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The Influence of Role Models on
the Antecedents of Entrepreneurial Intentions:

A Study Examining the Motivational Fit
Between Role Models and Aspiring Entrepreneurs

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Acknowledgements

Abstract

Decisions to engage in entrepreneurship are affected by role models and the examples they provide. This study seeks to deepen the insights of this relation, by testing the influence of a motivational fit between entrepreneurial role models (ERMs) and aspiring entrepreneurs on entrepreneurial intentions. The study deployed a vignette experiment, in which 71 European entrepreneurship students participated. They were presented to four fictive ERMs, each expressing one specific entrepreneurial motive. After exposure to each ERM, the participants' entrepreneurial self-efficacy and attitude towards entrepreneurship were measured, as both are important antecedents of entrepreneurial intentions. Statistical analyses based on ANOVA found partial support for one of the study's two hypotheses: For one of the four tested types of aspiring entrepreneurs, the motivational fit significantly improved the attitude towards entrepreneurship. This study advances the understanding of ERMs and their effectiveness by including the motive as factor to be evaluated in terms of role model congruency. In that capacity, it bridges the literature stream about ERMs with the stream addressing motives to engage in entrepreneurial activities. In practical terms, this study contributes to the comprehension of ERMs as instrument to stimulate the formation of entrepreneurial intentions.

Keywords: *Role models, Entrepreneurs, Motives, Entrepreneurial intentions, Entrepreneurial self-efficacy, Attitude towards entrepreneurship*

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List of Key Definitions & Abbreviations

ERM	Entrepreneurial role model	An entrepreneur who could be considered as an example for aspiring entrepreneurs.
EI	Entrepreneurial intention	The (formation of a) decision to start up a business.
ESE	Entrepreneurial self-efficacy	An individual's perception of own entrepreneurial competencies – known as antecedent of EI.
ATE	Attitude towards entrepreneurship	An individual's appraisal of entrepreneurial activities – known as antecedent of EI.
	Motivational fit	A situation in which two (or more) actors hold the same motive in common.
	Entrepreneurial Motive	The driver of an individual to engage in entrepreneurial activities.

Chapter 1 Introduction

Entrepreneurship is frequently referred to and identified as a stimulating force for economic growth, spurring innovations and technological advancements, and contributing to job creation (e.g., Fellnhofer & Kraus, 2015; Nowiński & Haddoud, 2019; Parker, 2009; Van Praag & Versloot, 2007). "Therefore, uncovering what leads people to undertake entrepreneurial activity has been the topic of research for over thirty years" (Nowiński & Haddoud, 2019, p.410). Likewise, practitioners such as policy makers tend to agree that gaining insights in the dynamics that result in increasing entrepreneurship is vital for society as a whole (Nowiński & Haddoud, 2019). Understanding of these mechanisms is required in order to create a foundation that supports start-up activity.

Prior studies concerned with this phenomenon identified various drivers of entrepreneurial activity (e.g., Liñán & Fayolle, 2015), of which Bosma et al. (2012) highlight one as key driver: "It has long been acknowledged that role models may have a profound influence on career decisions (e.g., Krumboltz, Mitchell & Jones, 1976)" (p.412). This is echoed by Nowiński and Haddoud (2019) who recently and increasingly observed the importance of prior exposure to role models "for decisions to start or expand entrepreneurial careers" (p.183). In fact, it is claimed that more than half of all (active) entrepreneurs had a role model, of which one-third would have waived their intention to found a venture without such a model (Bosma et al., 2012). These statistics imply a potentially crucial influence of role models on (the development of) entrepreneurial intentions (hereafter: EI).

Acknowledgement out of the academic context is presented by both the OECD (2009) and the European Commission (2003) who identified "the presence of entrepreneurial role models as amongst the most important for entrepreneurship" (Karimi et al., 2013, p.205). Furthermore, the media have shown role models' influencing potential, further acknowledging their importance in terms of mapping out choices of occupation and careers (Bosma et al., 2012). For instance, American business magazine Forbes lists and ranks the 30 most promising entrepreneurs aged 30 years or younger annually, providing a source of inspiration for various regions around the globe (Forbes, 2021). Likewise, entrepreneurs active on social media as Instagram tend to showcase their work, success, and life to their followers (Mahy, 2018).

Besides the stream concerned with (the influence of) entrepreneurial role models (hereafter: ERMs), a distinctive yet highly related stream of literature on the process by which entrepreneurial career preference is developed, has investigated drivers that are referred to as "motivations and aspirations" of prospective entrepreneurs (Bosma et al., 2019, p.44). In their annual inquiry called *The Global Entrepreneurship Monitor* (hereafter: GEM), the researchers identify four idiosyncratic motives for engaging in entrepreneurial activity: (i) continuing a family tradition; (ii) building great wealth or acquiring a very high income; (iii) having the purpose to make a difference in the world; and (iv) earning a living because of job scarcity (Bosma et al., 2019).

This study seeks to integrate these two streams of literature concerned with the mechanisms by which entrepreneurs decide to start their own businesses (i.e., the role model-stream and the motives-stream). In light of the aforementioned relevance of role models, this study addresses the effects of ERMs on aspiring entrepreneurs, by zooming in on the impact of a match in terms of entrepreneurial motives of the role model and aspiring entrepreneur.

In that capacity, and with respect to the literature on ERMs, we continue the exploration by Bosma et al. (2012) regarding the kinship between role models and aspiring entrepreneurs: "[T]he match between entrepreneurs and their role models has not yet been [sufficiently] studied. Do entrepreneurs have homophilic role models, that is models who are similar to themselves in terms of characteristics such as nationality and gender, or do they select role models that are different?" (Bosma et al., 2012, p.411).

Although these specific characteristics have been studied meanwhile (for instance, there is ample support for the claim that individuals and their respective role models are likely akin regarding race and gender (Hernandez, 1995; Maccoby & Jacklin, 1978; Ruef, Aldrich & Carter, 2003), the important motives to engage in entrepreneurial activity have been ignored in this context, leaving a gap in the current state of research. Accordingly, this thesis extends on these studies about the harmony between (aspiring) entrepreneurs and ERMs, by considering a match of the motivational drivers between the two actors. Thus, the aim of this study is to determine the influence of a motivational fit between ERM and aspiring entrepreneur. This entails testing whether the homophily-based reasoning (McPherson, Smith-Lovin & Cook, 2001) that has been applied to and tested for other characteristics (e.g., the observants' and role models' gender (Ibarra, 1997; Kalleberg et al., 1996), ethnicity (Reskin, McBrier & Kmec, 1999), industry/sector/domain (Bosma et al., 2012; Lockwood & Kunda, 1997)) also holds with regards to their motivational

driver. This proposition draws on (the implications of) the role identification theory (Bosma et al., 2012; Gibson, 2004), which entails that models who are perceived as comparable in terms of characteristics, behaviour or goals are appealing examples to observants – as elaborated on extensively in the second chapter.

The shaping influence of motive congruence with role models on entrepreneurial intentions is addressed through the following research question:

Does a motivational fit between aspiring entrepreneurs and their role models lead to improved antecedents of entrepreneurial intentions?

