behaviour relationship, is uphold by our findings. H2c, which theorises that time planning moderates the intention-behaviour relationship, is not confirmed by our findings, and is not statistically significant. All control variables are furthermore found to be not statistically significant, indicating that gender, age, or level of education does not affect social enterprise start-up behaviour. Our findings can be summarised by Figure 11, which shows the strength of the relationship within the model, their significance, and the resulting variance explained in the dependent variable, 'Behaviour'. In the following subsections, the statistical results of this study are discussed against the theoretical background outlined in the literature review (Section 2.1).

Figure 12: Final Structural Model with Path Coefficients and Variance Explained



5.1.1 The Intention-Behaviour Relationship (H1)

The social enterprise intention-behaviour relationship is found clearly within our study, as was originally hypothesised. Social enterprise start-up intention alone predicts 16.8% of the variance in subsequent behaviour. Nevertheless, it seems that intention is not a perfect predictor of actual behaviour, as 83.2% of the variance in behaviour remains unexplained. A further 6.8% in variance is then explained with the addition of our moderators (Model 4, Section 5.3.2).

The variance explained by intention in our study (16.8%) is lower than the average found in meta-analyses of intention-behaviour studies, such as Armitage & Conner (2001) or Sheeran (2002). However, we find three justifications within the literature which explain why this could be the case.

The first explanation is that our measurement of intention, for which we use the answers to t1 questions, may have captured 'wish-like', poorly formed intentions, rather than well-formed intentions (Bagozzi & Yi, 1989). This relates to the **degree of intention formation**, which is the extent to which the individual considers the consequences of their actions. Thereby, if the participant has considered the possible outcomes of their behaviour, their intentions are well-formed, and are a better predictor both of simple and complex behaviour, than poorly formed intentions (Sheeran, 2002). Although we could not ask questions regarding how well the intentions had been formed retrospectively, the importance of the measurement of intention formations should be considered in future research.

A second consideration is the **complexity of behaviours**. Fishbein (1995, 2000) proposes that researchers should differentiate between specific behaviours, behavioural categories and overall goals. The reason why the author recommends this distinction for behavioural research is that intention best predicts specific single activity compared to behavioural categories or goals (Fishbein, 2007). Hornik (2007) provides an example to clarify the distinction within the health-related field: A person may have the **overall goal** to lose weight. To achieve this aim, the individual has several options within the so-called corresponding **behavioural categories**, such as to either adapt her or his energy intake and/or the energy outflow. Each of these categories, in turn, consists of different **single actions**. While the first may entail to adhere to multiple dietary restrictions, the latter can refer to distinct exercise activities. Therefore, a single activity may be, for example, to go to a specific exercise class.

Applied to the present research, starting-up a social enterprise could be considered either a behavioural category or an overall goal, but not as a specific activity. For instance, if considered as a goal, this would lead to different behavioural categories, such as marketing or financing, which in turn entail different sets of activities. Marketing as a behavioural category may relate to specific actions which promote the social enterprise and its product or service.

Since starting-up a social enterprise can rather be regarded a behavioural category or goal, this may explain why our variance explained is lower compared to single, simple activities compiled in Armitage

and Conner's (2001) and Sheeran's (2002) meta-analyses. Essentially, the more complex the task, the more obstacles or challenges one may face, and so intention is less predictive of behaviour (Sheeran, 2002). The results from this study should thereby be more comparable to the findings from previous entrepreneurial intention-behaviour studies, such as Shirokova et al. (2016) and Van Gelderen et al. (2015). These found, respectively, entrepreneurial intention to explain 9.9% and 13% of the variance in behaviour, indeed explaining a slightly smaller variance than what was found in this study.

A further 83.2% of the variance in behaviour is not explained by intention, which means that intention alone is not a perfect predictor of subsequent behaviour. As delved into in Section 2.1.2, the intention-behaviour discrepancy is most often caused by 'inclined abstainers' and 'disinclined actors', those who **acted contrary to their intentions** (Sheeran, 2002). This is the case for our data, as 55 individuals with an intention to start-up a social enterprise, did not act, and seven people, who originally had no interest in social entrepreneurship, did go on to be part of a social enterprise start-up. In total, both groups amount to almost 30% of all the respondents of our sample (N=211).

A reason for this intention-behaviour discrepancy is that intentions can change over time (Sheeran, 2002). As such, the relative **temporal stability of intentions** is the next major consideration, as intentions can change quickly due to a myriad of factors. One could speculate that the seven respondents who indicated not having an intention in t1, yet acted, may have changed their intentions due to, for example, the online course on social entrepreneurship. As of a result of their now positive intention, they started-up a social enterprise. Following a similar logic, some of the 55 inclined abstainers may have changed or postponed their positive intentions due to, for example, an irresistible job offer, a family crisis, or administrative barrier. It is however still possible that these current inclined abstainers enact their intention eventually. Furthermore, as the first intention question in t1 asks to what extent the individual expects to be involved in starting-up a social enterprise within the **next five years**. Theoretically, one and a half years remain to allow for the enaction of their intention, so as to truly evaluate if the subject's original intention is fulfilled. Follow-up interviews asking about the individuals' current (continuing) intentions and the reasons as to why they have not acted to date could clarify these issues as part of future research.

To summarise, we firstly outlined that our variance explained may be lower compared to other behavioural studies, such as from Armitage and Conner (2000) and Sheeran (2002), possibly due to the degree of intention formation and/ or the complexity of our social enterprise start-up behaviour. Secondly, we indicated that intention alone is not a perfect predictor due to a visible discrepancy in our respondents' intention and subsequent behaviour, which could be caused by intentions changing over time. Overall, these results indicate that there is a need for academics to go beyond classic 'intention' studies, so as to investigate actual behaviour and what may influence individuals to enact or not enact their intended behaviour.

5.1.2 Institutional Support as a Moderator (H2a)

According to our data, 'Institutional Support' is **not** a significant moderator of the social enterprise start-up intention-behaviour relationship. This is surprising, given that we expected a supportive environment to help individuals to start-up a social enterprise, streamlining the administrative and legal process, while also reducing the entrepreneur's risk perception (Bruton, et al., 2010; Mair & Marti, 2009). In fact, we reconfirm this finding is reconfirmed by exchanging our own construct of 'Institutional Support' with Thomson Reuters' (2016) 'Country Social Enterprise Supportiveness'. While our survey in t2 asks respondents only about the regulative pillar within their country, Thomson Reuters' questions span all three institutional pillars. The two measurements are found to highly correlate with one another, indicating that our construct of 'Institutional support' is valid. However, both variables show that institutions do not appear to have a marked effect in the translation of social enterprise start-up intentions into behaviour. The literature provides differing explanations as to why we find that institutions may not have a significant effect on the intention-behaviour relationship.

Firstly, as our hypothesis based on the 'Institutional Support' view is not confirmed, one could conversely apply some arguments from the **'institutional void' theory**. Proponents of this theory argue that social enterprises develop particularly in countries with deficient formal institutions, hence institutional voids are considered opportunities (Dacin, et al., 2010; Mair & Marti, 2009). Ferri and Urbano (2015) suggest that an explanation as to why social enterprise founders are less discouraged by deficient institutions, compared to commercial entrepreneurs, may be because of their social mission. Driven by their social objectives, they may generate new, additional institutions or dismantle and remodel existing ones without being too affected by institutional voids (El Ebrashi & Darrag, 2017). Furthermore, in countries

with strong governments and fewer unmet social needs, potential social entrepreneurs are less motivated to start a social enterprise due to little demand, as suggested by studies such as Mair et al. (2012) and Estrin et al. (2013a). Our data however does neither support the institutional support, nor institutional void view, as there was no statistically significant effect, be it negative or positive. Nevertheless, it could be that institutional support does have an effect on the intention-behaviour relationship, but that the positive and negative effects cancel each other out, as suggested by Chen et al. (2016). As shown in the study of Puumalainen et al. (2015), it may be that unmet social needs can only be effectively met by social enterprises when the formal institutions are well established and sufficiently developed.

In this sense, one could argue that **our investigation looks too broadly at institutions,** which prevents us from finding out what institutional elements may hinder or support social enterprise start-ups. This type of broad approach to institutions within the entrepreneurship literature has been pointed out as an issue by Estrin et al. (2013b), who highlight the need for a more fine-tuned methodology. A number of authors delve into what specific aspects of institutions may have an effect on social entrepreneurship. For example, Estrin et al. (2013a) highlight the importance of property rights, finding that a strong rule of law which is supportive of individual rights has a positive effect on both social and commercial entrepreneurship. Alternatively, Griffiths et al.'s (2013) study highlights the importance of female participation in the labour force for increasing social enterprise start-up rates, while finding little evidence for environmental factors such as corruption, philanthropic support, or tax rates. As such, it may be that policy makers who do not yet know how to support social enterprise start-ups. This is highlighted for example by Kachlami (2014), who finds that conventional entrepreneurship policies, originally constructed to support commercial entrepreneurship, may have an entirely different or even negative effect on social enterprises.

In addition, Fishbein and Cappella (2006) support this reasoning by suggesting to adapt the IM to particular (a) activities, and (b) populations. This can be interpreted in two ways. On the one hand, as we defined our construct of 'social enterprise start-up behaviour' in terms of ten start-up activities, it may be that the 'Institutional Support' is relevant for some activities, but not for all. On the other hand, the statement implies that the determinant of 'Institutional Support' may be perceived in one population as an enabling factor, whereas another population may regard it as an obstacle (Fishbein, et al., 2001a). In

both cases, the effect of 'Institutional Support' may be statistically neutralised during our data analysis, which points towards future research looking at one activity and one population.

Alternatively, one reason for why institutional support may not have an impact on the intention-behaviour relationship may be that the potential social entrepreneurs have gone into the **'actional' phase of the Rubicon model.** This phase is characterised by a mindset which is closed to any information that would cause the individual to change their mind. In other words, environmental aspects that may disrupt their course of action are ignored (Achtziger & Gollwitzer, 2008). Although the institutional context may not play a role in the volitional phase of the Rubicon model, Urbano et al. (2010) and Stephan et al. (2015) suggest that it affects an individual's motivation. In fact, according to the Rubicon model, the institutional context is part of the motivational, pre-decisional phase (Achtziger & Gollwitzer, 2008). Hollenbeck and Klein (1987) propose that whether the institutional context is enabling or impeding a certain behaviour is considered during a person's process of setting a goal or developing an intention. Thus, these thoughts are supposed to be part of determining the desirability and feasibility of a particular goal (Urban & Kujinga, 2017). Hence, the institutional context could be expected to exert its influence in the motivational, pre-decisional phase instead of the volitional phase.

Future research could look at specific institutional aspects when investigating their moderating effects on the intention-behaviour relationship, for better understanding and provision of support to potential social entrepreneurs. This would allow to truly ascertain if and to what extent institutions may have an impact on the intention-behaviour gap within social entrepreneurship, or if an alternative explanation, such as that of the Rubicon model, may be more accurate in explaining the lack of effect.

5.1.3 Self-Control as a Moderator (H2b)

'Self-Control' is found to be the only variable tested which had a significant moderating effect on the intention-behaviour relationship. This implies that our data confirms the findings of authors such as Hagger et al. (2010), Mullan et al. (2013), and Van Gelderen et al. (2015). In particular, it supports the assumption that the personal factor of self-control shapes the degree to which a person acts upon her or his intention to start-up a social enterprise.

In this context, Hagger (2013) stresses that having this personal factor of self-control determines whether individuals are likely to enact their intentions. An explanation for this effect is provided by Van Gelderen

et al. (2015) who find that self-control has an effect on the intention-behaviour relationship within commercial entrepreneurship. Van Gelderen et al. (2015) argue that for individuals with low self-control intentions have the same significance as a wish, while for those with high self-control intentions are a goal which is actively worked towards. Starting-up a social enterprise would thereby require the individual to have certain self-regulatory and volitional capabilities. As such, one could go back to the argument regarding the need to differentiate between wish-like intention, and actual goal intentions, and use self-control to help distinguish the two. This could be a further development added to the traditional intention models so as to better predict behaviour.

Furthermore, an interesting point to note is that our data shows that those individuals with high self-control and no intention to start-up a social enterprise are less likely to translate their intentions into behaviour than those with **no intention and low self-control**. Essentially, one could infer that those with low self-control can still be influenced to start-up a social enterprise, despite their initial disinterest, while individuals with high self-control will work diligently towards an alternative career path. The possibility of such a correlation has indeed been pointed out previously by Van Gelderen et al. (2015), who hypothesise that those with high self-control may be less likely to recognise or seize entrepreneurial opportunities than more impulsive individuals.

Conclusively, self-control is a moderator of the intention-behaviour relationship, which targets and helps explain the intention-behaviour discrepancy. Furthermore, this personal factor could theoretically be applied to other intention-behaviour studies, even beyond the social entrepreneurial field. Given the important effect of self-control on the intention-behaviour relationship, we propose educators to integrate self-control improving activities in their programs. Although self-control is thought to be a mostly static personal factor throughout life, this is not entirely true, and there are also some activities that have been proven to increase an individual's self-control. One can refer to Friese et al.'s (2017) meta-analysis of the relationship of self-control training on subsequent self-control strength, which finds that training can indeed lead to a low to moderate increase in self-control. Studies indicate that several types of activities or interventions have the potential to increase self-control. For example, some studies suggest that regular practice of small self-control tasks improves overall self-control (Baumeister, et al., 2006; Muraven, 2010), while others advocate the use of meditation (Tang, et al., 2007), or martial arts lessons (Lakes & Hoyt, 2004).

5.1.4 Time Planning as a Moderator (H2c)

Our second personal factor, 'Time Planning', is found **not** to be statistically significant. Consequently, the hypothesis that it positively moderates the social enterprise start-up intention-behaviour relationship is not supported. Existing academic knowledge provides three plausible explanations for our outcome.

One explanation for why 'Time Planning' does not moderate the intention-behaviour relationship may be that it is not as good a proxy of implementation intentions as anticipated. Lynch et al. (2010) point out that comparing short- and long-term time planning actually shows that (a) People tend to plan more in the short run than in the long run; and (b) Short-term planning is a better proxy of implementation intentions than long-term planning. The authors assume that this observation can be explained because planning is a strategy to overcome obstacles. Thus, individuals may be more attentive towards time challenges in the near future. Moreover, as individuals plan more in the short run than in the long run, they wrongly assume that they are busier today than in the future (Lynch, et al., 2010; Zauberman & Lynch, 2005).

Another reason why time planning may not adequately represent implementation intentions is that it lacks part of the key element of implementation intentions: The 'situational cue' (Brandstätter, et al., 2001). Situational cue is the mental connection between a certain behaviour and a particular situation, which enables behaviour initiation: *"[I]ncreased accessibility of the environmental context in long-term memory enhances the probability of goal completion, because the mere perception of specified environmental features is capable of bringing the previously formulates goal into mind (and hence the activation of the resulting action itself […])"* (Aarts, et al., 1999, p. 972). Since the process of time planning only specifies "when", but not "where" to initiate the action, long-term time planning may not be an adequate proxy of implementation intentions as assumed in the beginning of the study.

Even if 'Time Planning' accurately accounted for implementation intentions, there are other issues that could explain why it results to be not statistically significant. Generally, previous research confirms that implementation intentions effectively translate intentions into behaviour (Gollwitzer & Sheeran, 2006). However, implementation intentions are not always constant over time, as shown in studies of Godin et al. (2010) or Murray et al. (2009). In addition, implementation intentions may only influence behaviour effectively when there is a strong goal intention (Gollwitzer, 1993; Sheeran, et al., 2005). Thus, one can

infer that as intentions are often volatile, this in turn may affect the long-term stability of implementation intentions.

Furthermore, Jackson et al. (2005) point out that current evidence does not indicate whether implementation intentions function better for simple than for complex behaviours, nor for single or multiple activities. Since then, Dalton and Spiller's (2012) research indicates that the strategy cannot be successfully transferred to multiple goals. Thereby, it might even be that implementation intentions may not necessarily have the intended effect of enhancing the goal attainment of starting-up a social enterprise, as this is a **complex** goal, consisting of **several** activities.

As discussed for 'Institutional Support' (Section 5.1.2), Fishbein and Cappella's (2006) recommendation to adapt the IM to a specific activity, can also explain why 'Time Planning' is not found to be a statistically significant moderator. It could be that 'Time Planning' is relevant for some of the social enterprise start-up activities we tested, but not for all. Therefore, the effect of 'Time Planning' as a moderator may be statistically neutralised in our study.

The last explanation refers back to the Rubicon model of action phases. In the actional phase the individual requires an 'actional mindset' which is characterised by being completely focused on obtaining a certain goal and, therefore, "*individuals in this mindset no longer reflect on the qualities of the goal to be achieved, or on their abilities and skills to achieve that goal*" (Achtziger & Gollwitzer, 2008, p. 277). This means that, in this stage, any self-reflective thought on a person's trait of 'Time Planning' may be perceived as a disruption towards achieving the goal. Moreover, the consideration of time plays a role in the motivational, pre-decisional phase (ibid.). As part of assessing the feasibility of a goal-directed behaviour, individuals determine whether or not they have sufficient time to pursue the goal. Therefore, the theory provides reason to assume that 'Time Planning' is not crucial in the volitional phase, but possibly earlier, when deciding on a particular intention.