Note that although the entrepreneurial intention is the ultimate variable of interest, in this study the antecedents preceding EI are acting as dependent variables due to the complex nature of the EI-construct (Krueger & Kickul, 2006; Nowiński & Haddoud, 2019), as elaborated on in section 2.1.

The research question will be addressed quantitatively by means of a vignette experiment in which entrepreneurship students participate (as discussed in-depth in the methodology chapter of this thesis) in line with prior studies on role model effects on the EI of students (e.g., Krueger, Reilly & Carsrud, 2000; Van Auken et al., 2006; Van Auken, Fry & Stephens, 2006).

This study contributes to the aforementioned distinctive streams of literature on nascent entrepreneurship, by bridging the two separate concepts (i.e., motivational drivers and the influence of ERMs). This way, we provide a more holistic overview of the two concepts and add granularity in our understanding of why and how certain individuals engage in entrepreneurial activities, as depicted in Figure 1 enclosed at the end of chapter 2.

Considering the deployed research approach, this study contributes to existing literature by adding empirical evidence to the underlying mechanisms of the crossover between motivational drivers and role models, addressing the following call by Bosma et al. (2012): "However, empirical research aimed at establishing the importance of role models for (nascent) entrepreneurs is scarce. Knowledge of the presence of entrepreneurial role models, their specific functions and characteristics is therefore limited" (p.410). Through empirical exploration, this thesis complements the current understanding of (the characteristics of) role models, and advances the

homophily-based reasoning that is embedded in the paper by Bosma et al. (2012) that constitutes the foundational core of this thesis.

As to practical contributions, this thesis deepens the understanding of ERMs as potential driver of entrepreneurship, enabling further development and usage of new (policy) instruments that advance entrepreneurial activity. Educational institutions and media are claimed to "employ their scarce resources to provide students and audiences at large with entrepreneurial role models in the classroom, on television and in the press" (Bosma et al., 2012, p.411). Thus, comprehension of the relation between entrepreneurship and role models is meaningful in order to explore if these devoted resources could be deployed more effectively.

The remainder of this thesis is structured as follows. The next chapter covers the theoretical framework in which academic grounding for all variables is embedded. Chapter three outlines the methodological approach and research design. In the subsequent chapter the results are presented and analysed. This is followed by the discussion of the findings (including theoretical contributions and practical implications) in chapter five. The ultimate chapter covers the conclusion of this study.

Chapter 2   Theoretical Framework

This chapter provides the theoretical foundation, in which the research design is embedded. The theory development is thus tailored to the empirical context of this thesis: First, the concepts of 'entrepreneurial intentions' and 'motivational match' are introduced in section 2.1. This is followed by a review of motivational drivers for engaging in entrepreneurial activities in section 2.2. Subsequently, section 2.3 addresses the concept of ERMs and their influence on (the intentions of) aspiring entrepreneurs. This is complemented by an in-depth discussion of two mediators in this influence: 'entrepreneurial self-efficacy' (in §2.3.3) and 'attitude towards entrepreneurship' (in §2.3.4). The chapter concludes by hypothesising relations to be tested in this study and depicting the relations in the conceptual model.

2.1 Entrepreneurial Intention & Motivational Match

The ultimate objective of this study is to examine how entrepreneurial intentions are shaped and affected by the motivational match with entrepreneurial role models. Therefore, firstly concise introductions to these two core concepts are provided.

'Entrepreneurial intentions' is a highly complex construct (Krueger & Kickul, 2006; Nowiński & Haddoud, 2019) technically defined as "the decision[s] to become an entrepreneur i.e. to start up a business" (Bosma et al., 2012, p.411). In general, intentions are ascribed as the most important determinant of behaviour, as postulated in the Theory of Planned Behaviour (TPB) (Ajzen, 1988, 1991). In their meta-analytic review of 185 empirical studies, Armitage and Conner (2001) established the efficaciousness of the TPB in predicting both intentions and behaviours. As to entrepreneurial intentions specifically, the predicting ability of the TPB has been demonstrated by numerous studies in entrepreneurship (e.g., Autio et al., 2001; Liñán & Chen, 2009; Kolvereid, 1996; Krueger et al., 2000).

In the TPB applied to an entrepreneurial context, intentions are shaped by three factors: (i) "attitude (the degree to which the individual holds a positive or negative personal valuation about the behavior or its consequences)"; (ii) "subjective norms (perceptions of pressure to engage in the behavior)"; and (iii) "perceived behavioral control (PBC; the extent to which an individual believes they are capable of performing the behavior)" (Karimi et al., 2013, p.205).

Within the focus of this thesis (i.e., the context of ERMs), the interpretation and adaptation of TPB by Nowiński and Haddoud (2019) is followed, as they added role models as an additional explanatory factor to the intentional model. This entails that vis-à-vis the original TPB, this thesis disregards the subjective norms as antecedent of EI, as role models predominantly impact the other two antecedents. As such, the conceptual and operational models of this study (Figure 1 and 2) are adaptations from the theoretical model of Nowiński and Haddoud (2019). Furthermore, in Nowiński and Haddoud's (2019) application of TPB, the attitude variable is represented one-on-one as 'attitude towards entrepreneurship' whereas the PBC is reflected by the substantially identical 'entrepreneurial self-efficacy'. Both variables are discussed in depth in sections 2.3.3 and 2.3.4 respectively, in relation to their mediating influence between role models and entrepreneurial intentions.

With regards to the second core concept of this study, 'matching motives', 'a motivational match', 'a motivational fit', and 'a match in terms of motives', all refer to the situation in which the aspiring entrepreneur and role model hold the main motive for becoming an entrepreneur in common. These motives are discussed in the following section.

2.2 Entrepreneurial Motives

Section 2.2. addresses the first main stream of literature that is included in this study: motives to engage in entrepreneurial activity. Consistent with the foundations of the conceptual framework of the GEM, four types are distinguished: (i) continuing a family tradition; (ii) building great wealth or acquiring a very high income; (iii) having the purpose to make a difference in the world; and (iv) earning a living because of job scarcity (Bosma et al., 2019).

Scholars have identified various additional motives, such as entrepreneurial passion (Cardon, Wincent & Drnovsek, 2009) and independence (Shane, Locke and Collins, 2003). Drawing on the empirical approach of the reputable GEM inquiry, this study limits the scope to the aforementioned four drivers, which are defined in subsequent sections.

2.2.1 Continuing a Family Tradition

Giving continuation to a venture created by a family member is used as one of the reference points for entrepreneurial motives in the GEM-report (Bosma et al., 2019). In many situations, the children of entrepreneurially active parents are exposed to their entrepreneurial activities. Shane, Kolvereid and Westhead (1991) identified "continuing a family tradition" as a key motive of entrepreneurs in Britain, New Zealand, and Norway (p.436). In the more recent empirical study from Cachon et al. (2013), "passing the venture on to family members" was one of the most frequently observed motivational drivers in North America (p.53).

2.2.2 Acquiring Great Wealth or High Income

Early academic works theorised that economic/financial gain was the main motive for entrepreneurship (Cantillon, 1931; Casson, 1982; Herbert & Link, 1988; Knight, 1921; Schumpeter, 1934). However, later studies reduced the relevance of this driver as entrepreneurs' main motive (Amit et al., 2001), and found that it ranked subordinate to other drivers. A nuance to the early academia is that the economic motive for entrepreneurs to acquire wealth is more oriented towards the realisation of having to sustain oneself (Westhead & Wright, 1998). With regards to the current empirical evidence, Abecassis-Moedas et al. (2021) observed various entrepreneurs operating in the creative industry that share the desire for acquiring great wealth or high income as main motivation.

2.2.3 Purpose to Make an Impact

Purpose-driven motives are currently emerging in entrepreneurship (Miller et al., 2012; Patzelt & Shepherd, 2011; Renko, 2013). One of the most prominent forms of purpose-driven entrepreneurship is social entrepreneurship, defined as: "the process of identifying, evaluating and exploiting opportunities aiming at social value creation by means of commercial, market based activities and the use of a wide range of resources" (Bacq & Janssen, 2011, p.376). Germak and Robinson (2014) found the following underlying reasons of entrepreneurs with a purpose-oriented approach: (i) personal fulfillment, (ii) helping society, (iii) non-monetary focus, (iv) achievement orientation, and (v) closeness to social problems.

2.2.4 Scarcity of Jobs

Facing barriers to obtain traditional employment (e.g., due to a lack of required education or discrimination) and a scarcity of traditional employment can trigger individuals to engage in entrepreneurial activities (Basu & Altinay, 2002; Haynie & Shepherd, 2011; Miller & Le Breton-Miller, 2017). This is echoed by Block et al. (2015), who claim that the increased difficulty for job acquisition can stimulate entrepreneurs to establish ventures. Furthermore, Fairlie (2013) states that higher rates of unemployment are associated with engaging in entrepreneurial activities: "slack labor markets … [result] in higher levels of business creation" (p.1).

2.3 Entrepreneurial Role Models and Their Influence

Section 2.3 addresses the second main stream of literature that is integrated in the design of this study: entrepreneurial role models and their impact on EI. First a general discussion (including definitions, underlying theories, and types) is provided. This is followed by the links[1] between role models and entrepreneurial self-efficacy (ESE) and attitude towards entrepreneurship (ATE) in sections 2.3.3 and 2.3.4 respectively. Hence, those sections address the integration of role models' influence as an exogenous variable in the TPB-model.

In order to provide a definition of a role model, the following concise outline regarding role models in the entrepreneurial context by Bosma et al. (2012) is followed:

> "Individual decisions to engage in a certain behavior are often influenced by the behavior and opinions of others, the demonstration of their identity and by the examples they provide (Ajzen, 1991; Akerlof & Kranton, 2000). This also holds for the occupational choice of individuals (Krumboltz, Mitchell & Jones, 1976) and, more specifically, the decision to engage in entrepreneurship" (p.410).

2.3.1 Definition & Functioning of Role Models

In this context, these "others" are frequently entrepreneurs and known as famous icons, (former) colleagues, friends or family members. They serve as role models: "[I]ndividuals who set examples to be emulated by others and who may stimulate or inspire other individuals to make certain (career) decisions and achieve certain goals (Basow & Howe, 1980; Shapiro, Haseltine & Rowe,

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[1] As mapped out in section 2.1.

1978; Wright, Wong & Newill, 1997)" (Bosma et al., 2012, p.410). In general, scholars agree that role models can arouse individuals to become entrepreneurs (Krueger, Reilly & Carsrud, 2000; Liñán & Fayolle, 2015; Urbano, Toledano & Ribeiro-Soriano, 2011). This overall positive impact of role models has been demonstrated in a range of varying contexts (Nowiński & Haddoud, 2019).

One way in which these role models function as stimulators of entrepreneurship is through enhancing an individual's desire to become an entrepreneur and as such positively influence entrepreneurial intentions. The dominant underlying mechanism and main function of a role model is 'learning by example' (Bosma et al., 2012, p.422).

Gibson (2004) provides scientific foundation for this mechanism in his role identification theory, in which a role model is based on two theoretical constructs: "the concept of role and the tendency of individuals to identify with other people … and the concept of modeling, the psychological matching of cognitive skills and patterns of behavior between a person [i.e., the role model] and an observing individual [i.e., the aspiring entrepreneur]" (p.136). This theory entails that role models who are evaluated as comparable with regards to characteristics, behaviour or goals (reflecting the role aspect), and who enable learning competencies (reflecting the model aspect) are appealing examples for the observing individuals. Thus, "based on role identification theory ... similarity between the [aspiring] entrepreneur and the role model (at least in the perception of the entrepreneur) is to be expected" (Bosma et al., 2012, p.413) – in this study referred to as the homophily-based reasoning. Absence of such similarity complicates rendering the perception of a role model's behaviour as compatible with one own's behavioural opportunity (i.e., the entrepreneurial intention).

Previous empirical studies suggest that individuals and their role models gravitate towards similarity with regards to gender and race (Hernandez, 1995; Maccoby & Jacklin, 1978; Ruef, Aldrich & Carter, 2003). Preliminary evidence by Bosma et al. (2012) implies closeness in terms of gender, sector and nationality. However, opposing results are also found. Role models tend to be older as well as more experienced and successful than their observers. This is explained as follows: if a characteristic entails hierarchy, ranking or achievement, dissimilarity is expected. In other cases, the conclusion based on Gibson's role identification theory (2004) is that entrepreneurs are inclined to choose role models with whom they can identify in terms of personal characteristics.

2.3.2 Types of Role Models

Based on the functions role models perform, three main types of role models can be distinguished: "role models serve three ... functions: to provide learning, to provide motivation and inspiration, and to help individuals define their self-concept" (Gibson, 2004, p.149). From these functions, three types of role models are derived: inspirators, supporters and teachers.

Another distinguishment is based on the distance between model and observer, resulting in close and distant role models. Close role models are defined as: "role model[s] who [are] in the same workgroup or department, and/or with whom the individual interacts with frequently" (Gibson, 2004, p.144). Close role models deliver a detailed explanation of the desired working methods in combination with feedback on the observer's performance (Ashford, 1986).

Distant role models are described as: "those who were either not as available (i.e., not part of typical role interactions), or are observed by individuals more rarely or through intervening media, such as through video presentations" (Gibson, 2004, p.148).

Based on their characteristics and the extent to which interactions are made, close models are associated with the supporter and teacher types, whereas distant models' function is aligned with providing inspiration.

These nuances and characteristics serve two functions, both related to the discussion chapter of this thesis: They form the base for (i) the contextualisation of results of this study, and (ii) embedment of theoretical and practical implications.

2.3.3 The Mediating Influence of Self-Efficacy

It is important to note that the relation between role models and the aspiring entrepreneurs' intentions is indirect. That is, the role model affects EI through antecedents, of which the observant's ESE is a main one (Krueger, Reilly & Carsrud, 2000; Van Auken et al., 2006; Van Auken, Fry & Stephens, 2006). Self-efficacy is a concept that was firstly defined as a Social Cognitive Theory (SCT) that refers to a person's judgement regarding the ability to perform activities required to produce unique performance attainments (Bandura, 1977, 1986, 1997). Thus, in lieu of referring to the skill itself, self-efficacy entails an individual's perception of these skills (Bandura, 1977; Kickul et al., 2009). Self-efficacy concerns the degree to which an individual confides in his or her competences to mobilise the motivation, cognitive resources, and causes of action required for a certain situation (Bandura, 1986). Within the domain of entrepreneurship, self-efficacy is referred to as entrepreneurial self-efficacy (ESE) and is defined as "the strength of a person's belief that he or she is capable of successfully performing the various roles and tasks of entrepreneurship" (Chen, Greene & Crick, 1998, p.295). The authors listed the following entrepreneurship-related tasks: marketing, innovation, management, risk-taking and financial control.