Alternatively, our result complements findings from studies within other fields, such as that of Olander et al. (2013), who indicate that time planning neither affects the behaviour of physical activity. In fact, their study shows that time management impacts the respondent's self-efficacy, the belief that one is able to enact the action. In turn, self-efficacy has recently been found to predict social entrepreneurial intention (Hockerts, 2017). Thus, the personal factor of 'Time Planning' may have been not statistically

significant in our research because it plays a substantial role in the motivational, pre-decisional phase, but not in the volitional phase (see Rubicon model, Section 2.1.4).

Hence, current academic knowledge provides several possible explanations why 'Time Planning' is not found to be a statistically significant moderator. Further research could clarify if time planning may actually influence an individual in the pre-decisional phase.

5.1.5 Control Variable Considerations

It is important to note that the characteristics of our particular sample may have affected the results, although we did control for three variables: age, gender and education level. However, none of our control variables has a statistical effect on behaviour, opposite to what our literature review originally indicated. This may be because social entrepreneurship appears to be more inclusive of both women, and individuals from all age groups (Lepoutre, et al., 2013; Terjesen, et al., 2012).

Another explanation may be the specifics of our sample. Firstly, it should be noted that our sample has an equal split between female and male respondents, and a wide age range, with an age average of 41.74 (SD 11.12). However, it is comprised of mainly highly educated individuals. This means that our sample is not representative of the general population and may also have implications on our results.

As suggested from the GEM data, in all countries, level of education is strongly positively associated with social entrepreneurship (Bacq, et al., 2011; Terjesen, et al., 2012). This relationship is interestingly even stronger for less economically developed countries (Terjesen, et al., 2012). Thereby, on average, social entrepreneurs also have a higher educational attainment than their commercial counterparts (Bacq, et al., 2011). A reason for this may be that those with a higher level of education both have more knowledge and a larger network to draw from than their less educated counterparts (Kautonen, et al., 2015). This would theoretically help individuals access resources, or also overcome barriers, possibly making it easier for the educated to start-up social enterprises. Furthermore, high educational attainment is often an indicator of a more privileged background (Blanden & Gregg, 2004; Ermisch & Francesconi, 2003), again pointing towards a better access to resources and networks. Thereby, it could be theoretically argued that these highly educated individuals may perceive their environment as more supportive than those with lower educational attainment.

Another element to point out is that self-control has generally been found to predict higher academic achievement, as shown by, for example, the studies of Duckworth & Seligman (2005) and Converse et al. (2012). Given their high academic achievements, our sample may thereby have relatively high self-control (mean average of 3.65) compared to the average population, again indicating that our sample's demographics may be a further reason as to why this study resulted in a higher than expected variance explained. We could thus infer that our interviewees, given their high educational attainment, have a higher self-control and are most likely from a more privileged background, relative to their society, and also enjoy a wide network and a good access to resources. A further assumption would be that our sample has a working knowledge in the use of computers, enjoys a good access to internet, and has enough free time to engage with an online learning course. This highlights that our results are not generalisable, as the sample has unique qualities which may skew results.

5.2 Limitations

The limitations throughout the study can be summarised as follows, divided into the subsections of: theory, methodology and, lastly, sample considerations and generalisability.

5.2.1 Theoretical Limitations

Generally, the theory substantially directs and shapes this research, as outlined in Section 3.3, our approach is deductive. As a consequence, there are certain theoretical pitfalls to this study to be aware of. Two of these pitfalls stem from Fishbein's (2000, 2008) IM, while one originates from Heckhausen and Gollwitzer's (1987) Rubicon model.

Firstly, Fishbein (1995) proposes to identify particular environmental and personal moderators by engaging in **qualitative research** first in order to account for peculiarities in the sample, as some of these moderators may vary depending on the population under investigation (Fishbein, et al., 2001a). While being a valid recommendation, for our study we determined the constructs and their items based on a thorough literature review. This is a common approach to research as well and is in line with the "*hypothetico-deductive method*" (Kuada, 2012, p. 74).

Secondly, we discussed that a possible explanation for why 'Institutional Support' and 'Time Planning' are not statistically significant moderators may be related to our deviation from Fishbein and Cappella's (2006) suggestion to adapt the IM to a certain singular activity and a particular population. In fact, we

applied the IM to (a) the behavioural category or goal of starting-up a social enterprise, and (b) to a diverse and international sample, with respondents from 71 distinct countries. To reconfirm our findings, it would be interesting to apply the IM to a single social enterprise start-up activity and a culturally homogenous population.

5.2.2 Methodological Limitations

Furthermore, there are several methodological weaknesses which can be categorised as: philosophical limitations, discrepancies between the t1 and t2 studies, and data collection methods.

First and foremost is the fact that the **t1 study was not designed as a precursor of t2**, as should have been the case (Gielnik, et al., 2014), and which leads to several potential issues. Importantly, constructing the t1 study with the t2 in mind would have allowed for the development of questions with our specific research aims in mind, and thereby would have allowed for a less constrained research approach. For example, it would have been valuable to distinguish wish-like intentions, and actual intentions. Or, by asking interviewees specific questions to investigate Gollwitzer's implementation intentions, we would not have had to make use of Lynch et al.'s (2010) proxy of 'Time Planning'.

Furthermore, although Lynch et al. (2010) do test their 'Time Planning' scale, it is with simpler tasks and a shorter time-frame, indicating that the **scale may not have been the best instrument** for our purpose. Moreover, the skill of time planning can be acquired and developed through training (Inyang & Enuoh, 2009). Consequently, it is not a static variable, which means that it is not possible to determine whether the intention-behaviour relationship is stronger because she or he is innately capable of time planning, or whether the person developed this skill after having started-up a social enterprise. If individuals indeed advanced their time planning skills after starting-up a social enterprise, this would then bias the result in favour of time planning. Another reason not to test 'Time Planning' is that it may poorly reflect implementation intentions due to its lack of representing the "where"-association of the situational cue, as discussed in Section 5.1.4.

A second design issue is the **timeframe**. Theoretically, when conducting an intention-behaviour study, it should be stated in the t1 questionnaire, which measures intention, within what time frame the intended behaviour should be enacted (Gielnik, et al., 2014). The t1 study was not sufficiently specific, as it stated the time frame in only one of the three questions used. Additionally, it asked about the individuals'

intentions for the next five years, meaning we actually measured behaviour before the stated deadline. Thereby, it may not be fair to say that those who have not yet acted are 'inclined abstainers', as they would theoretically have another year and a half to enact their intention.

Additionally, for the purpose of our study in t2, it would have been better if the respondents' **intentions** in t1 were **measured at the end of the online Coursera course**, instead of the beginning. This is based on recent evidence which suggests that social entrepreneurship courses positively affect intentions to start-up a social enterprise (Shahverdi, et al., 2018). Consequently, measuring intentions at the end of the course, may have resulted in a smaller intention-behaviour discrepancy within Sheeran's (2002) two-by-two matrix. As a result of such possible effects, the TPB suggests that the time span between measuring intentions and action should be as small as possible (ibid.). To sum up, our study would have benefitted from measuring intentions at the end of the course as initial intentions may have changed throughout it, resulting in a lower intention-behaviour discrepancy.

Furthermore, there is a data collection issue regarding the **testing of our scales in the pilot study**, particularly as we did not include the 'Brief Self-Control Scale' and the 'Time Planning' scale. We assumed they had already been sufficiently verified, and that adding them to our pilot would discourage respondents due to the questionnaire's length. If the scales were tested in the pilot study, we would have realised that the scales were not as consistent as believed. For example, many items of 'Self-Control' did not factor together well. Looking over the Brief Self-Control Scale, the items presumably did not factor together as they focused on different aspects of 'Self-Control', such as asking about both one's own perception of their self-control, versus the perception of others. Lynch et al.'s (2010) scale for 'Time Planning' should have been part of our pilot study as well, as it was originally developed for consumer behaviour. Although there were sufficient items to construct a 'Self-Control' and 'Time Planning' construct, the testing of the scales in the pilot study would have allowed for further foresight and validity.

Moreover, one of the three self-developed items for 'Institutional Support' shows a deficiency. Despite our focus on formal, regulatory institutions, the third item is formulated as follows: 'The institutional context in my country is very supportive of starting-up a social enterprise'. The wording of 'institutional context' is misleading since 'institutions' refer to all three, regulatory, normative, and cognitive pillars, yet we intend to focus on the regulatory one. This **inaccurate wording** may have resulted in respondents'

answering differently to this question compared to a question clearly referring to formal institutions. Nevertheless, looking at the EFA and CFA, all three items factored highly with each other, possibly indicating that respondents did consider the three questions to refer to the same institutional aspect.

5.2.3 Sample Considerations and Generalisability

Finally, the last limitation of the study concerns the generalisability of our findings, as our t2 sample is neither representative of the t1 sample, nor of the general population.

An important issue regarding our findings refers to the consideration of a possible **'nonresponse bias'**. This refers to the over 2000 individuals who answered the t1 questionnaire, yet did not provide answers now in t2 (Agresti & Finley, 2014). This can cause an error, which entails implications for the generalisability of the study. Considering that we had an overall 7.8% response rate, this study runs a high risk of 'nonresponse bias', as it makes one question why some individuals did, while others did not, answer the t2 survey. Our data indicates that the respondents to t2 should not be considered representative of the t1 sample, and much less of the general population. For example, when comparing certain measures at face value, we can see that respondents for t2 on average had a higher 'intention' than the t1 respondents, and were also on average about five years older (despite having accounted for the time gap of almost four years between t1 and t2). One could furthermore theorise that individuals who did follow through with their intentions were more likely to answer in t2, as they were interested in promoting their progress, while those who did not act may in turn have felt discouraged to answer the survey. This would imply that a disproportionate amount of social enterprise start-up initiators responded, and that the actual intention-behaviour relationship is weaker when considering the entire t1 sample.

Moreover, the t2 sample is comprised of **highly educated individuals**, which may indicate that our study does not reflect the issues faced by potential social entrepreneurs from less privileged backgrounds. For example, 'Institutional Support' may be more important to individuals with less education and from less affluent backgrounds, as they have less personal access to resources. As we found 'Institutional Support' not to be statistically significant, this could mean that our highly educated respondents would start a social enterprise despite a deficient institutional environment, because they have the network to access necessary resources, or are better able to circumvent barriers.

Furthermore, one could argue that our entire **sample already showed a certain amount of intention** or interest by singing up to Kai Hockerts' online course on social entrepreneurship. Hockerts' (2018, in process) findings support this notion, as a statistically significant and positive link was found between students' social enterprise start-up intentions and the subsequent number of elective social entrepreneurship courses they enrolled in. This, coupled with the average peak entrepreneurial age of our respondents, implies that our sample may have a high proportion of individuals who do have some interest in pursuing social entrepreneurship as a career, more so than the general public. A repetition of this study with a sample possessing a different initial intention, and/or different characteristics, such as educational attainment, may find intention to explain much less of the variance in subsequent behaviour.

Overall, the generalisability of our findings is limited by approaching our research from a scientific realist point of view. Although the results may be statistically valid, scientific realism argues that research can 'only' reflect approximate truths. Therefore, no universal laws should be deduced based on our research.

5.3 Implications for Practice and Theory

Our research findings and their discussion lead to several indications for practitioners as well as academics. One the one hand, the findings entail suggestions for policy makers and educators. On the other, we deduce implications for researchers focusing on the intention-behaviour relationship in general, and, in particular, social entrepreneurship.

5.3.1 Implications for Practitioners

Policy Makers

As noted in the introduction, Section 1.1, social enterprises can play an important role by catering to the population's social needs and also have the potential to affect a country's legislation (Santos, 2012). Therefore, it could be interesting for policy maker to understand how to encourage social enterprise start-ups.

Fishbein (2000) provides insights as to how interventions can address human behaviour from two different angles: either by targeting the process of intention formation, or the intention-behaviour translation. The first approach requires to change or reinforce a particular belief in order to influence intentions. However, based on our application of Sheeran's two-by-two matrix (see Section 4.1) intention formation seems not to be an issue, given that our sample has relatively high positive intention. For the

second approach to translating positive intentions into behaviour, Fishbein (2000) suggests that **interventions can either target skills training or provide a favourable environment**. Within our focus of intention-behaviour translation, it is particularly policy makers could have the potential to provide and create a supportive environment for social enterprises. However, our findings indicate that the institutional support does not impact this relationship. This leads to two possible implications for policy makers: **Either there is no need for them to invest their resources into creating an enabling environment, or the current policies are ineffective**, in which case policy makers should revise and adapt them.

Educators

Universities' growing interest in social entrepreneurship has resulted in integrating the discipline within curricula, establishing corresponding courses, as well as providing support to students who intend to start-up a social enterprise (SEFORIS, 2014). Considering our self-control result, we propose two concrete approaches for universities to enable the translation of social enterprise intentions into behaviour. Essentially, our findings indicate that self-control seems to be a relevant personal factor for the translation, and that the likelihood for individuals with positive intentions to start-up a social enterprise is higher the more self-control they possess. Universities can account for this insight by **supporting the students with particular high self-control, and by enhancing the self-control level of students with positive intentions**.

The first recommendation is supported by the high number of 'inclined abstainers' within our sample, which outweighs the number of individuals with negative intentions. The fact that so many individuals stated an intention even before commencing the Coursera course on social entrepreneurship, and yet did not enact their intentions, could suggest that there is a **need for support, so as to turn intentions into behaviour.**

The second suggestion refers to **introducing self-control enhancing techniques in courses**. Some researchers (Friese, et al., 2017; Inyang & Enuoh, 2009) regard self-control as a personal factor that can be improved with the right technique. Therefore, self-control methods could be particularly relevant for individuals with a positive intention to start-up a social enterprise, but with a low self-control level, so as to increase the likelihood that these individuals act as intended. For example, studies such as Baumeister

et al. (2006) and Muraven (2010) suggest that self-control can be grown through regularly exercising self-control activities which can be assigned even within the classroom.

In conclusion, the statistical results lead to multiple practical implications for policy makers and educators. While the first are advised to review their current policies, so as to enhance their efficacy, the latter could focus on sustaining students with positive intentions, both the ones with high and the ones with low self-control.

5.3.2 Implications for Academics

Our results lead to several learnings for academic researchers. Firstly, a comparison between the traditional TRA and TPB with Fishbein's IM shows that the predictability of behaviour is higher when applying the IM. TRA and TPB posit that intention leads to behaviour, which in our Model 1 resulted in 16.8% variance explained in behaviour (Section 4.3). Applying the IM by accounting for moderators within this relationship increased the amount of variance explained by 6.8%, as shown in Table 7, Section 4.4.2. Due to this increase in explanatory power, we recommend **intention-behaviour researchers** to **use the IM for the purpose of predicting behaviour**.

Furthermore, Fishbein's (2000) IM may be replicable; however, this does not necessarily mean that our chosen variables have to be those applied. A different kind of behaviour may require different environmental and personal moderator considerations. For studies interested in new venture creation, our application of the IM could be replicated for social as well as commercial enterprises. Nevertheless, as our final model (Section 4.4.2) predicts 23.6% of the variance in behaviour, there is still 76.4% of the variance in behaviour to be explained. In addition, as the intention-behaviour discrepancy of our sample indicates, not every intention is translated into subsequent behaviour. Hence, **social entrepreneurship researchers** should **proceed with behaviour studies** as more research is needed to better understand the translation of social enterprise start-up intentions into subsequent behaviour.

Finally, we **generally** advise researchers to **review the measurement scales for self-control and time planning**, and either improve them or create new scales. As explained in detail in the limitations (Section 5.2), our data casts into doubt whether Tangney et al.'s (2004) 'Brief Self Control Scale' provides items that sufficiently factor together. As suggested, this may be because the scale does not distinguish between different aspects of self- control, such as how one may self-perceive their self-control, and how

it is perceived by others. Furthermore, in the limitations section we question whether Lynch et al.'s (2010) scale for long-term time planning can be proposed as a proxy for implementation intention, at least when considering complex and long-term goals, such as starting-up a social enterprise.

To summarise, we recommend the IM over the TRA and TPB when predicting behaviour, revealed a need to further investigate the social enterprise start-up intention-behaviour relationship, and, lastly, we call for a new measurement scales for self-control and the development of a better proxy for implementation intentions Further implications for academics based on our findings are outlined as part of possible future directions for research, as follows.

5.4 Future Directions for Scientific Research

Given that we are the first to investigate the intention-behaviour relationship within the field of social entrepreneurship, there are several topics that could be further addressed by future researchers to enhance the understanding of this matter and further fill the literature gap. The following section points out prospective research topics that this study touches upon.