The mediating influence between ERMs and EI is for instance explained by means of provision of living evidence that certain objectives are accomplishable. Furthermore, "identification of and comparison with role models may help individuals define their self-concept or sense of self (Akerlof & Kranton, 2000) and enhance their self-efficacy to engage in a certain (e.g. entrepreneurial) occupation" (Bosma et al., 2012, p.412). In empirical terms, BarNir, Watson and Hutchins (2011) demonstrated support for the positive and compelling causal relationship between ERMs and ESE in a study among American students, further backing this mediating connection. Similar support is found for female university students by Austin and Naut (2016).

Additional backing for the underlying mechanism is derived from Lockwood and Kunda's (1997) research on superstar role models: On the condition that their success is perceived as attainable, this specific kind of role models provoke self-enhancement and inspiration, which results in observants believing that their own abilities could gradually enhance.

This attainability-based reasoning is previously put forward by Meichenbaum (1971), who claimed that role models have the ability to encourage and excite by rendering successful future selves more tangible, and through illustration of how future successes could be accomplished.

In turn, as first discovered by Bandura (1977), the "self-perceptions of personal skills in performing certain tasks affect career intentions" (Nowiński & Haddoud, 2019, p.185). With specific regards to the entrepreneurial context of this thesis, it is worth mentioning that Boyd and Vozikis (1994) found a link between ESE and entrepreneurial intention and behaviour, whereas Krueger and Brazeal (1994) viewed entrepreneurial self-efficacy as a prerequisite for an entrepreneur's essence. The second part of the mediating relationship is reflected in the notion by Bayon, Vaillant and Lafuente (2015) that "a perceived entrepreneurial ability encourages individuals towards taking concrete entrepreneurial actions" (Nowiński & Haddoud, 2019, p.185). Ample support is present for ESE's positive impact on entrepreneurial intentions in this regard (e.g., Aragon-Sanchez, Baixauli-Soler & Carrasco-Hernandez, 2017; Chen, Greene & Crick, 1998; Krueger, Reilly & Carsrud, 2000; Lüthje & Franke, 2003).

To highlight the strong overall relation ranging from exposure to an ERM to the entrepreneurial intention, Nowiński and Haddoud (2019) explicitly state: "[I]t could be concluded that when students are not inspired by role models, they are highly likely to develop low entrepreneurial intentions despite exhibiting high self-efficacies" (p.189). Based on the above-mentioned reasonings, and the underlying premise of the homophily-based reasoning (derived from Gibson's (2004) role identification theory by Bosma et al. (2012)) the first hypothesis of this thesis is:

> **H1:** A motivational match between aspiring entrepreneur and entrepreneurial role model results in increased entrepreneurial self-efficacy as antecedent of entrepreneurial intentions.

2.3.4 The Mediating Influence of Attitudes Towards Entrepreneurship

In addition to self-efficacy, the relation between role models and entrepreneurial intentions of aspiring entrepreneurs is mediated by the 'attitude towards entrepreneurship' (Nowiński & Haddoud, 2019). An attitude "refers to the degree to which a person has a favourable or unfavourable evaluation or appraisal of the behaviour in question" (Ajzen, 1991, p.188). This is in tune with the reasoning that attitudes affect intentions that in turn affect behaviour (Bagozzi, Baumgartner & Youjae, 1989).

Specifically in the entrepreneurial context of this thesis, attitude refers here to "the subjective appraisal of entrepreneurial activities and their outcomes", in line with the work by Nowiński and Haddoud (2019, p.184). Following their study, the attitude towards entrepreneurship reflects "to what extent individuals perceive entrepreneurial activity as a worthwhile and rewarding experience" (Nowiński & Haddoud, 2019, p.184).

This attitude towards entrepreneurship is shaped and influenced by role models, as previous studies demonstrated support for a positive link between (exposure to) role models and attitude in various entrepreneurial contexts (e.g., Carr & Sequeira, 2007; Fellnhofer & Puumalainen, 2017; Liñán & Chen, 2009). First mentioned authors explicitly found that a positive attitude is mediating the relation between exposure to role models and the emergence of entrepreneurial intentions. One potential explanation for this is derived from the study on superstar role models by Lockwood and Kunda (1997), who state that "participants could ... entertain the belief that their own futures would be as bright as the star's" (Lockwood & Kunda, 1997, p.101). This 'bright perception' of the future closely pertains to the definition of a positive attitude in which the aforementioned 'subjective appraisal' is embedded. Along similar lines, Laviolette, Lefebvre and Brunel (2012) found potential for entrepreneurial role models to arouse positive emotions.

Furthermore, the mediating relation as found by Carr and Sequeira (2007) is aligned with the TPB, that is used as grounding for the claim that positive attitudes towards entrepreneurship strengthen the formation of entrepreneurial intentions (Ajzen, 1991; Krueger & Carsrud, 1993). Rearticulating in practical terms: "When people expect positive outcomes from entrepreneurial activity they are more likely to venture into business creation" (Nowiński & Haddoud, 2019, p.184). This reasoning has been supported by past empirical research, that indicated significant links between attitude towards entrepreneurship and self-employment/entrepreneurial intentions (e.g., Aragon-Sanchez, Baixauli-Soler & Carrasco-Hernandez, 2017; Fini et al., 2012; Moriano et

al., 2012). Last mentioned authors even identified a positive attitude towards entrepreneurship as the strongest antecedent of entrepreneurial intentions. Based on the synesthesation of aforementioned literature, and following the logic of the homophily-based reasoning[2] (derived from Gibson's role identification theory (2004) by Bosma et al. (2012)), the second hypothesis of this study reads as follows:

> **H2:** A motivational match between aspiring entrepreneur and entrepreneurial role model results in a more positive attitude towards entrepreneurship as antecedent of entrepreneurial intentions.

2.4 Conceptual Model

The above-mentioned hypotheses are depicted in Figure 1. The two variables on the left side jointly result in the motivational match as defined in section 2.1. Considering their mediating influences, the variables SE and ATE are placed between the motivational match construct and the dependent variable of EI. The hypothesised relationships are expressed in the operational model in Figure 2, enclosed in the methodology chapter.