Our results confirm that social entrepreneurial intention may be an important, but not a sufficient, predictor of subsequent behaviour, as we find a higher variance explained in behaviour when moderators are included within the model. Hence, our study suggests that future researchers could continue the investigation into **alternative moderators** explaining the intention-behaviour discrepancy. This could be approached by further in-depth research into potential environmental and personal moderation effects, particularly regarding institutional aspects as mentioned in Section 5.1.2). For policy makers, it could be especially interesting to determine if and how institutional elements spur on or inhibit the translation of social enterprise start-up intentions to behaviour.

Furthermore, we propose to conduct **follow-up research** as a continuation of this study. In particular, our currently explanatory research could be enhanced in terms of a so-called 'sequential explanatory design' (Saunders, et al., 2016). This is a mixed methods approach consisting of two data collections: Firstly, through a quantitative study, which is then followed by a second qualitative data collection phase (ibid.). The 'sequential explanatory design' is typically used to delve into the outcomes of the first study. This approach could be beneficial to us in order to better understand our results and look in more detail at the intention-behaviour relationship.

Firstly, this design could enable a detailed examination of Sheeran's (2002) two-by-two matrix by interviewing the respondents according to their clusters. In this regard, 'inclined abstainers' and 'disinclined actors' of our sample could explain why they didn't act in line with their initial intention. This could possibly shed light on the role of the online Coursera course, as discussed in Section 5.2.3, or also identify possible moderators or mediators for future research.

Secondly, another data collection through qualitative means could explain why 'Institutional Support' and 'Time Planning' seem not to be relevant considerations for our respondents when acting upon their intentions. This could clarify if, for example, current institutional policies are ineffective and, thus, be a reason for why 'Institutional Support' is not found to be statistically significant. In addition, prospective studies could indirectly take up this question by verifying if the institutional context and time management skill affect the motivational, pre-decisional phase, as suggested by the Rubicon model (see Section 5.1.2 and 5.1.4).

Lastly, researchers from **other fields** could contribute to current insights regarding the intention-behaviour relationship by conducting longitudinal studies and by focusing their research on complex, rather than simple, behaviours. This could be of particular interest as our model is replicable in new venture creation studies, and subsequent findings on the moderation effects of institutions, self-control and time planning could be compared.

In conclusion, this study illustrates a need for future scientific studies to further investigate the intention-behaviour relationship within and beyond social entrepreneurship. Future directions for scientific research include; conducting a qualitative or mixed methods follow-up study to better understand the findings of this research, and searching for other intention-behaviour moderators.

5.5 Contribution to the Current Scientific Literature

This research study and its findings provide multiple contributions to the scientific world.

First of all, its focus contributes to filling a **literature gap** by merging the disciplines of social entrepreneurship and intention-behaviour. To date, research has focused on the measurement of intentions within social entrepreneurship, with little attention paid to whether these intentions lead to behaviour (Schlagel & Koenig, 2014; Van Gelderen, et al., 2015). For instance, the precursor study by

Hockerts (2015, 2017) examines different antecedents of social entrepreneurial intention based on the theory of planned behaviour (TPB), which arguments that intentions reliably and effectively result in subsequent actions. However, these intention studies are only important if intention truly predicts behaviour (Shinnar, et al., 2017). Thereby, our study can be understood as **an overdue and necessary contribution to the existent literature** which, until today, has not investigated the intention-behaviour relationship within the social entrepreneurial field and, thus, failed to verify the relevance of intention studies.

Our findings, based on longitudinal data, indicate that intention does, to a certain extent, predict subsequent social enterprise start-up activities (see Section 5.1.1). Nevertheless, since intention accounts for 16.8% of the variance in social enterprise start-up behaviour, intention can be interpreted as an insufficient predictor of subsequent action. In this sense, our result **complements and confirms previous research** from other fields which derived at the same conclusion (Gollwitzer & Oettingen, 2012; Laguna & Purc, 2016; Moghavvemi, et al., 2015).

As described in Section 2.1.2, our model goes beyond the motivational model of the TPB (Armitage & Conner, 2000) by testing possible moderators of the social enterprise start-up intention-behaviour relationship, as proposed by Fishbein's (2000, 2008) IM. Thereby, this research focus falls within the scope of so-called behaviour enaction models which attempt to **deepen the understanding of how intentions are translated into behaviour** (ibid.). In fact, by adding the three moderators, our model results in explaining 23.6% of the variance in behaviour. Hence, our model provides a slightly **improved explanation of the translation of intention into behaviour**.

Moreover, by investigating the effects of environmental and personal factors, this study **responds to the request of researchers to shed light on moderators of the intention-behaviour relationship** (Sheeran, 2002) and, therefore, acknowledges their importance (Van Gelderen, et al., 2015). In particular, our findings suggest that 'Self-Control' does moderate the relationship, showing that the **social enterprise start-up intention-behaviour relationship becomes stronger for individuals possessing high levels of self-control**. On the other hand, Institutional Support', Thomson Reuters' 'Country Social Enterprise Supportiveness' and 'Time Planning' are not found to be statistically significant. It is suggested that future research could attempt to understand why both constructs do not appear to moderate the intention-

behaviour relationship. The newly acquired insights of our study deepen the understanding of the social enterprise start-up intention-behaviour relationship and result in recommendations for practice and theory (see Section 5.3), such as producing a **replicable model** for new venture studies.

Overall, this research fills a literature gap by focusing on the translation of intention into behaviour within the field of social entrepreneurship. On the one hand, as reflected in the research from other disciplines, our findings indicate that intention may be an important, but insufficient as a predictor of behaviour. On the other, it provides novel findings with reference to the role of self-control within social entrepreneurship. Lastly, this study contributes to the existing academic literature by taking up previous calls to further investigate moderators, and by applying the IM, which according to our sample, leads to an improved explanation of the translation of intention into behaviour. Notwithstanding this improvement, there is still a need for further research regarding the intention-behaviour relationship in social entrepreneurship.

6 Conclusions

This research paper is the first to investigate the intention-behaviour relationship within the field of social entrepreneurship by following-up on Hockerts' (2015, 2017) social enterprise start-up intentions inquiry from 2014. The central purpose of the current study was to verify whether social enterprise start-up intentions lead to subsequent behaviour, as well as to analyse how environment and personal factors may moderate the intention-behaviour relationship. This research showed and discussed our sample's findings as follows:

1) **Intentions can lead to behaviour within the context of social entrepreneurship**. However, the resulting moderate variance explained confirms past indications from other disciplines: intention is an important yet insufficient antecedent of actual behaviour (Gollwitzer & Oettingen, 2012; Laguna & Purc, 2016; Moghavvemi, et al., 2015). Hence, our study supports the necessity of applying Fishbein's (2000) 'Integrative Model for Behavioural Prediction' (IM), which improves the explanatory power of the intention-behaviour relationship by considering environmental and personal moderators.

2) **The environmental factor of 'Institutional Support' seems not to moderate the intention-behaviour relationship**. Reasons for this may include: (a) The implications of the Rubicon model, which stipulates that once an individual enters the 'actional phase', they pursue their goal relentlessly without considering

environmental barriers; and (b) The possibility that institutional policies in place to support social enterprises are currently ineffective. To verify our statistical result, Thomson Reuters' 'Country Social Enterprise Supportiveness' was tested and compared with our original models, but it neither was found to moderate the relationship.

3) **The personal factor of 'Self-Control' is a significant moderator of the intention-behaviour relationship**. Individuals with high self-control are more likely to act in line with their intentions, while those with low self-control may act opposite to their initial intentions. This is in line with previous findings which confirm that self-control, a personal factor that changes little over time, is an important moderator of the intention-behaviour relationship.

4) **The personal factor of 'Time Planning' is not found to be statistically significant as a moderator of the intention-behaviour relationship**. This could be because: (a) Lynch et al.'s (2010) long-term 'Time Planning' scale is not a suitable proxy for implementation intentions; (b) Implementation intentions do not have a significant moderating effect for large-scale, long-term projects such as starting-up a social enterprise; or (c) Time resource deliberations may be regarded as disruptions in the 'actional phase', and instead could be considered in the earlier pre-decisional phase, as suggested by the Rubicon model.

5) **The control variables of gender, age and education level seem not to affect the likelihood of behaviour**. This may be a result of social entrepreneurship being more inclusive of, or more appealing to, individuals who traditionally may be less likely to start-up a commercial enterprise.

These results can only be considered against the background of the theoretical and methodological limitations as well as the generalisability. Despite Fishbein's (1995) suggestions to identify environmental and personal factors through qualitative research and to adapt the factors to the population under study, we derived our factors from theory and applied one set of variables to a global sample. To name a few methodological weaknesses of our study, the t1 study was not designed as a precursor for t2, resulting in inaccuracy issues. Moreover, the scales for 'Self-Control' and 'Time Planning' were not tested in the pilot study. In terms of generalisability, we realise that our sample has certain unique characteristics which may skew our data. Nevertheless, our results are statistically valid and provide insights which can be applied in further scenarios.

In particular, our results provide relevant **implications** for both academia and practice. Firstly, intention-behaviour researchers could benefit from using Fishbein's (2000) IM, instead of the TRA or TBP, to better predict behaviour. Secondly, as the intention-behaviour discrepancy of our sample indicates, social entrepreneurship researchers should refrain from exclusively examining social enterprise start-up intentions and bring forward behavioural studies. Thirdly, we recommend the development of new measurement scales for 'Self-Control' and 'Time Planning'. Furthermore, practical implications for policy makers include to either limit the effort put into building a favourable environment, as it does not appear to affect the intention-behaviour translation, or alternatively to revise their current policies, as they may be ineffective. Finally, educators could support intenders with high self-control and consider incorporating self-control enhancing methods in their university courses to address students with social enterprise start-up intentions.

Lastly, we point towards multiple directions for future researchers. One avenue is to enhance the search for further moderators of the intention-behaviour relationship, or to follow-up our research through qualitative means, i.e. by interviewing respondents, and investigate why the institutional context and time management skills do not seem to affect the relationship. Particularly the knowledge gap concerning the translation of intention into complex, long-term behaviours could be addressed within other fields by replicating Fishbein's (2000) IM.

Overall, this study responds to the request of scholars to fill a literature gap, and thus enhances current academic insights by examining the intention-behaviour relationship within the context of social entrepreneurship. By showing that social enterprise start-up intention can predict behaviour, this research verifies the relevance of intention studies in this field, at least to a certain extent. Our research furthermore tested and applied a part of Fishbein's (2000) IM, by adding several moderators to our model so as to deepen the understanding of the intention-behaviour relationship. This leads to an increase in variance explained of behaviour, which confirms that intention alone is not a sufficient predictor or behaviour. Hence our application can be viewed as an improvement of the "Theory of Planned Behaviour", the theoretical starting point of our precursor study by Hockerts (2015, 2017).

In summary, despite our opening quote by Nicholls' (2006, p. vi), claiming that "*[s]ocial entrepreneurs have a vision of the future and **will stop at nothing** to see that future come true*", we conclude that this

assumption does not hold true for our sample. Our study reveals that while social enterprise start-up intentions lead to subsequent behaviour most of the time, intention does not sufficiently explain the variance in behaviour. This implies that further variables influence an individual's social enterprise start-up behaviour.

Bibliography

Aarts, H., Dijksterhuis, A. & Midden, C., 1999. To plan or not to plan? Goal achievement or interrupting the performance of mundane behaviors. *European Journal of Social Psychology,* 29, pp. 971-979.

Achtziger, A. & Gollwitzer, P. M., 2008. Motivation and volition. In: J. Heckhausen & H. Heckhausen, eds. *Motivation and action.* New York, USA: Cambridge University Press, pp. 272-294.

Adelekan, S.A., Williamson, M., Atiku, S.O., 2018. Influence of social entrepreneurship pedagogical initiatives on students' attitudes and behaviours. *Journal of Business and Retail Management Research,* 12(3), pp.168-177

Agresti, A. & Finley, B., 2014. *Statistical methods for the social sciences.* 4th ed. Harlow, UK: Pearson Education Ltd.

Agresti, A. & Franklin, C., 2013. *Statistics: The art and science of learning from data.* 3rd ed. Harlow, UK: Pearson Education UK Ltd.

Ajzen, I., 1985. From intentions to actions: A theory of planned behavior. In: J. Kuhl & J. Beckmann, eds. *Action control: From cognition to behavior.* New York, USA: Springer-Verlag, pp. 11-39.

Ajzen, I., 1991. The theory of planned behavior. *Organizational Behavior and Human Decision Processes,* 50(2), pp. 179-211.

Ajzen, I., 2012. Martin Fishbein's legacy: The reasoned action approach. *The ANNALS of the American Academy of Political and Social Science,* 640(1), pp. 11-27.

Ajzen, I. & Fishbein, M., 1980. *Understanding attitudes and predicting social behavior.* Englewood Cliffs, New Jersey, USA: Prentice-Hall.

Allom, V., Mullan, B., Clifford, A. & Rebar, A., 2018. Understanding supplement use: An application of temporal self-regulation theory. *Psychology, Health and Medicine,* 23(2), pp. 178-188.

Allom, V., Mullan, B. & Sebastian, J., 2013. Closing the intention-behaviour gap for sunscreen use and sun protection behaviours. *Psychology of Health,* 28(5), pp. 477-494.

Alsos, G. A. & Kolvereid, L., 1998. The business gestation process of novice, serial, and parallel business founders. *Entrepreneurship: Theory and Practice,* 22(4), pp. 101-114.

Armitage, C. J. & Conner, M., 2000. Social cognition models and health behaviour: A structured review. *Psychology and Health,* 15(2), pp. 173-189.

Armitage, C. J. & Conner, M., 2001. Efficacy of the theory of planned behaviour: A meta-analytic review. *British Journal of Social Psychology,* 40(4), pp. 471-499.

Aure, P.A.H., 2018. Exploring the social entrepreneurial intentions of senior high school and college students in a Philippine university: A PLS-SEM approach. *Journal of Legal, Ethical and Regulatory Issues*, 21 (2), pp. 1-11.

Austin, J., Stevenson, H. & Wei-Skillern, J., 2006. Social and commercial entrepreneurship: Same, different, or both? *Entrepreneurship Theory and Practice,* 30(1), pp. 1-22.

Bacq, S. & Alt, E., 2018. Feeling capable and valued: A prosocial perspective on the link between empathy and social entrepreneurial intentions. *Journal of Business Venturing*, 33(3), pp.333-350

Bacq, S., Hartog, C., Hoogendoorn, B. & Lepoutre, J., 2011. *Social and commercial entrepreneurship: Exploring individual and organizational characteristics,* Zoetermeer, Netherlands: EIM.

Bacq, S. & Janssen, F., 2011. The multiple faces of social entrepreneurship: A review of definitional issues based on geographical and thematic criteria. *Entrepreneurship & Regional Development,* 23(5-6), pp. 373-403.

Bagozzi, R. & Yi, Y., 1988. On the evaluation of structural equation models. *Journal of the Academy of Marketing Science,* 16(1), pp. 74-94.

Bagozzi, R. & Yi, Y., 1989. The degree of intention formation as a moderator of the attitude-behavior relationship. *Social Psychology Quarterly,* 52(4), pp. 266-279.

Balnaves, M. & Caputi, P., 2001. Methods of inquiry: 'It is a capital mistake to theorize before one has data!'. In: M. Balvnaves & P. Caputi, eds. *Introduction to quantitative research methods.* Thousand Oaks, California, USA: Sage Publications Ltd., pp. 64-109.

Bandura, A., 1986. *Social foundations of thought and action: A social cognitive theory.* Englewood Cliffs, New Jersey, USA: Prentice-Hall.

Bandura, A., 1991. Social cognitive theory of self-regulation. *Organizational Behavior and Human Decision Processes,* Volume 50, pp. 248-287.

Bandura, A., 1998. Health promotion from the perspective of social cognitive theory. *Psychology and Health,* 13(4), pp. 623-649.

Bandura, A., 1999. A social cognitive theory of personality. In: L. Pervin & O. John, eds. *Handbook of personality.* New York, USA: Guilford Publications, pp. 154-196.

Bandura, A., 2001. Social cognitive theory: An agentic perspective. *Annual Review of Psychology,* Volume 52, pp. 1-26.

Bandura, A., 2012. Social cognitive theory. In: P. A. M. Van Lange, A. W. Kruglanski & E. T. Higgins, eds. *Handbook of theories of social psychology: Volume 1.* London, UK: Sage Publications Ltd., pp. 349-374.

Bandura, A., 2018. Towards a psychology of human agency: Pathways and reflections. *Perspectives of Psychological Science,* 13(2), pp. 130-136.

Baron, R. & Kenny, D., 1986. The moderator-mediator variable distinction in social psychological research: Conceptual, strategic, and statistical considerations. *Journal of Personality and Social Psychology,* 51(6), pp. 1173-1182.

Barton, M., Schaefer, R., Canavati, S., 2018. To be or not to be a social entrepreneur: Motivational drivers amongst American business students. *Entrepreneurial Business and Economics Review*, 6(1), pp.9-35

Baumeister, R. F., Bratslavsky, E., Muraven, M. & Tice, D. M., 1998. Ego depletion: Is the active self a limited resource? *Journal of Personality and Social Psychology,* 74(5), pp. 1252-1265.

Baumeister, R. F. & Heatherton, T. F., 1996. Self-regulation failure: An overview. *Psychological Inquiry,* 7(1), pp. 1-15.

Baumeister, R. F., Vohs, K. D. & Tice, D. M., 2007. The strength model of self-control. *Current Directions in Psychological Science,* 16(6), pp. 351-355.

Baumeister, R., Gaillot, M., DeWall, C. & Oaten, M., 2006. Self-regulation and personality: How interventions increase regulatory success, and how depletion moderates the effects of traits on behavior. *Journal of Personality,* 74(6), pp. 1773-1802.

Bechara, J. P. & Van de Ven, A. H., 2007. Philosophy of science underlying engaged scholarship. In: A. H. Van de Ven, eds. *Engaged scholarship: A guide for organizational and social research.* New York, USA: Oxford University Press, pp. 36-70.

Bentler, P., 1990. Comparative fit indices in structural models. *Psychological Bulletin,* 107(2), pp. 238-246.

Blaikie, N., 2010. *Designing social research: The logic of anticipation.* 2nd ed. Cambridge, UK: Polity.

Blanden, J. & Gregg, P., 2004. Family income and educational attainment: A review of approaches and evidence for Britain. *Oxford Review of Economic Policy,* 20(2), p. 245–263.

Bordens, K. S. & Horowitz, I. A., 2002. *Social psychology.* 2nd ed. New Jersey, USA: Lawrence Erlbaum Associates.

Borsboom, D., Mellenbergh, G. J. & van Heerden, J., 2004. The concept of validity. *Psychological Review,* 111(2), pp. 1061-1071.

Boschee, J. & McClurg, J., 2003. *Towards a better understanding of social entrepreneurship: Some important distinctions.* [Online]
Available at: http://www.caledonia.org.uk/
[Accessed 19 01 2018].

Bradburn, N. M., Rips, L. J. & Shevell, S. K., 1987. Answering autobiographical questions: The impact of memory and inference on surveys. *Science,* Volume 236, pp. 157-161.

Brandstätter, V., Heimbeck, D., Malzacher, J. & Frese, M., 2003. Goals need implementation intentions: The model of action phases tested in the applied setting of continuing education. *European Journal of Work and Organizational Psychology,* 12(1), pp. 37-59.

Brandstätter, V. & Hennecke, M., 2018. Goals. In: J. Heckhausen & H. Heckhausen, eds. *Motivation and Action.* 3rd ed. Cham, Switzerland: Springer International Publishing, pp. 453-484.

Brandstätter, V., Lengfelder, A. & Gollwitzer, P. M., 2001. Implementation intentions and efficient action initiation. *Journal of Personality and Social Psychology,* 81(5), pp. 946-960.

Broonen, J. P., 2010. Des intentions aux actes: La volition en conseil en orientation. *L'Orientation Scolaire et Professionnelle,* 39(1), pp. 137-171.

Bruton, G., Ahlstrom, D. & Li, H., 2010. Institutional theory and entrepreneurship: Where are we now and where do we need to move in the future? *Entrepreneurship Theory and Practice,* 34(3), pp. 421-440.

Busenitz, L. et al., 2003. Entrepreneurship research in emergence: Past trends and future directions. *Joumal of Management,* 29(3), pp. 285-308.

Byrne, B., 2016. *Structural equation modeling with AMOS: Basic concepts, applications, and programming.* 3rd ed. New York, USA & Oxon, UK: Routledge Ltd.

Campbell, D. & Russo, M., 2001. *Social measurement.* 1st ed. Thousand Oaks, California, USA: Sage Publications Ltd.

Chakravartty, A., 2007. *A metaphysics for scientific realism: Knowing the unobservable.* Cambridge, UK: Cambridge University Press.

Chapman, S. & McNeill, P., 2005. *Research methods.* 3rd eds. new York, USA.:Routledge Ltd.

Chen, J., Saarenketo, S. & Puumalainen, K., 2016. Internationalization and value orientation of entrepreneurial ventures - a Latin American perspective. *Journal of International Entrepreneurship,* 14(1), pp. 32-51.

Cherryholmes, C. H., 1992. Notes on pragmatism and scientific realism. *Educational Researcher,* 21(6), pp. 13-17.

Chipeta, E. M. & Surujlal, J., 2017. Influences of attitude, risk taking propensity and proactive personality on social entrepreneurship intentions. *Polish Journal of Management Studies.* 15(2), pp. 27-36.

Choi, N. & Majumdar, S., 2014. Social entrepreneurship as an essentially contested concept: Opening a new avenue for systematic future research. *Journal of Business Venturing,* 29(3), pp. 363-376.

Cohen, J., 1988. *Statistical power analysis for the behavioral sciences.* 2nd ed. Hillsdale, New Jersey, USA: Lawrence Erlbaum Associates.

Colman, T., Devinney, T., Midgley, D. & Venaik, S., 2008. Formative versus reflective measurement models: Two applications of formative measurement. *Journal of Business Research,* 61(12), pp. 1250-1262.

Conner, M., Sandberg, T. & Norman, P., 2010. Using action planning to promote exercise behaviour. *ANNALS of Behavioral Medicine,* Volume 40, pp. 65-76.

Converse, P. D., Pathak, J., DePaul-Haddock, A. M., Gotlib, T. & Merbedone, M., 2012. Controlling your environment and yourself: Implications for career success. *Journal of Vocational Behaviour,* 80(1), pp. 148-159.

Costello, A. & Osborne, J., 2005. Best practices in exploratory factor analysis: Four recommendations for getting the most from your analysis. *Practical Assessment,* 10(7), pp. 1-9.

Crossman, J. M., 2016. Planning, practising and prioritising wellness through an integrative behaviour change plan. *Health Education Journal,* 75(7), pp. 823-832.

Curtis, R. & Reynolds, P., 2007a. *Panel Study of Entrepreneurial Dynamics - History of the Research Paradigm,* n.p.: Panel Study of Entreprneurial Dynamics.

Curtis, R. & Reynolds, P., 2007b. *Panel Study of Entrepreneurial Dynamics - Program Rationale and Description,* n.p.: Panel Study of Entrepreneurial Dynamics.

Dacin, P. A., Dacin, M. T. & Matear, M., 2010. Social entrepreneurship: Why we don't need a new theory and how we move forward from here. *Academy of Management Perspectives,* 24(3), pp. 37-57.

Dalton, A. N. & Spiller, S. A., 2012. Too much of a good thing: The benefits of implementation intentions depend on the number of goals. *Journal of Consumer Research,* Volume 39, pp. 600-614.

Davies, J., Foxall, G. R. & Pallister, J., 2002. Beyond the intention-behaviour mythology: An integrated model of recycling. *Marketing Theory,* 2(1), pp. 29-113.

Dees, J., 1998a. *The meaning of social entrepreneurship,* Kansas City, USA & Palo Alto, USA: Kauffman Foundation and Stanford University.

Dees, J., 1998b. Enterprising nonprofits. *Harvard Business Review,* 1(76), pp. 55-67.

Dees, J. & Andersen, B., 2006. Framing a theory of social entreprneurship: Building on two schools of practice and thought. *ARNOVA Occasional Paper Series. Research on Social Entrepreneurship: Understanding and Contributing to an Emerging Field,* Volume 1, pp. 39-66.

Defourney, J. & Nyssens, M., 2008. Social enterprise in Europe: recent trends and developments. *Social Enterprise Journal,* 4(3), pp. 202-228.

Defourney, J. & Nyssens, M., 2010. Conceptions of social enterprise and social entrepreneurship in Europe. *Journal of Social Innovation,* 1(1), pp. 32-53.

Defourney, J. & Nyssens, M., 2014. The EMES approach of social enterprise in a comparative perspective. In: J. Defourney, L. Hulgard & V. Pestoff, eds. *Social entrepreneurship and the third sector: Changing European landscapes in a comparative perspective.* Oxon, UK & New York, USA: Routledge Ltd., pp. 42-65.

DeLamater, J. D., Myers, J. D. & Collett, J. L., 2015. *Social Psychology.* 8th eds. Philadelphia, Pennsylvania, USA: Westview Press.

Devitt, M., 2007. Scientific realism. In: F. Jackson & M. Smith, eds. *The Oxford handbook of contemporary philosophy.* Oxford, UK: Oxford University Press, pp. 767-791.

Diamantopoulos, A., Riefler, P. & Roth, K., 2008. Advancing formative measurement models. *Journal of Business Research,* 61(12), pp. 1203-1218.

Djankov, S., La Porta, R., Lopez de Silanes, F. & Shleifer, A., 2002. The regulation of entry. *Quarterly Journal of Economics,* 117(1), pp. 1-37.

Dombrovsky, V., Paalzow, A. & Rastrigina, O., 2011. Latvia: Panel study of entrepreneurial dynamics overview. In: Reynolds, P.D. & Curtis, R.T., 1st eds. *New business creation. International studies in entrepreneurship,* Volume 27. New York, USA: Springer, pp. 143-174.

Drayton, W., 2002. Citizen sector: Becoming as entrepreneurial and competitive as business. *California Management Review,* 44(3), pp. 120-132.

Duchesneau, D. A. & Gartner, W. B., 1990. A profile of new venture success and failure in an emerging industry. *Journal of Business Venturing,* 5(5), pp. 297-312.

Duckworth, A. & Seligman, M., 2005. Self-discipline outdoes IQ in predicting academic performance of adolescents. *Psychological Science,* 16(12), pp. 939-944.

Eikenberry, A. & Kluver, J., 2004. The marketization of the nonprofit sector: Civil society at risk? *Public Administration Review,* 64(2), pp. 132-140.

El Ebrashi, R. & Darrag, M., 2017. Social entrepreneurs' strategies for addressing institutional voids in developing markets. *European Journal of International Management,* 11(3), pp. 325-346.

Elster, J., 1977. Ulyssess and the sirens: A theory of imperfect rationality. *Social Science Information,* Volume 16, pp. 469-526.

Ermisch, J. & Francesconi, M., 2003. Family matters: Impacts of family background on educational attainments. *Economica,* 68(270), pp. 137-156.

Estrin, S., Korosteleva, J. & Mickiewicz, T., 2013b. Which institutions encourage entrepreneurial growth aspirations? *Journal of Business Venturing,* 28(4), pp. 564-580.

Estrin, S., Mickiewicz, T. & Stephan, U., 2013a. Entrepreneurship, social capital, and institutions: Social and commercial entrepreneurship across nations. *Entrepreneurship Theory and Practice,* 37(3), p. 479–504.

European Commission, 2013. *Policy brief on social entrepreneurship - Entrepreneurial activities in Europe,* Luxembourg: OECD & European Union.

Everitt, B. S., 2007. *Cambridge dictionary statistics.* 3rd ed. Cambridge, UK: Cambridge University Press.

Fabrigar, L., MacCallum, R., Strahan, E. & Wegener, D., 1999. Evaluating the use of exploratory factor analysis in psychological research. *Psychological Methods,* 4(3), pp. 272-299.

Falk, R. & Miller, N., 1992. *A Primer for soft modeling.* 1st ed. Akron, Ohio, USA: The University of Akron Press.

Fatoki, O., 2014. The competencies and challenges of leading a student entrepreneurship organisation in South Africa. *Mediterranean Journal of Social Sciences,* 5(10), pp. 216-221.

Ferri, E. & Urbano, D., 2015. Exploring how institutions influence social and commerical entrepreneurship: An international study. In: L. M. Carmo Farinha, J. J. M. Ferreira, H. L. Smith & S. Bagchi-Sen, eds. *Handbook of research on global competitive advantage through innovation and entrepreneurship.* Hershey, PA: IGI Global, pp. 454-468.

Fishbein, M., 1995. Developing effective behavior change interventions: Some lessons learned from behavioral research. In: T. E. Backer, S. L. David & G. Saucy, eds. *Reviewing the behavioral science knowledge base on technology transfer.* Rockville, Maryland, USA: National Institute on Drug Abuse, pp. 246-261.

Fishbein, M., 2000. The role of theory in HIV prevention. *AIDS Care,* 12(3), pp. 273-278.

Fishbein, M., 2007. A reasoned action approach: Some issues, questions, and clarifications. In: I. Ajzen, D. Albarracín & R. Hornik, eds. *Prediciton and change of health behavior: Applying the reasoned action approach.* Mahwah, New Jersey: Lawrence Erlbaum Associates, pp. 281-295.

Fishbein, M., 2008. A reasoned action approach to health promotion. *Medical Decision Making,* 28(6), pp. 834-844.

Fishbein, M. & Ajzen, I., 2011. *Predicting and changing behavior.* New York, USA: Psychology Press.

Fishbein, M. & Azjen, A., 1980. *Understanding attitudes and predicting social behavior.* Englewood Cliffs, New Jersey, USA: Prentice-Hall.

Fishbein, M. & Cappella, J. N., 2006. The role of theory in developing effective health communications. *Journal of Communication,* Volume 56, pp. 1-17.

Fishbein, M. et al., 2001a. Factors influencing behavior and behavior change. In: A. Baum, T. A. Revenson & J. E. Singer, eds. *Handbook of health psychology.* Mahwah, New Jersey, USA: Lawrence Erlbaum Associates, pp. 3-17.

Fishbein, M., von Haeften, I. & Appleyard, J., 2001b. The role of theory in developing effective interventions: Implications from Project SAFER. *Psychology, Health & Medicine,* 6(2), pp. 223-238.

Flick, U., 2015. *Introducing research methodology: A beginner's guide to doing a research project.* London, UK: Sage Publications Ltd.

Flyvbjerg, B., 2006. Five misunderstandings about case-study research. *Qualitative Inquiry,* 12(2), pp. 219-245.

Fornell, C. & Larcker, D., 1981. Evaluating structural equation models with unobservable variables and measurement errors. *Journal of Marketing Research,* 18(1), pp. 39-50.

Friese, M., Frankenbach, J., Job, V. & Loschelder, D., 2017. Does self-control training improve self-control? A meta-analysis. *Perspectives of Psychological Science,* 12(6), pp. 1077-1099.

Garson, G., 2016. *Partial least squares - Regression & structural equation models,* Raleigh, North Carolina, USA: Statistical Associates Publishing.

Gartner, W. B., 1985. A conceptual framework for describing the phenomenon of new venture creation. *Academy of Management Review,* 10(4), pp. 696-706.

Gartner, W., Carter, N. & Reynolds, P., 2004. Business start-up activities. In: W. Gartner, K. Shaver, N. Carter & P. Reynolds, eds. *Handbook of entrepreneurial dynamics: The process of business creation .* Thousand Oaks, California, USA: Sage Publications Ltd., pp. 285-298.

Gielnik, M. et al., 2014. A temporal analysis of how entrepreneurial goal intentions, positive fantasies, and action planning affect starting a new venture and when the effect wears off. *Journal of Business Venturing,* 29(6), pp. 755-772.

Gollwitzer, P. M., 1993. Goal achievement: The role of intentions. *European Review of Social Psychology,* 4(1), pp. 141-185.

Gollwitzer, P. M., 1999. Implementation intentions. *American Psychologist, 54(7)*, pp. 493-503.

Gollwitzer, P. M. & Brandstätter, V., 1997. Implementation intentions and effective goal pursuit. *Journal of Personality and Social Psychology,* 73(1), pp. 186-199.

Gollwitzer, P. M. & Oettingen, G., 2011. Planning promotes goal striving. In: K. D. Vohs & R. F. Baumeister, eds. *Handbook of self-regulation: Research, theory, and applications.* New York, USA: Guilford, pp. 162-185.

Gollwitzer, P. M. & Oettingen, G., 2012. Goal pursuit. In: *The Oxford handbook of human motivation.* New York, USA: Oxford University Press, pp. 208-231.

Gollwitzer, P. M. & Schaal, B., 1998. Metacognition in action: The importance of implementation intentions. *Personality and Social Psychology Review,* 2(2), pp. 124-136.

Gollwitzer, P. M. & Sheeran, P., 2006. Implementation intentions and goal achievement: A meta-analysis of effects and processes. *Advances in Experiemental Social Psychology ,* Volume 38, pp. 69-119.

Greif, S. & Benning-Rohnke, E., 2015. Konsequente Umsetzung von Zielen durch Coaching. *Coaching | Theorie & Praxis,* 1(1), pp. 25-35.

Griffiths, M., Gundry, L. & Kickul, J., 2013. The socio-political, economic, and cultural determinants of social entrepreneurship activity: An empirical examination. *Journal of Small Business and Enterprise Development ,* 20(2), pp. 341-357.

Hagger, M. S., 2013. The multiple pathways by which self-control predicts behavior. *Frontiers in Psychology,* Volume 4, pp. 1-3.

Hagger, M. S., Wood, C. W., Stiff, C. & Chatzisarantis, N. L. D., 2010. Self-regulation and self-control in exercise: The strength-energy model. *International Review of Sport and Exercise Psychology,* 3(1), pp. 62-86.

Haig, B. D., 2013. The philosophy of quantitative methods. In: T. D. Little, ed. *The Oxford handbook of quantitative methods in psychology, Volume 1.* New York, USA: Oxford University Press, pp. 7-32.