Figure 1
Conceptual Model
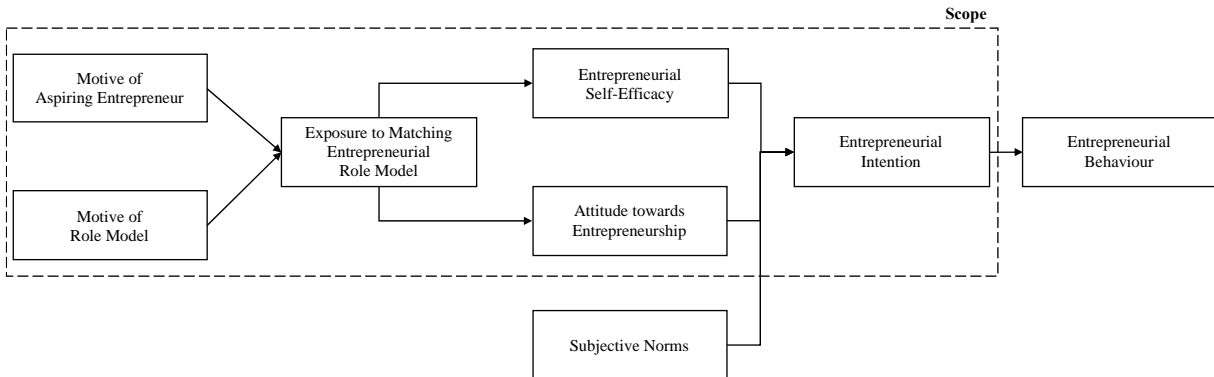
Adapted from BarNir, Watson & Hutchins (2011), Nowiński & Haddoud (2019), and Karimi et al. (2013)

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[2] As introduced in §2.3.1.

Chapter 3   Methodology

In this chapter an overview of the research design is provided (§3.1), including justification of the deployed research methodology. This is followed by: (i) the approach regarding the collection of the data (including relevant ethical considerations) (§3.2); (ii) key descriptive statistics of the sample (§3.3); (iii) the operational definitions and measures (§3.4); (iv) the strategy of analysing the collected data (§3.5).

The operational model depicted below (Figure 2) indicates the contributions of this study along the relationships established in previous studies (e.g., Nowiński & Haddoud, 2019; Karimi et al., 2013) as cited in the theoretical framework. In that capacity, it demonstrates how this thesis extends the TPB (as applied in the entrepreneurial context by Karimi et al. (2013) through inclusion of the influence of the exogenous factor of role models and deepening the understanding thereof. Subsequent sections describe in detail how this contribution is realised.

Important to note with regards to demarcation of this study's contributions, is that the direct influence of (congruent motivations with) ERMs on ESE and ATE is included in the experimental scope[3], whereas their indirect influence on EI is excluded. The potential indirect relation between a motivational fit RMs and EI (through affecting ESE and ATE) is however addressed in the discussion chapter.

Figure 2

Overview of Operational Model as Part of the Full Model of Interest

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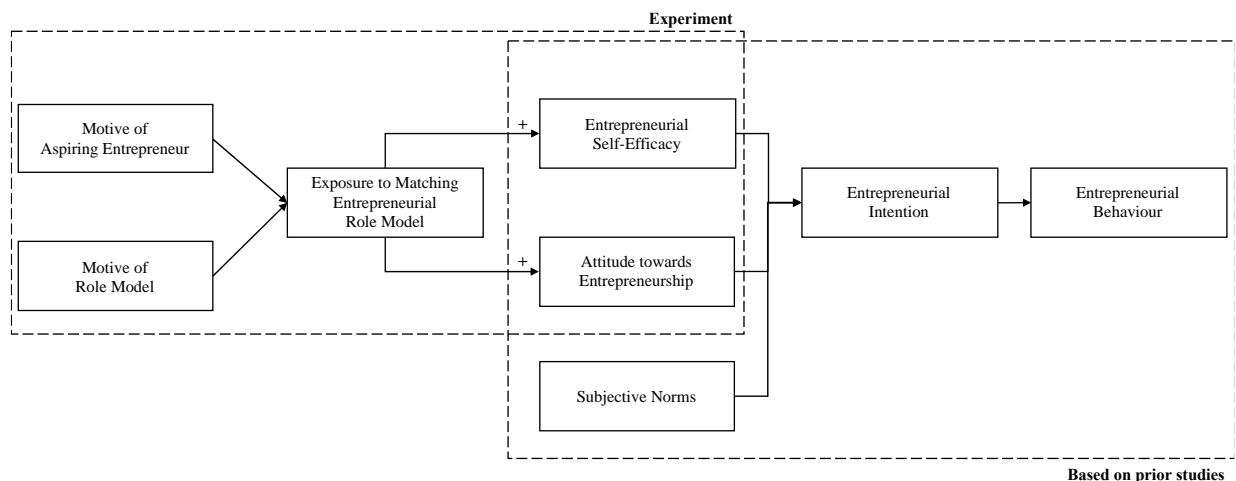
[3] The positive relations as proposed in Hypothesis 1 and 2 respectively are reflected by the plus signs in the model.

3.1 Research Design

3.1.1 Technical Aspects

Considering the aim of this study (i.e., discovering the influence of a motivational match between aspiring entrepreneurs and their role models on the formation of entrepreneurial intentions), the core of the executional part is constituted by testing the previously integrated theories and the accompanying hypotheses as presented in chapter 2. The approach to test these relationships between the cause and effect variables (Saunders, Lewis & Thornhill, 2009) is defined and justified in the sections 3.1.1 to 3.1.3. Besides the exploration of the causal relationship between the variables, the deductive nature of this study entails the following characteristics (Saunders, Lewis & Thornhill, 2009): The operationalisation of concepts and constructs needs to enable quantitative measuring. Furthermore, the authors are directed to be independent of what is being observed to comply with the principle of scientific rigour. The final characteristic of the deductive logic is generalisation, meaning that conclusions derived from the statistical analysis of the data should allow to be generalised (Lee & Lings, 2008).

In technical terms, this deductive, quantitative research deploys a factorial experimental design by means of a vignette study, that combines a (lab) vignette experiment with a traditional survey (Atzmüller & Steiner, 2010; Saunders, Lewis & Thornhill, 2009). The experiment itself enables the identification of differences in ESE and ATE, resulting from the congruence in terms of entrepreneurial motives between role model and participant. The motives as described in section 2.2 form the core of the vignettes[4] of the experiment, that - as such - enables the simultaneous investigation of the various motives[5] (Steiner, Atzmüller, & Su, 2016). As no other factors (e.g., the role model's age, gender, industry) than the motivational fit are included in the experiment, the most accurate approximation of causality between the motivational match and (the change in) the aspiring entrepreneurs' ESE and ATE is achieved. Within the academic business context, Di Stefano and Gutierrez (2019) highlight this isolation feature as a key benefit of experiments compared to observational studies that do not share this characteristic.

The experimental design type is within-subjects, (or: within-group design), meaning that repeated measures are used on one group of participants (Allen, 2017), in order to facilitate the

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[4] Enclosed in Appendix I.
[5] As summarised in Table 2 in §3.4.1.

intended data analysis (as discussed in 3.5). This design type is favourable in multiple ways: First, the number of participants required to "obtain an accurate estimation of a statistical parameter becomes far [lower] than the alternative design using independent groups" (Allen, 2017, p.1879). This is due to the measuring of changes in ESE and ATE within a person instead of across groups, and increases this study's feasibility. Second, this measuring technique yields greater statistical accuracy compared to changes between groups, by measuring the said changes more directly in the within-subjects design (Allen, 2017). Jointly, these attributes lead to greater statistical power while lowering the number of required participants. Third, the prerequisite of assigning participants randomly to a vignette is waived, as all participants are exposed to all vignettes (Allen, 2017). The major disadvantage of this design concerns the "nature of the group over time" (Allen, 2017, p.1879), and includes the risks of subjects leaving the sample or losing access to them otherwise. Considering that no temporal aspect is of relevance to this study (i.e., all measurements are acquired at once), this barrier is negligible. To reduce the impact of the second disadvantage of observations not being independent, the vignettes are presented in random orders.