Hair, J., Black, W., Babin, B. & Anderson, R., 2014a. *Multivariate data analysis.* 7th ed. Harlow, UK: Pearson New International Ltd.

Hair, J., Ringle, C. & Sarstedt, M., 2011. PLS-SEM: Indeed a silver bullet. *Journal of Marketing Theory and Practice,* 19(2), pp. 139-152.

Hair, J., Sarstedt, M., Hopkins, L. & Kuppelwieser, V., 2014b. Partial least squares structural equation modeling (PLS-SEM): An emerging tool in business research. *European Business Review,* 26(2), pp. 106-121.

Hanfstingl, B., Andreitz, I., Müller, F. H. & Thomas, A., 2010. Are self-regulation and self-control mediators between psychological basic needs and instrinsic teacher motivation. *Journal for Educational Research Online,* 2(2), pp. 55-71.

Hassan, E., 2005. Recall bias can be a threat to retrospective and prospective research designs. *The Internet Journal of Epidemiology,* 3(2), pp. 1-7.

Haugh, H. & Kitson, M., 2007. The third way and the third sector: New labour's economic policy and the social economy. *Cambridge Journal of Economics,* Volume 31, pp. 973-994.

Heckhausen, H. & Gollwitzer, P., 1987. Thought contents and cognitive functioning in motivational versus volitional states of mind. *Motivation and Emotion,* 11, pp. 101-120.

Heckhausen, J., 2007. The motivation-volition divide and its resolution in action-phase models of developmental regulation. *Research in Human Development,* 4(3-4), pp. 163-180.

Heckhausen, J. & Heckhausen, H., 2018. Motivation and action: Introduction and overview. In: J. Heckhausen & H. Heckhausen, eds. *Motivation and action.* 3rd ed. Cham, Switzerland: Springer International Publishing, pp. 1-15.

Hensler, J., Ringle, C. & Sarstedt, M., 2015. A new criterion for assessing discriminant validity in variance-based structural equation modeling. *Journal of Academy of Marketing Science,* 43(1), pp. 115-135.

Hikkerova, L., Nyock Ilouga, S. & Sahut, J.-M., 2016. The entrepreneurship process and the model of voltion. *Jounal of Business Research,* Volume 69, pp. 1868-1873.

Hockerts, K., 2015. The social entrepreneurial antecedents scale (SEAS): A validation study. *Social Enterprise Journal,* 11(3), pp. 260-280.

Hockerts, K., 2017. Determinants of social entrepreneurial intentions. *Entrepreneurship Theory and Practice,* 41(1), pp. 105-130.

Hockerts, K., 2018, work in progress. The effects of experiential social entrepreneurship education on intention formation in students.

Hollenbeck, J. R. & Klein, H. J., 1987. Goal commitment and the goal-setting process: Problems, prospects, and proposals for future research. *Journal of Applied Psychology,* 72(2), pp. 212-220.

Hoogendoorn, B., 2016. The prevalence and determinants of social entrepreneurship at the macro level. *Journal of Small Business Management,* 54(1), pp. 278-296.

Hoogendoorn, B., Pennings, E. & Thurik, R., 2010. *What do we know about social entrepreneurship: An analysis of empirical research,* Rotterdam, Netherlands: ERIM Report Series - Research in Management.

Hörisch, J., Kollat, J. & Brieger, S., 2016. What influences environmental entrepreneurship? A multilevel analysis of the determinants of entrepreneurs' environmental orientation. *Small Business Economics,* 48(1), pp. 47-69.

Hornik, R., 2007. An extension of the theory of reasoned action and its successors to multiple behavior interventions. In: I. Ajzen, D. Albarracín & R. Hornik, eds. *Prediction and change of health behavior: Applying the reasoned action approach.* Mahwah, New Jersey, USA: Lawrence Erlbaum Associates, pp. 53-67.

Hoyle, R., 1995. The structural equation modeling approach: Basic Concepts and Fundamental Issues. In: R. Hoyle, ed. *Structural equation modeling - Concepts, issues and applications.* Thousand Oaks, California, USA: Sage Publications Ltd., pp. 1-15.

Hu, L. & Bentler, P., 1999. Cutoff criteria for fit indexes in covariance structure analysis: Conventional criteria versus new alternatives. *Structural Equation Modeling: A Multidisciplinary Journal,* 6(1), pp. 1-55.

Hunt, S. D., 2018. The philosophy of science foundations of marketing research: For scientific realism and the inductive realist models of theory status and generation. *Journal of Global Scholars of Marketing Science,* 28(1), pp. 1-32.

Inyang, B. J. & Enuoh, R. O., 2009. Entrepreneurial competencies: The missing links to successful entrepreneurship in Nigeria. *International Business Research,* 2(2), pp. 62-71.

Ip, C.Y., Liang, C., Wu, S.C., Law, K.M.Y., Liu, H.C., 2018. *Creativity Research Journal,* 30(2), pp.132-142

Ip, C.Y., Wu., S.C., Liu, H.C., Liang, C., 2018. Social entrepreneurial intentions of students from Hong Kong. *Journal of Entrepreneurship*, 27(1), pp. 47-64

Jackson, C. et al., 2005. Beyond intention: Do specific plans increase health behaviours in patients in primary care? A study of fruit and vegetable consumption. *Social Science & Medicine,* Volume 60, pp. 2383-2391.

Joensuu, S., Tornikoski, E., Viljamaa, A. & Varamaki, E., 2013. Development of entrepreneurial intention in higher education and the effect of gender – a latent growth curve analysis. *Education and Training,* 55(8/9), pp. 781-803.

Kachlami, H. M., 2014. The likely determinants of social entrepreneurship and policy implications. In: A. Lundström, C. Zhou, Y. von Friedrichs & E. Sundin, eds. *Social entrepreneurship: Leveraging economic, political, and cultural dimensions.* Switzerland: Springer International Publishing, pp. 293-307.

Kautonen, T., Hatak, I., Kibler, E. & Wainwright, T., 2015. Emergence of entrepreneurial behaviour: The role of age-based self-image. *Journal of Economic Psychology,* Volume 50, pp. 41-51.

Kautonen, T., Van Gelderen, M. & Tornikoski, E. T., 2013. Predicting entrepreneurial behaviour: A test of the theory of planned behaviour. *Applied Economics, 45(6)*, pp. 697-707.

Kelley, D. et al., 2017. *Global Entrepreneurship Monitor 2016/2017 report on women's entrepreneurship,* n.p.: Global Entrepreneurship Monitor (GEM) Consortium.

Kerlin, J., 2006. Social enterprise in the United States and Europe: Understanding and learning from the differences. *Voluntas: International Journal of Voluntary and Nonprofit Organizations,* 17(3), pp. 247-263.

Kerlin, J., 2010. A comparative analysis of the global emergence of social enterprise. *Voluntas: International Journal of Voluntary and Nonprofit Organizations,* 21(2), pp. 162-179.

Kleinmann, M. & König, C., 2018. *Selbst- und Zeitmanagement.* 1st ed. Göttingen, Germany: Hogrefe Verlag GmbH & Co. KG.

Koch, N., 2015. Common method bias in PLS-SEM: A full collinearity assessment approach. *International Journal of e-Collaboration,* 11(4), pp. 1-10.

Korosec, R. L. & Berman, E. M., 2006. Municipal support for social entrepreneurship. *Public Administration Review,* 66(3), pp. 448-462.

Krueger, N., 2009. Entrepreneurial intentions are dead: Long live entrepreneurial intentions. In: A. Carsrud & M. Brännback, eds. *Understanding the entrepreneurial mind - Opening the black box.* New York, USA: Springer-Verlag, pp. 51-72.

Kuada, J. E., 2012. *Research methodology: A project guide for university students.* 1st ed. Frederiksberg, Denmark: Samfundslitteratur.

Kuhl, J., 1983. *Motivation, Konflikt und Handlungskontrolle.* 1st ed. Berlin, Germany: Springer-Verlag.

Kuhl, J. & Fuhrmann, A., 1998. Decomposing self-regulation and self-control: The volitional component inventory. In: J. Heckhausen & C. S. Dweck, eds. *Motivation and self-regulation across the life span.* Cambridge: Cambridge University Press, pp. 15-50.

Kumar, R., 2014. *Research methodology: A step-by-step guide for beginners.* London, UK: Sage Publications Ltd.

Lacap, J.G.P., Mulyaningsih, H.D., Rmadani, V., 2018 article in press. The mediating effects of social entrepreneurial antecedents on the relationship between prior experience and social entrepreneurial intent: The case of Filipino and Indonesian university students. *Journal of Science and Technology Policy Management.*

Ladyman, J., 2002. *Understanding philosophy of science.* 1st ed. London, UK: Routledge Ltd.

Laguna, M. & Purc, E., 2016. Personality traits and training initiation process: Intention, planning and action initiation. *Frontiers in Psychology, 7*, pp. 1-11.

Lakes, K. & Hoyt, W., 2004. Promoting self-regulation through school-based martial arts training. *Journal of Applied Developmental Psychology,* 25(3), pp. 283-302.

Lane, R., 1996. Positivism, scientific realism and political science. *Journal of Theoretical Politics,* 8(3), pp. 361-382.

Langowitz, N., Minniti, M. & Arenius, P., 2005. *Global Entrepreneurship Monitor: 2004 report on women and entrepreneurship,* n.p.: Global Entreprneurship Monitor (GEM) Consortium.

Lepoutre, J., Justo, R., Terjesen, S. & Bosma, N., 2013. Designing a global standardized methodology for measuring social entrepreneurship activity: The Global Entrepreneurship Monitor social entrepreneurship study. *Small Business Economics,* 40(3), pp. 693-714.

Levesque, M. & Minniti, M., 2006. The effects of ageing on entrepreneurial behaviour. *Journal of Business Venturing,* 21(2), pp. 177-194.

Littlewood, D. & Holt, D., 2018. Social entrepreneurship in South Africa: Exploring the influence of environment. *Business & Society,* 57(3), pp. 1-37.

Lynch, J.G., Netemeyer, R.G., Spiller, S.A. & Zammit, A., 2010. A generalizable scale of propensity to plan: The long and the short of planning for time and for money. *Journal of Consumer Research,* 37(1), pp. 108-128.

Lyons, T. D., 2016. Scientific realism. In: P. Humphreys, ed. *The Oxford handbook of philosophy of science.* New York, USA: Oxford University Press, pp. 564-584.

Mair, J., 2010. Social entrepreneurship: Taking stock and looking ahead. In: A. M. H. Fayolle, ed. *Handbook of research on social entrepreneurship.* Cheltenham, UK: Edward Elgar, pp. 15-29.

Mair, J., Battilana, J. & Cardenas, J., 2012. Organizing for society: A typology of social entrepreneuring models. *Journal of Business Ethics,* 111(3), p. 353–373.

Mair, J. & Marti, I., 2006. Social entrepreneurship research: A source of explanation, prediction, and delight. *Journal of World Business,* 41(1), pp. 36-44.

Mair, J. & Marti, I., 2009. Entrepreneurship in and around institutional voids: A case study from Bangladesh. *Journal of Business Venturing,* 24(5), pp. 419-435.

Mäki, U., 1984. Wissenschaftlicher Realismus - Kontroversen und Konvergenzen. In: J. Manninen & H. J. Sandkühler, eds. *Realismus und Dialektik.* Köln, Germany: Pahl-Rugenstein, pp. 52-59.

Manolova, T., Brush, C. & Edelman, L., 2009. Start-up activities and new firm characteristics. In: R. Curtis & P. Reynolds, eds. *New firm creation in the United States.* New York, USA: Springer, pp. 239-259.

Martin, R. & Osberg, S., 2007. Social entrepreneurship: The case for definition. *Stanford Social Innovation Review,* 5(2), pp. 29-39.

Matthews, B. & Ross, L., 2010. *Research methods.* 1st ed. Harlow, UK: Pearson Education UK Ltd.

McAlister, A. L., Perry, C. L. & Parcel, G. S., 2008. How individuals, environments, and health behaviors interact: Social cognitive theory. In: K. Glanz, B. K. Rimer & K. Viswanath, eds. *Health behavior and health education: Theory, research and practice.* San Francisco, California, USA: John Wiley & Sons, pp. 169-188.

McEachan, R. R. C., Conner, M., Taylor, N. J. & Lawton, R. J., 2011. Prospective prediciton of health-related behaviours with the theory of planned behaviour: A meta-analysis. *Health Psychology Review,* 5(2), pp. 97-144.

Middlestadt, S. E., 2012. Beliefs underlying eating better and moving more: Lessons learned from comparative salient belief elicitations with adults and youth. *ANNALS of the American Academy of Political and Social Science,* 640(1), pp. 81-100.

Mischel, W., Shoda, Y. & Peake, P. K., 1988. The nature of adolescent competencies predicted by preschool delay of gratification. *Journal of Social Psychology,* Volume 54, pp. 687-696.

Mistry, C. D., Sweet, S. N., Latimer-Cheung, A. E. & Rhodes, R. E., 2015. Predicting changes in planning behaviour and physical activity among adults. *Psychology of Sport and Exercise, 17*, pp. 1-6.

Moghavvemi, S., Mohd Salleh, N. A., Sulaiman, A. & Abessi, M., 2015. Effect of external factors on intentin-behaviour gap. *Behaviour & Information Technology,* 34(12), pp. 1171-1185.

Montaño, D. E. & Kasprzyk, D., 2008. Theory of reasoned action, theory of planned behavior, and the integrated behavioral model. In: K. Glanz, B. K. Rimer & K. Viswanath, eds. *Health behavior and health education: Theory, research and practice.* San Francisco, California, USA: John Wiley & Sons, Inc., pp. 67-96.

Mullan, B. et al., 2013. Self-regulation and the intention behaviour gap. Exploring dietary behaviours in university students. *Appetite,* 73, pp. 7-14.

Muraven, M., 2010. Building self-control strength: Practicing self-control leads to improved self-control performance. *Journal of Experimental Social Psychology,* 46(2), pp. 465-468.

Muraven, M., Baumeister, R. F. & Tice, D. M., 1999. Longitudinal improvement of self-regulation through practice: Building self-control strength through repreated practice. *The Journal of Social Psychology,* 139(4), pp. 446-457.

Murray, T. R., 2003. *Blending qualitative and quantitative research methods in theses and dissertations.* Thousand Oaks, California, USA: Corwin.

Murray, T., Rodgers, W. & Fraser, S., 2009. Examining implementation intentions in an exercise intervention: The effects on adherence and self-efficacy in a naturalistic setting. *Journal of Applied Social Psychology,* 39(10), pp. 2303-2320.

Murtagh, A. M. & Todd, S. A., 2004. Self-regulation: A challenge to the strength model. *Journal of Articles in Support of the Null Hypothesis,* 3(1), pp. 19-50.

Nebioglu, M., Konuk, N., Akbaba, S. & Erogul, S., 2012. The investigation of reliability and validity of the brief self-control scale. *Bulletin of Clinical Psychopharmacology,* 22(4), pp. 340-351.

Nicholls, A., 2006. *Social entrepreneurship: New models of sustainable social change.* 1st ed. New York, USA: Oxford University Press.

Nicholls, A., 2010. The legitimacy of social entrepreneurship: Reflexive isomorphism in a pre-paradigmatic field. *Entrepreneurship Theory and Practice,* 34(4), pp. 611-633.

Norman, P. & Conner, M., 2005. The theory of planned behavior and exercise: Evidence for the mediating and moderating roles of planning on intention-behavior relationships. *Journal of Sport & Exercise Psychology,* Volume 27, pp. 488-504.

North, D. C., 1990. *Institutions, institutional change and economic performance.* Cambridge, UK: Cambridge University Press.

Notais, A., Tixier, J., 2017. Girlz'n the hood: Discovering the determinants of social entrepreneurial intention of women in deprived urban areas. *International Journal of Entrepreneurship and Small Business.* 31(3), pp. 382-398

Olander, E. K. et al., 2013. What are the most effective techniques in changing obese individuals' physical activity self-efficacy and behaviour: A systematic review and meta-analysis. *International Journal of Behavioural Nutrition and Physical Activity,* 10(29), pp. 1-15.

Pathak, S. & Muralidharan, E., 2016. Informal institutions and their comparative influences on social and commerical entrepreneurship: The role of in-group collectivism and interpersonal trust. *Journal of Small Business Management ,* 54(S1), pp. 168-188.

Pathak, S. & Muralidharan, E., 2018. Economic inequality and social entrepreneurship. *Business & Society,* 57(6), pp. 1150-1190.

Pedersen, K., 2005. Social science theory in project work and the project report. In: P. Bitsch Olsen & K. Pedersen, eds. *Problem-oriented project work: A workbook.* Fredriksberg, Denmark: Roskilde University Press, pp. 137-167.

Peng, M., Sun, S. L., Pinkham, B. & Chen, H., 2009. The institution-based view as a third leg for a strategy tripod. *Academy of Management Perspectives,* 23(3), pp. 63-81.

Peredo, A. & McLean, M., 2006. Social entrepreneurship: A critical review of the concept. *Journal of World Business,* 41(1), pp. 56-65.

Perrini, F. & Vurro, C., 2006. Social entrepreneurship: Innovation and social change across theory and practice. In: M. Marti, J. Robinson & K. Hockerts, eds. *Social entrepreneurship.* Hampshire, UK & New York, USA.: Palgrave Macmillan, pp. 57-86.

Pfeffer, I. & Strobach, T., 2017. Executive functions, trait self-control, and the intention-behaviour gap in physical activity behavior. *Journal of Sport and Exercise Psychology,* 39(4), pp. 277-292.

Podsakoff, P., MacKenzie, S., Lee, J. & Podsakoff, N., 2003. Common method biases in behavioral research: A critical review of the literature and recommended remedies. *Journal of Applied Psychology,* 88(5), pp. 897-903.

Pole, C. & Lampard, R., 2002. *Practical social investigation - qualitative and quantitative methods in social research.* 1 ed. Harlow, UK: Pearson Education Ltd.

Pramila, R., Rizal, A.M., Kamarudin, S., Husin, M.M., 2017. Motivating factors contributing to young social entrepreneurs' intention to start social activities. *Advanced Science Letters.* 23(4), pp.2787-2790

Preethi, C.M., Priyadarshini, R.G., 2018. The intention towards social entrepreneurship among students and its link with Big 5 Model. *IOP Conference Series: Materials Science and Engineering,* 390(1)

PSED, 2005. *Panel Study of Entrepreneurial Dynamics - PSED 2 Wave A,* Ann Arbor, Michigan, USA: The Univeristy of Michigan.

Psillos, S., 1999. *Scientific realism: How science tracks truth.* London, UK: Routledge Ltd.

Puumalainen, K., Sjögrén, H., Syrjä, P. & Barraket, J., 2015. Comparing social entrepreneurship across nations: An exploratory study of institutional effects. *Canadian Journal of Administrative Sciences,* 32(4), pp. 276-287.

Radin, R.S.A., Rahman, A., Othman, N., Pihie, Z.A., 2017. Social entrepreneurial intention among students of different status and university category. *International Journal of Economic Research*. 14(15), pp. 377-394.

Rabinovich, A. & Webley, P., 2007. Filling the gap between planning and doing: Psychological factors involved in the successful implementation of saving intention. *Journal of Economic Psychology,* Volume 28, pp. 444-461.

Rawhouser, H., Cummings, M. & Crane, A., 2015. Benefit corporations legalisation and the emergence of a social hybrid category. *California Management Review,* 57(3), pp. 13-35.

Reynolds, P., 2017. When is a firm born? Alternative criteria and consequences. *Business Economics,* 52(1), p. 41–56.

Rhodes, R. E. & Dickau, L., 2012. Experimental evidence for the intention-behavior relationship in the physical activity domain: A meta-analysis. *Health Psychology,* 31(6), pp. 724-727.

Rhodes, R. E. & Mark, R., 2012. Social cognitive models. In: E. O. Acevedo, ed. *The Oxford handbook of exercise psychology.* New York, USA: Oxford University Press, pp. 257-294.

Ringle, C., Wende, S. & Becker, J., 2015. *Smart PLS 3.* Boenningstedt, Germany: Smart PLS GmBH.

Rivera, R.G., Santos, D., Martín-Fernández, M., Requero, B., Cancela, A., 2018. Predicting attitudes and behavioural intentions towards social entrepreneurship: The role of servant leadership in young people. *Revista de Psicologia Social,* 33(3), pp. 650-681

Robbins, R. & Niederdeppe, J., 2015. Using the integrative model of behavioral prediciton to identify promising message strategies to promote healthy sleep behaviors among college students. *Health Communication,* 30(1), pp. 26-38.

Robinson, J., Shaver, P. & Wrightsman, L., 1991. Criteria for scale selection and evaluation. In: J. Robinson, P. Shaver & L. Wrightsman, eds. *Measures of personality and social psychological attitudes. Vulume 1 of measures of social psychological attitudes.* San Diego, California, USA: Elsevier, pp. 1-16.

Roy, M. J. et al., 2015. "The most supportive environment in the world"? Tracing the development of an institutional 'ecosystem' for social enterprise. *Voluntas,* Volume 26, pp. 777-800.

Ruane, J. M., 2016. *Introducing social research methods: Essentials for getting the edge.* Chichester: Wiley Blackwell.

Salhi, B., 2018. Impact of personal motivation on the intention and behaviours of social entrepreneurs. *Journal of Entrepreneurship Education,* 21 (Special Issue), pp.1-15.

Sandman, P. M. & Weinstein, W. D., 1993. Predictors of home radon testing and implications for testing promotion programs. *Health Education Quarterly,* Volume 20, pp. 471-487.

Santos, F., 2012. A positive theory of social entrepreneurship. *Journal of Business Ethics,* 111(3), pp. 335-351.

Saunders, M., Lewis, P. & Thornhill, A., 2016. *Research methods for business students.* 7th ed. Harlow, UK: Pearson Education Ltd.

Schermelleh-Engel, K., Moosbrugger, H. & Müller, H., 2003. Evaluating the fit of structural equation models: Tests of significance and descriptive goodness-of-fit measures. *Methods of Psychological Research Online,* 8(8), p. 23–74.

Schlagel, C. & Koenig, M., 2014. Determinants of entrepreneurial intent: A meta-analytic test and integration of competing models. *Entrepreneurship Theory and Practice,* 38(2), pp. 291-332.

Schroder, K. E. E. & Schwarzer, R., 2005. Habitual self-control and the management of health behavior among heart patients. *Social Science & Medicine,* Volume 60, pp. 859-875.

Scott, W. R., 2005. Institutional theory: Contributing to a theoretical research program. In: K. G. Smith & M. A. Hitt, eds. *Great minds in management: The process of theory development.* Oxford/ New York: Oxford University Press, pp. 460-483.

SEFORIS, 2014. *The state of social entrepreneurship - Key facts and figures,* n.p.: Seforis.

Seymour, R. G., 2012. *Handbook of research methods on social entrepreneurship.* Cheltenham: Edward Elgar.

Shahverdi, M., Ismail, K. & Qureshi, M. I., 2018. The effect of perceived barriers on social entreprneurship intention in Malaysian universities: The moderating role of education. *Management Science Letters,* Volume 8, pp. 341-352.

Shane, S. & Venkataraman, S., 2000. The promise of entrepreneurship as a field of research. *Academy of Management Review,* 25(1), pp. 217-226.

Shaw, E. & Carter, S., 2007. Social entrepreneurship theoretical antecedents and empirical analysis of entrepreneurial process and outcomes. *Journal of Small Business and Enterprise Development,* 13(4), pp. 418-434.

Sheeran, P., 2002. Intention—behavior relations: A conceptual and empirical review. *European Review of Social Psychology,* 12(1), pp. 1-36.

Sheeran, P., Trafimow, D. & Armitage, C. J., 2003. Predicting behaviour from perceived behavioural control: Tests of the accuracy assumption of the theory of planned behaviour. *British Journal of Social Psychology,* Volume 42, pp. 393-410.

Sheeran, P., Webb, T. & Gollwitzer, P., 2005. The interplay between goal intentions and implementation intentions. *Personality and Social Psychology Bulletin,* 31(1), pp. 87-98.

Sheeran, P. & Webb, T. L., 2016. The intention-behaviour gap. *Social and Personality Psychology Compass,* 10(9), pp. 503-518.

Shinnar, R. S., Hsu, D. K., Powell, B. C. & Zhou, H., 2017. Entrepreneurial intentions and start-ups: Are women or men more likely to enact their intentions? *International Small Business Journal,* 36(1), pp. 60-80.

Shirokova, G., Osiyevskyy, O. & Bogatyreva, K., 2016. Exploring the intention-behaviour link in student entrepreneurship: Moderating effects of individual and environmental characteristics. *European Management Journal,* 34(4), pp. 386-399.

Shoda, Y., Mischel, W. & Peake, P. K., 1990. Predicting adolescent cognitive and self regulatory competencies from preschool delay of gratification: Identifying diagnostic conditions. *Developmental Psychology,* Volume 26, pp. 978-986.

Short, J., Moss, T. & Lumpkin, G., 2009. Research in social entrepreneurship: Past contributions and future opportunities. *Strategic Entrepreneurship Journal,* Volume 3, pp. 161-194.

Silfee, V. et al., 2016. Effect of a behavioral intervention on dimensions of self-regulation and physical activity among overweight and obese adults with type 2 diabetes: A pilot study. *Psychology, Health & Medicine,* 21(6), pp. 715-723.

Sniehotta, F. F., Scholz, U. & Schwarzer, R., 2005a. Bridging the intention-behaviour gap: Planning, self-efficacy, and action control in the adoption and maintenance of physical exercise. *Psychology and Health,* 20(2), pp. 143-160.

Sniehotta, F. F., Schwarzer, R., Scholz, U. & Schüz, B., 2005b. Action planning and coping planning for long-term lifestyle change: Theory and assessment. *European Journal of Social Psychology,* 35, pp. 565-576.

Spiess, E. & Wittmann, A., 1999. Motivational phases associated with the foreign placement of managerial candidates: An application of the Rubicon model of action phases. *International Journal of Human Resource Management,* 10(6), pp. 891-906.

Stephan, U., Uhlaner, L. M. & Stride, C., 2015. Institutions and social entrepreneurship: The role of institutional voids, institutional support, and institutional configurations. *Journal of International Business Studies,* Volume 46, pp. 308-331.

Tangney, J. P., Baumeister, R. F. & Boone, A. L., 2004. High self-control predicts good adjustment, less pathology, better grades, and interpersonal success. *Journal of Personality,* 72(2), pp. 271-322.

Tang, Y. et al., 2007. Short-term meditation training improves attention and self-regulation. *Proceedings of the National Academy of Sciences of the United States of America,* 104(43), pp. 17152-17156.

Terjesen, S., Lepoutre, J., Justo, R. & Bosma, N., 2012. *2009 Report on social entrepreneurship,* n.p.: Global Entrepreneurship Research Association.

Tiwari, P., Bhat, A.K., Tikora, J., 2017. The role of emotional intelligence and self-efficacy on social entrepreneurial attitudes and social entrepreneurial intentions. *Journal of Social Entrepreneurship*, 8(2), pp. 165-185

Theurer, J., 2014. *Zeitmanagement für Rechtsanwälte, Steuerberater und Wirtschaftsprüfer: Weniger Stress - mehr Effizienz - mehr freie Zeit.* Wiesbaden, Germany: Springer Gabler.

Thomson Reuters Foundation, 2016. *The Best Countries to be a Social Entrepreneur 2016.* [Online] Available at: http://poll2016.trust.org/ [Accessed 04 10 2018].

Tukamushaba, K. E., Orobia, L. & George, B. P., 2011. Development of a conceptual model to understand international social entrepreneurship and its application in the Ugandan context. *Journal of International Entrepreneurship*, pp. 282-298.

United Nations, 2015. *World population prospects: The 2015 revision, key findings and advance tables,* New York: Department of Economic and Social Affairs, Population Division.

Urban, B. & Kujinga, L., 2017. The institutional environment and social entrepreneurship intentions. *International Journal of Entrepreneurial Behavior & Research,* 23(4), pp. 638-655.

Urbano, D., Toledano, N. & Ribeiro Soriano, D., 2010. Analyzing social entrepreneurship from an institutional perspective: Evidence from Spain. *Journal of Social Entrepreneurship,* 1(1), pp. 54-69.

Van Gelderen, M., Kautonen, T. & Fink, M., 2015. From entrepreneurial intention to actions: Self-control and action-related doubt, fear and aversion. *Journal of Business Venturing,* 30(5), pp. 655-673.

Van Ryzin, G., Grossman, S., DiPadova-Stocks, L. & Bergrund, E., 2009. Portrait of the social entrepreneur: Statistical evidence from a US panel. *Voluntas: International Journal of Voluntary and Nonprofit Organizations,* 20(2), pp. 129-140.

vanDellen, M. R., Hoyle, R. H. & Miller, R., 2012. The regulatory easy street: Self-regulation below the self-control threshold does not consume regulatory resources. *Personality and Individual Differences,* 52(8), pp. 898-902.

Viswanathan, M., 2005. *Measurement error and research design.* 1st ed. Thousand Oaks, California, USA: Sage Publications Ltd.

Volkmann, C., Tokaraki, K. & Earnst, K., 2012. Background, characteristics and context of social entrepreneurship. In: C. Volkmann, K. Tokaraki & K. Earnst, eds. *Social entrepreneurship and social business: An introduction and discussion with case studies.* Wiesbaden, Germany: Springer Gabler, pp. 3-30.

Wach, K. & Wojciechowski, L., 2016. Entrepreneurial intentions of students in Poland in the view of Ajzen's theory of planned behaviour. *Entrepreneurial Business and Economics Review,* 4(1), pp. 83-94.

Webb, T. L. & Sheeran, P., 2006. Does changing behavioral intentions engender behavior change? A meta-analysis of the experimental evidence. *Psychological Bulletin,* 132(2), pp. 249-268.

Weijzen, P. L. G., de Graaf, C. & Dijsterhuis, G. B., 2009. Predictors of the consistency between healthy snack choice intentions and actual behaviour. *Food Quality and Preference,* Volume 20, pp. 110-119.

Wight, C. & Joseph, J., 2010. Scientific realism and international relations. In: J. Joseph & C. Wight, eds. *Scientific realism and international relations.* London, UK: Palgrave Macmillan, pp. 1-30.

Wolfe, R. N. & Johnson, S. D., 1995. Personality as a predictor of college performance. *Educational & Psychological Measurement,* Volume 55, pp. 177-185.

Wu, A. & Zumbo, B., 2008. Understanding and using mediators and moderators. *Social Indicators Research,* 87(3), pp. 367-392.

Yong, A. & Pearce, S., 2013. A beginner's guide to factor analysis: Focusing on exploratory factor analysis. *Tutorials in Quantitative Methods for Psychology,* 9(2), pp. 79-94.

Zahra, S. A. & Wright, M., 2011. Entrepreneurship's next act. *Academy of Management Perspectives,* 25(4), pp. 67-83.

Zahra, S., Gedajlovic, E., Neubaum, D. & Shulman, J., 2009. A typology of social entrepreneurs: Motives, search processes and ethical challenges. *Journal of Business Venturing,* 24(5), pp. 519-532.

Zauberman, G. & Lynch, J. G., 2005. Resource slack and propensity to discount delayed investments of time versus money. *Journal of Experimental Psychology: General,* 134(1), pp. 23-37.

Zhang, Y., Au, K. & Reynolds, P., 2011. Anatomy of business creation in China: Initial assessment of the Chinese panel study of entrepreneurial dynamics. In: Reynolds, P.D. & Curtin, R.T., eds. *New business creation. International studies in entrepreneurship,* Volume 27 . New York, USA: Springer, pp. 95-121.

Appendix A – Lists of Recent Publications on Social Entrepreneurial Intentions

Publications in 2017

No.	Title	Author/s	Source
1	The role of emotional intelligence and self-efficacy on social entrepreneurial attitudes and social entrepreneurial intentions	Tiwari, P.; Bhat, A.K.; Tikoria, J.	Journal of Social Entrepreneurship 8(2) pp. 165-185
2	Social entrepreneurial intention among students of different status and university category	Radin, R.S.A.; Rahman, A.; Othman, N.; Pihie, Z.A.L.	International Journal of Economic Research 14(15), pp. 377-394
3	Determinants of social entrepreneurial intentions	Hockerts, K.	Entrepreneurship: Theory and Practice 41(1) pp. 105-130
4	Girlz'n the hood: Discovering the determinants of social entrepreneurial intention of women in deprived urban areas	Notais, A.; Tixier, J.	International Journal of Entrepreneurship and Small Business 31(3) pp. 382-398
5	Influences of attitude, risk taking propensity and proactive personality on social entrepreneurship intentions	Chipeta, E.M.; Surujlal, J.	Polish Journal of Management Studies 15(2) pp. 27-36
6	The institutional environment and social entrepreneurship intentions	Urban, B.; Kujinga, L.	International Journal of Entrepreneurial Behaviour and Research 23(4) pp. 638-655
7	Motivating factors contributing to young social entrepreneurs' intention to start social activities	Pramila, R.; Rizal, A.M.; Kamarudin, S.; Husin, M.M.	Advanced Science Letters 23(4) pp.2787-2790

Publications in 2018

No.	Title	Author/s	Source
1	The mediating effects of social entrepreneurial antecedents on the relationship between prior experience and social entrepreneurial intent: The case of Filipino and Indonesian university students	Lacap, J.P.G.; Mulyaningsih, H.D.; Ramadani, V.	Journal of Science and Technology Policy Management [Article in Press]
2	Exploring the social entrepreneurial intentions of senior high school and college students in a Philippine university: A PLS-SEM approach	Aure, P.A.H.	Journal of Legal, Ethical and Regulatory Issues 21 (2) pp. 1-11
3	Feeling capable and valued: A prosocial perspective on the link between empathy and social entrepreneurial intentions	Bacq, S.; Alt, E.	Journal of Business Venturing 33(3) pp.333-350
4	Enhancing social entrepreneurial intentions through entrepreneurial creativity: A comparative study between Taiwan and Hong Kong	Ip, C.Y.; Liang, C.; Wu, S.-C.; Law, K.M.Y.; Liu, H.-C.	Creativity Research Journal 30(2) pp.132-142
5	Social entrepreneurial intentions of students from Hong Kong	Ip, C.Y.; Wu, S.-C.; Liu, H.-C.; Liang, C.	Journal of Entrepreneurship 27(1) pp. 47-64
6	To be or not to be a social entrepreneur: Motivational drivers amongst American business students	Barton, M.; Schaefer, R.; Canavati, S.	Entrepreneurial Business and Economics Review 6(1) pp.9-35
7	The effect of perceived barriers on social entrepreneurship intention in Malaysian universities: The moderating role of education	Shahverdi, M.; Ismail, K.; Qureshi, M.I.	Management Science Letters 8(5) pp. 341-352
8	Predicting attitudes and behavioural intentions towards social entrepreneurship: The role of servant leadership in young people	Rivera, R.G.; Santos, D.; Martín-Fernández, M.; Requero, B.; Cancela, A.	Revista de Psicologia Social 33(3) pp. 650-681
9	The intention towards social entrepreneurship among students and its link with Big 5 Model	Preethi, C.M.; Priyadarshini, R.G.	IOP Conference Series: Materials Science and Engineering 390(1)

10	Influence of social entrepreneurship pedagogical initiatives on student's attitudes and behaviours	Adelekan, S.A.; Williamson, M.; Atiku, S.O.	Journal of Business and Retail Management Research 12(3) pp.168-177
11	Impact of personal motivation on the intention and behaviours of social entrepreneurs	Salhi, B.	Journal of Entrepreneurship Education 21 (Special Issue), pp.1-15

Appendix B – Pilot Questionnaire

Introduction

Thank you for participating in our pilot survey!