3.1.2 Content of the Experiment

As stated in section 3.1.1, a vignette study consists of 2 parts: (i) the vignette experiment, and (ii) the survey.

The content of the experiment is as follows: The vignettes contain a concise and carefully composed description of a (hypothetical) situation (i.e., having a particular role model). In each vignette, the role model is introduced to the participant by means of a brief and bogus newspaper article[6], in complete accordance with the methodology of the experimental study on super star role models by Lockwood and Kunda (1997). As the role models are fictional, impact of a priming effect is irrelevant. This approach using vignettes enables the systematic testing of combinations (Atzmüller & Steiner, 2010) of motives for starting in entrepreneurial activities, as discussed in section 2.2. In practice, this implies that respondents are required to empathise with the situation (Finch, 1987) and imagine having the role model as presented in the vignette, in order to form an opinion or feeling, and subsequently express those by responding to questions and statements.

The second part of the study, consisting of a traditional survey, addresses "the parallel and supplementary measurement of additional respondent-specific characteristics, which are used ...

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[6] Enclosed in Appendix I

in the analysis of vignette data" (Atzmüller & Steiner, 2010, p.128). These characteristics refer to the motives for engaging in entrepreneurial activity held by the participant/aspiring entrepreneur, as well as common demographics (e.g., age, gender) of the participant.

3.1.3 Justification of the Selected Approach

The following notion on experiments within the context of business studies by Di Stefano & Gutierrez (2019) constitutes the underlying logic of the selected research approach: "Some research questions may require the researcher to purposefully "abstract away many real-world complications" [Billinger, Stieglitz & Schumacher, 2014, p.96] in order to isolate the effect under examination and avoid potential confounds" (Di Stefano & Gutierrez, 2019, p.500). The experimental setup thus enables the purposeful exclusion of confounds and ensures that observed outcomes can exclusively be ascribed to the experimental treatments (Billinger, Stieglitz & Schumacher, 2014). This is highly relevant considering the multifaceted character of EI (Krueger & Kickul, 2006), for which myriad factors are involved in the formation process. Thus, the research design aligns with the aim and research question of this study: establishing links between the motivational fit with role models, and the ATE and ESE of aspiring entrepreneurs, by means of testing the hypotheses as developed in chapter 2. The motivational fit is isolated through the vignette-based design, in which only the motive of the role model is included as a factor.

With regards to validity implications of the deployed methodology it is noted that - as stated in §3.1.1 - a vignette study fuses the concepts of classical experiments on the one hand with survey methodologies on the other. In that capacity, the imperfections of each separate method are potentially compensated for. The reasoning for this is as follows:

Surveys tend to result in high external validity, that is derived from "their claim of representativeness and their multivariate and multivalent measurements" (Atzmüller & Steiner, 2010, p.128). Notwithstanding, "the multicollinearity of measured variables and the passive way of taking measurements (i.e., without any experimental intervention or control of explanatory variables)" leads to lower internal validity (Atzmüller & Steiner, 2010, p.128).

Contrarily, classical experimental designs "derive their high internal validity from orthogonal design plans and an active mode of measurement enabled by the controlled intervention" (Atzmüller & Steiner, 2010, p.128). Nonetheless, their specific imperfection concerns the low external validity, caused by experiments' commonly oversimplified setting and

non-representativeness.

The objective of combining the two approaches is to reduce the said limitations (Atzmüller & Steiner, 2010). In this regard, experimental vignette studies are claimed to "allow the controlled manipulation of relevant variables", whilst preserving "contextual realism, acknowledging that meaning and cognition are situationally specific" (Raaijmakers et al., 2015, p.90). This is in tune with the vision of Steiner, Atzmüller and Su (2016) who set forth that "vignettes are multivalent representations of subjects or situations, [and resultingly] the corresponding questions are embedded in a concrete, realistic context" (p.53).

On this basis, the selected method yields findings with a high internal validity and averts retrospective biases (Raaijmakers et al., 2015). On the condition that participants perceive the vignettes as genuine and believable, a high external validity can likewise be achieved (Finch, 1987).

Other validity considerations concern content and construct validity. As prescribed by Saunders, Lewis and Thornhill (2016) the content validity is primarily based on "careful definition of the research through the literature reviewed" (p.366). In fact, the conceptual model in this study is a direct adaptation from the empirical studies by Nowiński and Haddoud (2019) and BarNir, Watson and Hutchins (2011). In order to further increase the content validity of this study, the questionnaire is discussed with professors from Sten K. Johnson Centre for Entrepreneurship.

To ensure high construct validity, the selected scale items were derived from peer-reviewed studies by McGee et al. (2009) and Zhao, Seibert and Hills (2005). Furthermore, Nowiński and Haddoud (2019) have revalidated most scales in light of their fuzzy-set qualitative comparative analysis.

3.2 Data Collection

Primary data forms the source for the analysis of this study, as it is specifically gathered for this research project (Collis & Hussey, 2013). The data was gathered by means of a factorial study considering the embedment of the vignette experiment into the survey (Steiner, Atzmüller & Su, 2016). This survey was conducted online, due to the time and cost-efficiency benefits of this data collection method (Malhotra, 2008). Additionally, a digital distribution of the survey facilitates the presentation of multimedia and other graphic elements (Wright, 2005). This contributed to the formation of a genuine representation of reality in the vignettes, as the aforementioned bogus news articles could be presented in the actual look and feel of a newspaper article).

The research was conducted in Sweden, with distribution of the survey through convenience and snowball sampling (Bryman & Bell, 2015) to facilitate the acquisition of sufficient participants/respondents. The sample consists of students enrolled in entrepreneurship courses in universities across Europe, who represent aspiring entrepreneurs. Entrepreneurship courses can be entire degrees (e.g., MSc. Entrepreneurship) or individual/bundled courses (e.g., Minor social entrepreneurship). Through their studies, these students are familiarised with (the concept of) shaping entrepreneurial intentions, and understand questions addressing ESE and ATE. Additionally, they may be assumed to have (at least some) affinity with entrepreneurial role models. Furthermore, over the last decade, and with the rise of social media, the exposure to role models has increased (Jenkins, Lin & Jeske, 2016). Therefore, the assignment to empathise with the hypothetical situation of having a role model is assumed as achievable.

The survey was created in Qualtrics and a link was distributed through Facebook and WhatsApp groups for entrepreneurship students, and the alumni platform of the Sten K. Johnson Centre for Entrepreneurship at Lund University[7]. Furthermore, a number of contacts within the area of entrepreneurial education (e.g., former professors and classmates) were contacted to distribute the survey with their class or peers.