We are hoping to understand if the following questionnaire is easy to understand, and we appreciate any comments about typos, unclear statements, or if it appears that we are missing a crucial aspect!

At the end of each page in the questionnaire there is a comment box in which you can give us feedback.

For the purpose of the survey, you can answer the questions as you would for yourself, or alternatively imagine that you are starting-up or have started-up a social enterprise!

Note that these questions are intended for a group of former students who took Kai Hockerts' online Coursera course on social entrepreneurship in autumn of 2014, so some questions refer to this time frame.

In the survey, a social enterprise is defined as an enterprise which "*pursues an explicit social mission aimed at benefiting marginalized people by applying business-inspired earned-income strategies.*"

Thank you again for your participation, your feedback is important!

Section 1 – Control Questions and Screening

Q1. In what country do you currently reside?

Drop-down menu with all recognised countries

Q2. Which of the following best describes your marital status?

1) Married; 2) Widowed; 3) Divorced; 4) Separated; 5) In a domestic or civil union; 6) Single, but cohabiting with a significant other; 7) Single, never married.

Q3. How many children are you parent or guardian for and live in your household (aged 18 or younger)?

1, 2, 3, 4, 5, 6, 7, 8, 9, 10 or more

Since Autumn of 2014, have you been involved in a social enterprise? Please indicate how strongly you agree or disagree with the following statements:

Five-point Likert Scale ranging from 'Strongly Disagree' to 'Strongly Agree'

Q4. I have been involved in the founding of a social enterprise start-up.

Q5. I have been employed in a social enterprise.

Q6. I have volunteered at a social enterprise.

Q7. I have invested in a social enterprise.

Q8. I have otherwise been involved in a social enterprise.

Q9. I have been involved in the start-up of a traditional for-profit enterprise.

Q10. I am considering to start-up a social enterprise one day.

Q11. Feedback: Please comment on anything which is unclear or which you believe may need changing in the above section. Thank you! *(Qualitative Question)*

Section 2 – Dependent Variable: Behaviour

Please indicate if you have taken any of the following steps towards a social enterprise start-up since the autumn of 2014. If you have started several social enterprises, please specify for the social enterprise which you consider most established.

Five-point Likert Scale ranging from 'Strongly Disagree' to 'Strongly Agree'

Q12. Saving money

Q13. Applied for funding

Q14. Received funding

Q15. Invested money into social enterprise supplied

Q16. Opened bank account for the start-up

Q17. Determined regulatory requirements

Q18. Legal form of entity registered

Q19. Began to promote goods or services

Q20. Have a web presence

Q21. Received income from goods or services

Q22. Received a salary from your social enterprise.

Q23. Have you answered 'Strongly disagree' or 'disagree' to all the options in the section above?

1) Yes, I have answered 'Strongly disagree' or 'disagree' to **all** questions in the above section
2) No, I have answered at least one question with 'neither agree nor disagree', 'agree' or 'disagree'

Section 3 – Countries of Operation

If answered '(1) Yes' to Q 23, Sections 3 & 4 are skipped, the interviewee goes directly to Section 5.

Please indicate in which country you initiated the following activities, with a maximum of three country choices:

For each question, three drop-down options with all recognised countries.

Q23. Promoted goods or services

Q24. Received income from goods or services

Q25. Legally registered

Section 4 – Sources of Funding

From which of the following sources have you received funding from for your social enterprise?

Five-point Likert Scale ranging from 'Strongly Disagree' to 'Strongly Agree'

Q26. Personal savings of Founders

Q27. Family

Q28. Friends

Q29. Employers

Q30. Private Investors – Venture Capitalists & Business Angels

Q31. Crowdfunding

Q32. National/Local government funding

Q33. Loans from banks or other financial institution

Q34. NGOs

Q35. Philanthropic Organisations

Q36. Corporate partners

Q37. Most people who have taken the online Coursera course on social entrepreneurship have not started-up a social enterprise. As you have participated in a social enterprise start–up, why do you think you have? *(Qualitative Question)*

Q38. As you are a founder of a social enterprise or are currently starting one up, what are the barriers which stood in the way of you starting-up a social enterprise, and how did you overcome them? *(Qualitative Question)*

Section 5

Only answered by respondents who answered '(1) Yes' to Q23, otherwise this question is skipped.

Q39. If you have not started-up a social enterprise, could you please describe why you have not? *(Qualitative Question)*

Section 6 – Feedback

Q40. Feedback: Please comment on anything which is unclear or which you believe may need changing in the above section. Thank you! *(Qualitative Question)*

Section 7 – Institutional Support

Please indicate to what extent you agree with the following statements:

Five-point Likert Scale ranging from 'Strongly Disagree' to 'Strongly Agree'

Q41. My family would be supportive of me starting-up a social enterprise.

Q42. I am afraid of failure.

Q43. I have to overcome more barriers than others within my society to start-up a social enterprise.

Q44. I have a lot of knowledge about the business world.

Q45. I have a lot of business contacts.

Q46. I have easy access to a social entrepreneurial network, e.g. social enterprise accelerators and incubators such as Ashoka, Agora, India Inclusive Innovation Fund (IIIF), Social Impact Accelerator (SIA), SIGMA, etc.

Q47. It is easy to register a social enterprise in my country of residence.

Q48. My government supports social entrepreneurs.

Q49. There is a lot of corruption in my country.

Q50. The institutional context in my country is very supportive of starting-up a social enterprise.

Q51. Approximately what percent of Kai's online Coursera course would you say you have completed? (Having watched all the videos, and read all the literature)
Five-point scale: 0%, 25%, 50%, 75%, 100%

Q52. Have you been part of a team submitting a business plan to the online course on social entrepreneurship?

1) No, I did not submit a business plan
2) Yes, I submitted a business plan as part of a group
3) Yes, I submitted a business plan, but as an individual

Q53. Which of the following best describes your relationship status in autumn of 2014?
1) Married, 2) Widowed 3) Divorced, 4) Separated, 5) In a domestic or civil union, 6) Single, but cohabiting with a significant other, 7) Single, never married.

Q54. If you are a social enterprise founder, would you be willing to be contacted again for a further interview?
1) Yes, 2) No, 3) Not applicable

Q55. Last Feedback: Please comment on anything which is unclear or which you believe may need changing in the above section, or if you have any final comments on the entire survey. Thank you! *(Qualitative Question)*

Appendix C – Final Questionnaire

Preface

Thank you in advance for taking the time to complete this survey on social entrepreneurial behaviour!

The survey should take around 5-10 minutes to complete.

With this survey, we would like to know what activities you may have taken towards starting-up a social enterprise, or what factors may have prevented you from taking action. These questions are intended for individuals who took Kai Hockerts' online MOOC course on social entrepreneurship in 2014 or 2015, and some questions may refer to this time frame.

The term 'social enterprise' is mentioned throughout the questionnaire, and for the purpose of the survey, a social enterprise is defined as "*an organization that applies commercial strategies to maximize societal benefits".*

Thank you!

Section 1 – Control Question & Screening

Q1. What is your current country of residence?

Drop-down menu with all recognised countries

Please indicate how strongly you agree or disagree with the following statements regarding your actions since the completion of the online course on social entrepreneurship.

Five-point Likert Scale ranging from 'Strongly Disagree' to 'Strongly Agree'

Q2. Since the completion of the online MOOC on social entrepreneurship, I have been involved in the founding of a social enterprise start-up.

Q3. Since the MOOC course on social entrepreneurship, I have taken concrete steps outside MOOC course to potentially start-up a social enterprise. e.g. started saving, applied for funding, invested money into supplies, etc.

Q4. I have invested in a social enterprise.

Q5. I have been employed by a social enterprise.

Q6. I have volunteered with a social enterprise.

Section 2

If the answer to question Q3 was 'neither agree nor disagree', 'agree' or 'strongly agree', then Section 2 is completed, and Section 3 skipped.
If answer to Q3 is 'disagree' or 'strongly disagree', Section 2 is skipped, and the individual moves to Section 3.

Please indicate if you have taken any of the following steps towards a social enterprise start-up since the completion of the MOOC course. If you have started several social enterprises, please indicate for that which you consider most established.

Five-point Likert Scale ranging from 'Strongly Disagree' to 'Strongly Agree'

Q7. Saving money

Q8. Consulted with beneficiaries regarding the social enterprise

Q9. Applied for funding

Q10. Received funding

Q11. Opened a bank account for the start-up

Q12. Determined regulatory requirements

Q13. Legal form of entity registered

Q14. Began to promote goods or services

Q15. Have a web presence

Q16. Received income from goods or services

Q17. If the social enterprise you are involved in is legally registered, in what country is it legally registered? Please indicate with a maximum of three country choices.

Drop-down menu of all recognised countries

Q18. How many people, including yourself, do you consider to be founders of your social enterprise?

Drop-down menu: Not applicable, 1 individual – myself, 2 individuals, 3 individuals, 4 individuals, 5 individuals, 6 individuals, 7 individuals, 8 individuals, 9 individuals, 10 or more individuals

Q19. At this point in time, what is your current relationship with the social enterprise described above?

1) I am an owner, 2) I am a manager, 3) I am an employee, 4) I act as an advisor
5) I am a beneficiary, 6) I am no longer involved

Q20. Which option best describes the growth phase you consider your social enterprise to be at?

1) The social enterprise is in the inception phase.
2) The social enterprise is in its early growth phase.
3) The social enterprise is now in the process of scaling up.
4) The social enterprise has reached maturity.
5) The social enterprise has ceased to exist.

Q21. What percentage of your working week have you spend on your social enterprise during the start-up phase?

Slider scale ranging from 0% - 100%

Q22. Could you provide an online link to the social enterprise that you are involved with (e.g. website, LinkedIn, Facebook)

Three open response sections for the posting of a link

Q23. If you feel comfortable, could you please describe from which sources you have received funding (e.g. friends & family, banks, international organisations, grants, government, angel investors, awards, crowdfunding, etc.), and the approximate amount? All information you provide will be kept strictly confidential. *(Qualitative Question)*

Q 24. Most people who have taken the online MOOC course on social entrepreneurship have not started-up a social enterprise. As you have participated in a social enterprise start-up, why do you think you have? *(Qualitative Question)*

Q25. As you are a founder of a social enterprise or are currently starting one up, what are the barriers which stood in the way of you starting-up a social enterprise and how did you overcome them? *(Qualitative Question)*

Section 3

Qualitative question on reasons why the social enterprise has not been started. Only completed by those whose answer to Q4 is 'disagree' or 'strongly disagree', and so have skipped Section 2.

Q26. If you have not started-up a social enterprise, could you please describe why you have not? *(Qualitative Question)*

Section 4 – Institutional Support

Please indicate to what extent you agree with the following statements:

Five-point Likert Scale ranging from 'Strongly Disagree' to 'Strongly Agree'

Q27. My family would be supportive of me starting a social enterprise

Q28. My government supports social entrepreneurs

Q29. I have a lot of knowledge about the business world

Q30. I have a lot of business contacts

Q31. It is easy to register a social enterprise in my country of residence

Q32. The institutional context in my country is very supportive of starting a social enterprise

Q33. There is a lot of corruption in my country

Section 5 – Time Planning

Please indicate to what extent you agree with the following statements:

Five-point Likert Scale ranging from 'Strongly Disagree' to 'Strongly Agree'

Q34. I set long–term goals for what I want to achieve with my time.

Q35. I decide beforehand how my time will be used within the next months.

Q36. It makes me feel better to have my time planned out in the next months.

Q37. I actively consider the steps I need to take to stick to my time schedule.

Q38. I consult my planner to see how much time I have left for the next few months.

Q39. I like to look to my planner for the next 1–2 months in order to get a better view of using my time in the future.

Section 6 – Trait Self Control

How well do the following statements describe you as you normally are?

Five-point Likert Scale ranging from 'Strongly Disagree' to 'Strongly Agree'

Q40. I am good at resisting temptation

Q41. It is difficult for me to get rid of bad habits (R)

Q42. I am lazy (R)

Q43. I say inappropriate things (R)

Q44. I do things that are bad for me, if they are fun (R)

Q45. I should have more self-discipline (R)

Q46. I abstain from things that are bad for me

Q47. People think I have iron self-discipline

Q48. Pleasant and fun things sometimes prevent me from getting work done (R)

Q49. I have difficulties concentrating (R)

Q50. I can work effectively to reach long-term objectives

Q51. Sometimes I cannot prevent myself doing things I know are wrong (R)

Q52. I often act without closely considering the alternatives (R)

Section 7 – Extra Questions

Q53. How strongly do you agree or disagree with the following statement: I am likely to be involved with a social enterprise in the future.

Five-point Likert Scale ranging from 'Strongly Disagree' to 'Strongly Agree'

Q54. Approximately what percentage of the online MOOC course on Social Entrepreneurship would you say you completed? (Having watched all the videos, and read the literature.)

Five-point scale: 0%, 25%, 50%, 75%, 100%

Q55. Have you been part of a team submitting a business plan to the online course on social entrepreneurship?

1) No, I did not submit a business plan
2) Yes, I submitted a business plan as part of a group
3) Yes, I submitted a business plan, but as an individual

Q56. I feel that participating in group work within the MOOC has enhanced my skills relating to social entrepreneurship.

Five-point Likert Scale ranging from 'Strongly Disagree' to 'Strongly Agree'

Q57. I have stayed in touch with my group members from the MOOC on Social Entrepreneurship.

Five-point Likert Scale ranging from 'Strongly Disagree' to 'Strongly Agree'

Q58. If you are a social enterprise founder, would you be willing to be contacted again for a further interview?