First, a pilot experiment was developed to test the experiment's quality and ease-of-understanding. Seven participants participated in order to gain insights about their perception of the clarity of the descriptions in the vignettes and accompanying questions. Upon completion of the pilot, respondents were requested to submit feedback. Furthermore, researchers from the Sten

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[7] Table 1 includes the related origins of the participants.

K. Johnson Centre for Entrepreneurship were consulted to approbate the experimental design and survey questions to ensure all constructs would be measured appropriately. Based on the acquired comments and insights, some formulations and display order of questions were adjusted to avert ambiguity and/or misinterpretations. Furthermore, questions addressing the self-evaluation of the congruence with the role model were added for each vignette. After implementation of all feedback on the pilot study, the vignette study was conducted in April 2021.

Respondents commenced the study by responding to a filtering question ensuring a participant belongs to the intended sample (i.e., entrepreneurship students). The remaining questions of the first part of the survey concerned the discovery of the participant's dominant motive for engaging in entrepreneurial activity. These questions form a suitable introduction to the research topic, without priming participants.

In the subsequent section, participants were exposed to the vignettes, which were presented in random order. After reading the bogus newspaper article, respondents completed measures of the two dependent variables (ESE and ATE), through identical questions for all vignettes[8]. In order to ensure participants took time to empathise with the assignment to imagine the presented role models as their own, a timer function was included. This entailed that participants had to wait 45 seconds (incl. time to read the news article excerpt) before the button to proceed appeared. The measurements of ESE and ATE were followed by a manipulation check and self-evaluation[9] of the congruence with the role model.

After the experiment followed the final part of the survey, covering the collection of (common) demographic data of participants (e.g., age, gender, ethnicity, location, based on (Saunders, Lewis & Thornhill, 2009)) as well as the control variable. These questions were strategically placed at the end of the survey, to improve the likelihood of survey completion, and thus maximise the response rate along minimising the number of missing responses (Dillman, 2007; Jackson, 2009). This rationale is based on the assumption that participants become more engaged throughout the survey, facilitated by answering the more interesting questions first (Stoutenbourgh, 2008). Noteworthy in this regard is the observation that "respondents view vignettes frequently as a welcome relief from monotonous survey questions" (Steiner, Atzmüller & Su, 2016, p.53), which contributed to the same response-related objectives.

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[8] Elaborated on in §3.4.2; Scale items included in Appendix II
[9] Elaborated on in §3.4.3

3.2.1 Ethical Considerations

To comply with all ethical standards for conducting research, the procedures and code of conduct of the American Psychological Association Ethical Principles of Psychologists (American Psychological Association, 2017) were followed. Furthermore, the framework for ethical research by Bryman and Bell (2015) was used, who argue that the following aspects require review: (i) information requirement, (ii) consent requirement, (iii) confidentiality and anonymity, (iv) usage requirements, and (v) false pretences.

Information requirement

An introductory text communicated the study's aims and objectives. The text was displayed as the first interaction between the participants with the questionnaire. Regardless of the device used (mobile, tablet, desktop), all participants were exposed to the informational introduction of the questionnaire.

Consent requirement

Consent from the participants was acquired through a confirmation question (Q1), where each participant agreed with the described analysis in the provided explanation.

Confidentiality and anonymity

The participants' answers are guaranteed to remain confidential.

Usage requirements. The purpose of the data and its usage was clearly stated in the survey's introduction.

False Pretences

In order to prevent false pretences, the procession of the data was communicated transparently with participants and the final report was sent to people that indicated they desired a copy (Q44 in Appendix III).

3.3 Sample

In total 101 respondents participated in the study, of which 71 completed all questions, and passed the filtering question[10] and the hidden attention check[11]. Table 1 summarises their main demographic characteristics.

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[10] Q2 in Appendix III

[11] I.e., a question without meaning, with the mere objective of confirming that the participant reads all questions and instructions carefully; Q39 in Appendix III

Table 1

Demographic of Sample Group

Demographic	N	%
Gender		
Male	39	51.9
Female	31	43.7
Prefer not to say	1	1.4
Age		
18 - 25	39	54.9
26 - 35	29	40.8
36 - 45	1	1.4
46 - 55	2	2.8
56 - 65	0	0
66 +	0	0
Location		
Northern Europe	40	56.3
Eastern Europe	3	4.2
Southern Europe	3	4.2
Western Europe	23	32.4
Other	2	2.8
Ethnicity		
White	49	69.0
Hispanic, Latino or Spanish origin	8	11.3
Black or African American	4	5.6
Asian	4	5.6
Middle Eastern or North African	2	2.8
Some other race, ethnicity, or origin	2	2.8
Prefer not to say	2	2.8
Prior Entrepreneurial Experience		
None	44	62.0
Yes	27	38.0
Origin		
Current students MSc. Entrepreneurship Lund University	39	54.9
Last year alumni MSc. Entrepreneurship Lund University	4	5.6
Current students other University	11	15.5
Last year alumni other University	17	24.0

3.4 Operational Definitions & Measures

3.4.1 Independent Variable

The independent variable is the 'exposure to a motivationally matching role model', which evidently consists of the motives of the aspiring entrepreneur and the role models, as depicted in Figures 1 and 2. As stated before, the vignettes present the role models through bogus newspaper articles. In operational terms, this results in the four vignettes as listed in Table 2:

Table 2
Overview of Vignettes in the Experiment

Vignette	Motive of Role Model
A Entrepreneurial Role Model A	Family Tradition
B Entrepreneurial Role Model B	Acquisition of Wealth
C Entrepreneurial Role Model C	Impact Purpose
D Entrepreneurial Role Model D	Necessity

These motives are expressed by means of answers in fictitious interviews, through examples of the fictive role model's experience and achievements. The actual vignettes are enclosed in Appendix I.

The motive of the aspiring entrepreneurs is measured through questions derived from the scale items in the (dataset of the) GEM Adult Population Survey (APS) (as listed in Table 3 and included in Appendix II-A) (GEM Consortium, 2020). With the motive of the role models fixed in the vignettes, and the motive of the aspiring entrepreneur measured through said scale items, the motivational match can be determined as discussed in the section on the data analysis (§3.5).

3.4.2 Dependent Variables

As the conceptual model displays, the dependent variables (DVs) are ESE and ATE, as reviewed in the theoretical framework. As these variables are common within the context of EI, pre-constructed and pre-validated scale items are deployed. Table 3 includes an overview of the measurement of the DVs.

Table 3

Overview of Utilised Scale Items for the Independent & Dependent Variables

Variable	Source	Items	Measurement	Appendix
Independent				
Participant's main driver	GEM Consortium (2020)	MOT 1-12	5-points Likert Scale	II-A
Dependent				
Entrepreneurial Self-Efficacy	Zhao, Seibert & Hills (2005)	ESE 1-4	5-points Likert Scale	II-B
Attitude Towards Entrepreneurship	McGee et al. (2009)	ATE 1-3	5-points Likert Scale	II-C

The dependent variables are measured in each vignette, directly after reading the bogus article about the fictional role model. For ESE, 4 questions are asked (included in Appendix II-B); ATE is measured based on 3 questions (included in Appendix II-C). With regards to the measurement of ESE, this study deviates from the empirical study by Nowiński and Haddoud (2019). That study deploys 19 scale items developed by McGee et al. (2009), that measure five dimensions of ESE on a meticulous level of detail. Instead of including the 19 scale items for all 4 vignettes – severely impacting the feasibility of the study and participants' willingness to complete the experiment – the more generic scale items developed by Zhao, Seibert and Hills (2005) were utilised for the measurement of the ESE-construct.