1) Yes,
2) No,
3) Not applicable

Appendix D – Final Item Code and Corresponding Question

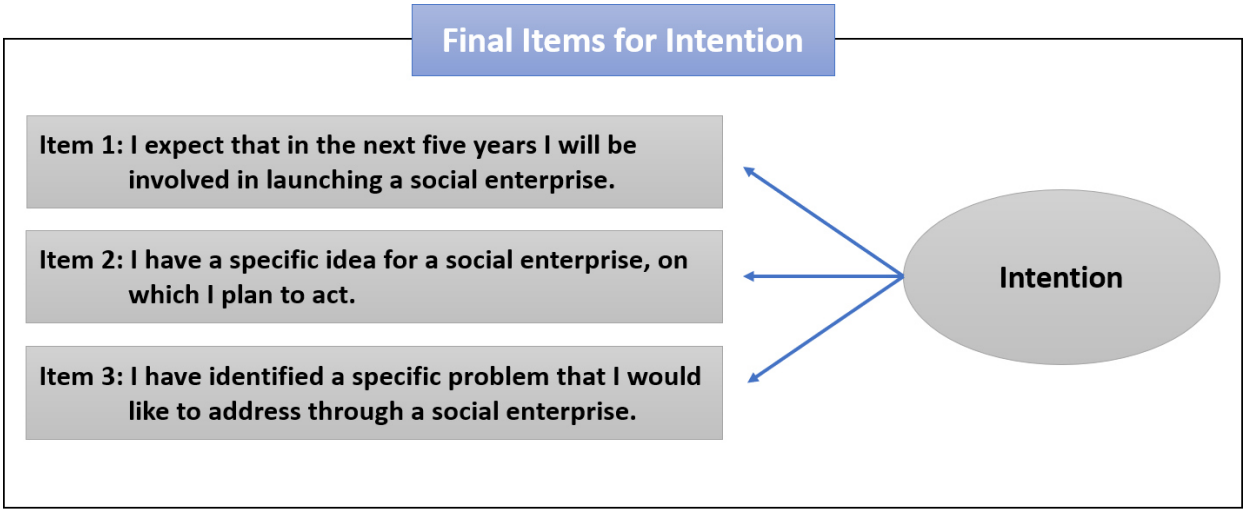
Item	Question Number	Question
Behaviour 1	Q2	Since the completion of the online MOOC on social entrepreneurship, I have been involved in the founding of a social enterprise start-up.
Behaviour 2	Q3	Since the MOOC on social entrepreneurship, I have taken concrete steps to start-up a social enterprise.
Behaviour 3	Q4	I have invested money in a social enterprise.
Behaviour 4	Q7	Saving money for a social venture.
Behaviour 5	Q10	Received funding.
Behaviour 6	Q11	Opened bank account for the start-up.
Behaviour 7	Q13	Legal form of entity registered.
Behaviour 8	Q14	Began to promote goods or services.
Behaviour 9	Q15	Have a web presence.
Behaviour 10	Q16	Received income from goods or services.
Time Planning 1	Q35	I decide beforehand how my time will be used within the next months.
Time Planning 2	Q36	It makes me feel better to have my time planned out in the next months.
Time Planning 3	Q37	I actively consider the steps I need to take to stick to my time schedule.
Time Planning 4	Q38	I consult my planner to see how much time I have left for the next few months.
Time Planning 5	Q39	I like to look to my planner for the next 1–2 months in order to get a better view of using my time in the future.
Self-Control 1	Q41	It is difficult for me to get rid of bad habits. (R)
Self-Control 2	Q42	I am lazy. (R)
Self-Control 3	Q48	I do things that are bad for me, if they are fun. (R)
Self-Control 4	Q49	I have difficulties concentrating. (R)
Self-Control 5	Q51	Sometimes I cannot prevent myself doing things I know are wrong. (R)
Self-Control 6	Q52	I often act without closely considering alternatives. (R)
Institutional Support1	Q28	My government supports social entrepreneurs.
Institutional Support2	Q31	It is easy to legally register a social enterprise in my country.
Institutional Support3	Q32	The institutional context in my country is very supportive of starting-up a social enterprise.
Intention 1	t1*	I expect that in the next 5 years I will be involved in launching of a social enterprise.
Intention 2	t1*	I have a specific idea for a social enterprise, on which I plan to act.
Intention 3	t1*	I have identified a social problem that I would like to address through a social enterprise.
Gender	t1*	What is your gender? 1) Male 2) Female
Age	t1*	What is your current age? *Drop-down menu with all available ages*
Education	t1*	*Drop down menu with options of* 1) Did not graduate from high school; 2) Graduated from high school; 3) Graduated from College (Bachelor's Degree or similar); 4) Graduated from University (Master's Degree or similar); 5) PhD or equivalent

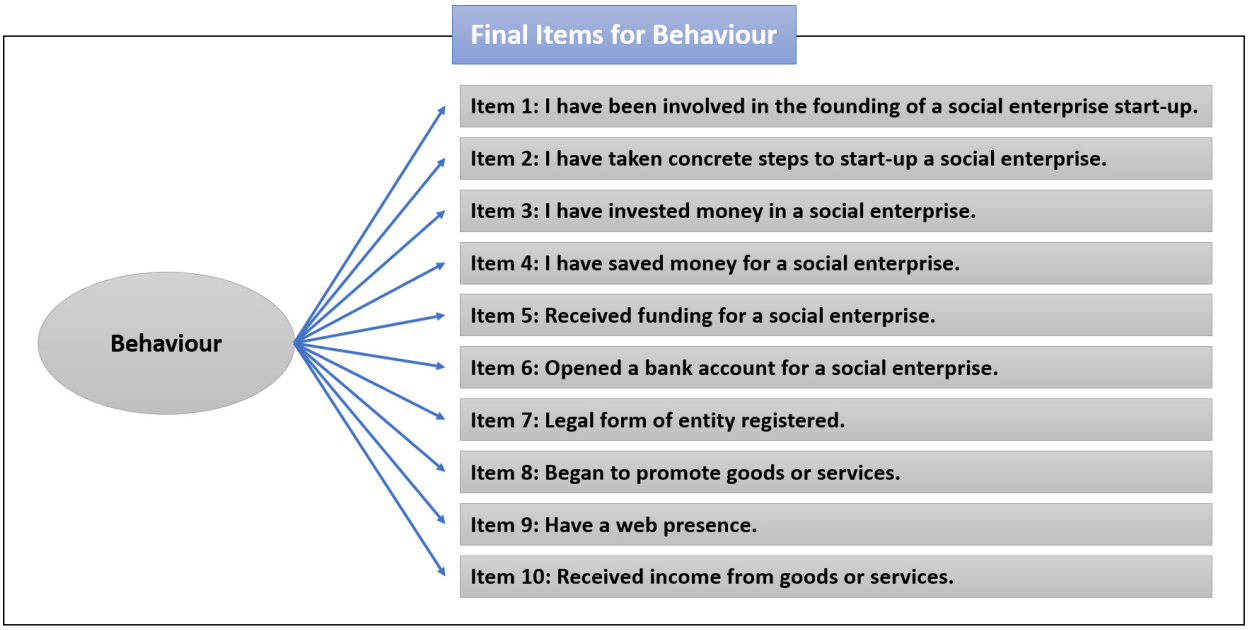
(R) = Reverse coding; * = Questions asked in t1

Items initially included, but removed throughout EFA and CFA process

Item	Question Number	Question
Behaviour 11	Q8	Consulted with beneficiaries regarding the social enterprise.
Behaviour 12	Q9	Applied for funding.
Behaviour 13	Q12	Determined regulatory requirements.
Self-Control 7	Q44	I do things that are bad for me, if they are fun. (R)
Time Planning 4	Q34	I set long-term goals for what I want to achieve with my time.
Intention 4	t1*	I do not plan to start-up a social enterprise. (R)

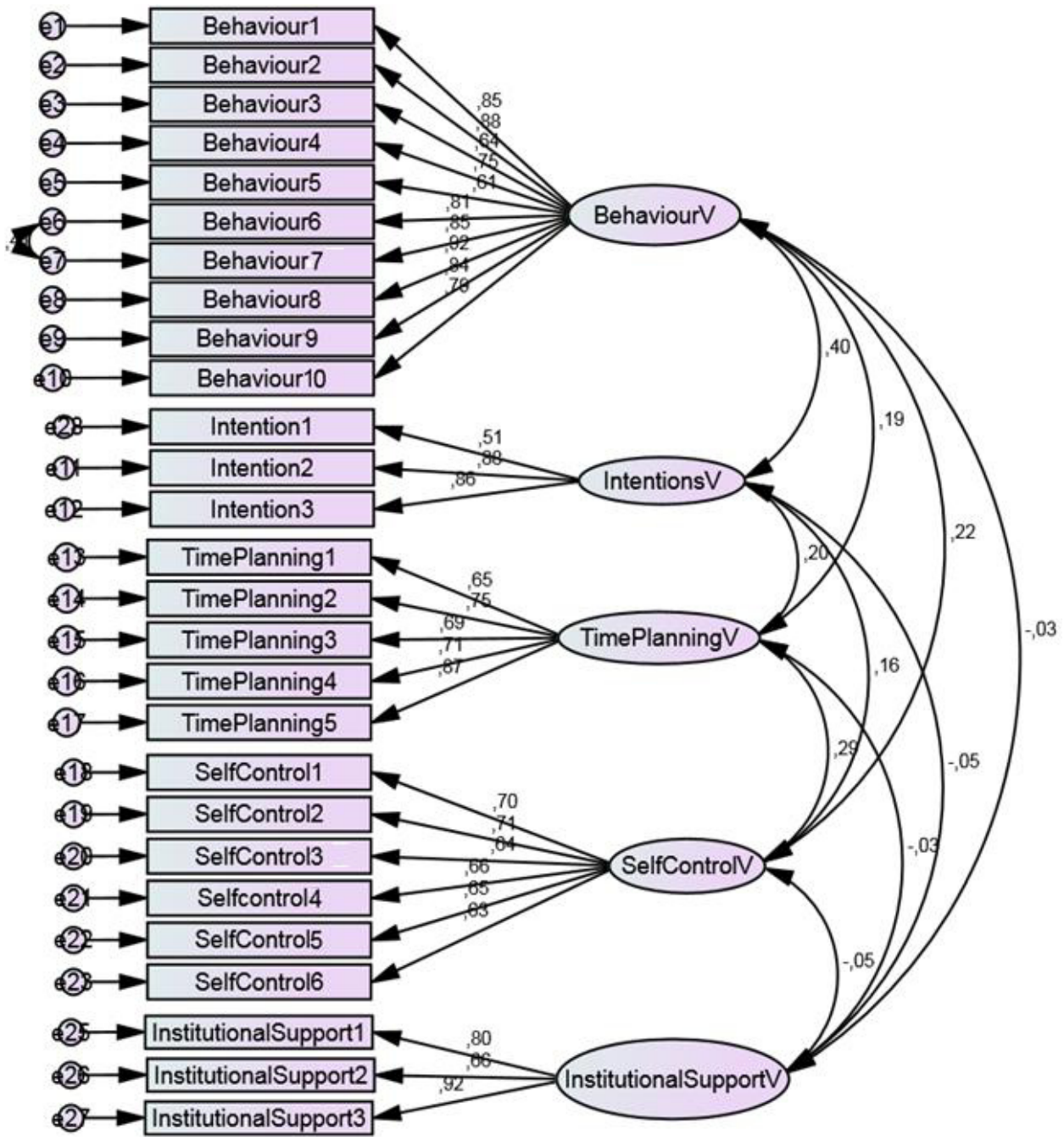
Appendix E – Final Items for the Constructs of Intention and Behaviour





Appendix F – Confirmatory Factor Analysis Illustration

Constructed with the programme IBM Amos 24



Appendix G – Final Model Path Analysis with Path Weightings and T-Statistics

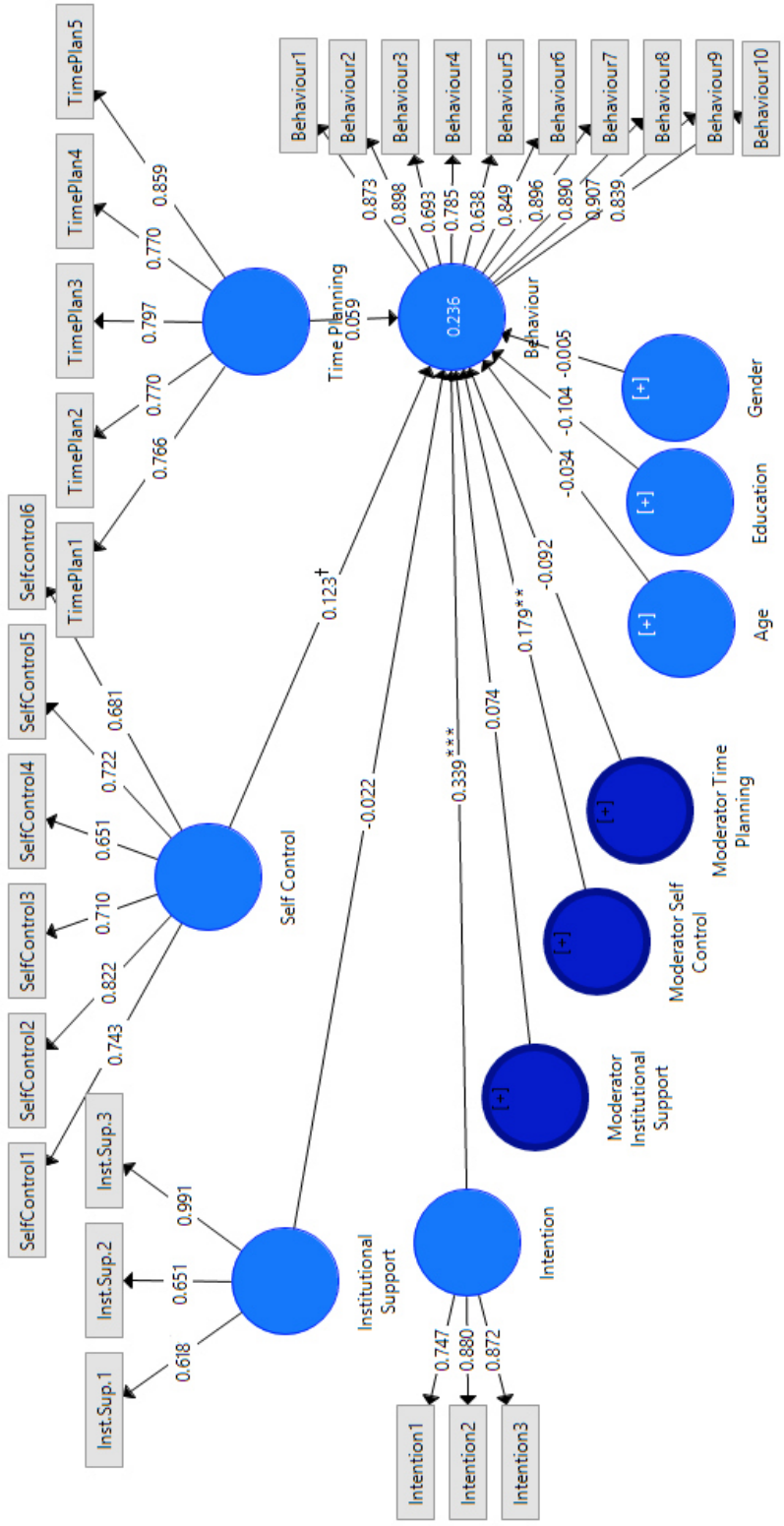


Figure 1 – Entire Final Model Path Analysis with Path Weightings, as done in the Program SmartPLS 3 (Ringle, et al., 2015).

Figure 2 – Final 'Inner' Structural Model Path Analysis with Path Weightings, as calculated with SmartPLS 3 (Ringle, et al., 2015)

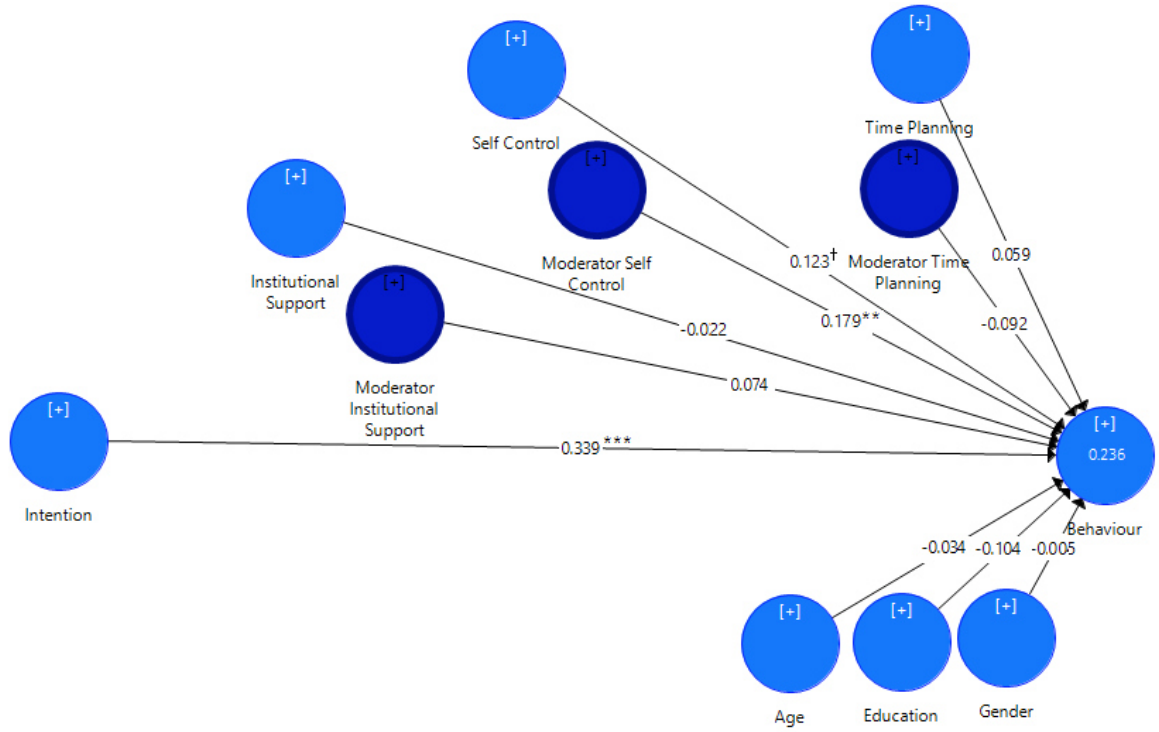


Figure 3 - Final 'Inner' Structural Model with T-Statistics, as calculated with SmartPLS 3 (Ringle, et al., 2015).