3.4.3 Control Variable & Manipulation Check

"To properly measure the relationship between a dependent variable and an independent variable, other variables, known as extraneous or confounding variables, must be controlled (i.e., neutralized, eliminated, standardized)" (Allen, 2017, p. 1841). This relevance is reinforced considering the complex nature of human subjects that participated in the study (Allen, 2017). 'Prior entrepreneurial experience' serves as a control variable, as a preceding experience possibly influences perceptions of the DVs (Blandford, Cox & Cairns, 2008).

Furthermore, the experiment contains (direct) manipulation checks, to "ensure that experimental manipulations had the intended effect and that there are in fact differences between

the experimental condition[s]" (Allen, 2017, p.475). Based on the methodology of Raaijmakers et al. (2015), for each vignette, subjects expressed to what extent they agreed on the applicability of the entrepreneurial motives (5-points rating scales; unit of measurement: 1 = strongly disagree vs. 5 = strongly agree).

3.5 Data Analysis

The first step in the analysis of the vignette experiment concerns the filtering out of non-valid responses (i.e., not passing the aforementioned attention check) and respondents that do not belong to the sample (i.e., non-entrepreneurship students). Subsequently, the participant's main motive to engage in entrepreneurial activity is determined, based on the first part of the survey. For each motive, the reliability of the scale items is assessed using Cronbach's alpha. This is followed by aggregation of the items measuring one motive, with the highest scoring aggregate being classified as the main motive. Participants are thus categorised in one of the four motives as discussed in sections 2.2 and 3.1.1. In case of an *ex aequo* score, the participant's results are duplicated to enable the additional classification into the equally scoring motive, as for those observations, no single dominant driver could be identified. Subsequently, the correlation between the measured motive and the self-assessment with role models was evaluated to assess that measurement's effectiveness and accuracy. The penultimate step of the preparation concerns the normality and reliability checks for the scale items measuring the two DVs. The preparation is concluded by the evaluation of the manipulation, entailing that for each vignette the manipulation is perceived as intended (i.e., the correct motive of the role model is interpreted).

Ultimately, comparing the ESE and ATE between the vignettes provides insights in the importance of a motivational fit, in terms of the influence on participants' ESE and ATE. Based on the within-subjects design of the experiment, hypotheses are tested with repeated measures analysis of variance (ANOVA). The accompanying assumptions (i.e., regarding normal distribution, sphericity, and absence of outliers) are addressed in the results chapter. Likewise, executed post hoc tests (and if relevant appurtenant corrections) are mentioned in the corresponding results sections.

The classification into types of entrepreneurs based on motives results in participants being labeled as one of the following entrepreneurial types: (i) family business entrepreneur; (ii) wealth-seeking entrepreneur; (iii) purpose-driven entrepreneur; and (iv) necessity-driven entrepreneur. This

classification enables comparisons between the four groups, and the slicing of results per entrepreneurial type. Thus, the potentially varying influences of the motivational fit with a role model on ESE and ATE are explored granularly, per entrepreneurial type (based on the participants' motives).

Whether potential differences in ATE and ESE can be explained by the display order of the vignettes or the control variable is evaluated by analysis of covariance (Salkind, 2010). If such variance is present, this would entail that the control variable is "involved in the statistical interaction with an exposure of interest" (Salkind, 2010, p.253). On the condition that the control variable is held constant, the analysis can still be executed - as a consequence, the findings are only applicable to cases with that selected constant level of the control variable. To include this control variable, transformation into binary values is required. All tests and checks are performed using analysis software SPSS.

Chapter 4   Results

This chapter brings forward the results of the experiment. In order to test the hypotheses, first multiple preparations are processed in section 4.1. This is followed by the analysis of the motivational fit in section 4.2. This chapter is closed by a summary of the conclusions of the tested hypotheses in Table 16.

4.1 Preparation of the Data

After filtering out uncompleted responses, respondents that did not meet the filtering criteria (Appendix III, Q2), and respondents that did not pass the attention check (Appendix III, Q39), the remaining number of participants totals 71, of which 27 participants (38%) had prior entrepreneurial experience (i.e., experience with starting a new, own company).

4.1.1 Classification Based on Main Entrepreneurial Motive

As discussed in 3.5, participants are categorised based on their main motivation to become an entrepreneur, which is required for identification of the motivational match, enabling the analysis as discussed in 4.2. This classification requires evaluation of the reliability of the scale items measuring the four drivers. Table 4 summarises this reliability[12], as found in both the pilot study and the final execution of the experiment.

Table 4
Reliability Evaluation of Scale Items Measuring Participants' Main Driver

	Pre-test		Main Test	
Motive	α	No. of items	α	No. of items
Family Business	.887	3	.912	3
Wealth-seeking	.884	3	.884	3
Impact purpose	.897	3	.903	3
Necessity	.702	3	.739	3

As Table 4 exhibits, all scales measuring the motivations of participants are reliable. Based on this, 4 new variables are computed[13] through aggregation into scores per motive, as an average of the

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[12] Full SPSS output enclosed in Appendix IV-A.
[13] Variable names in data set: 'mot_1_score'; 'mot_2_score'; 'mot_3_score'; 'mot_4_score'.

three scale items measuring that motive. This allows for the ranking of drivers and thus identification of the main motive(s) of each participant. For 10 participants, equal scores were found for two motives. As discussed in section 3.5, the responses of these participants were duplicated and reclassified according to their second main motive. As a result, the final number of participants of this study totaled 81 ($N = 81$). Table 5 summarises the types of entrepreneurs in the sample, based on their motivation for engaging in entrepreneurial activity.

Table 5
Frequencies of Entrepreneurial Types in Sample

Type	N	%
Family Business Entrepreneur	9	11.1
Wealth-seeking Entrepreneur	21	25.9
Impact Purpose Entrepreneur	45	55.6
Necessity-driven Entrepreneur	6	7.4

To evaluate the accuracy of the scales measuring the drivers of a participant, the correlation with the self-assessment of the congruence with the four role models is evaluated. Spearman's rho correlation coefficient[14] found significant mediocre correlations between the measured motive, and the participants' own perceptions of their motive as reflected by the fictive role models. These are observable in a diagonal line in Table 6 and reflected upon in the discussion chapter of this thesis.

Table 6
Main Driver Correlation Matrix[*]

		Self-assessment of congruence with …			
		RM_A	RM_B	RM_C	RM_D
Score of	Family Business	.536(.000)[*]	.103(.359)	-.022(.845)	.057(.613)
Measured	Wealth-seeking	.095(.397)	.452(.000)[*]	-.333(.002)[*]	.215(.054)
motive	Impact Purpose	-0.86(.447)	-.157(.161)	.637(.000)[*]	-.084(.458)
	Necessity	-.049(.665)	-.072(.521)	-.048(.673)	.399(.000)[*]

[*]Significant at $\alpha = 0.01$ (2-tailed)

4.1.2 Dependent Variable Preparations

To enable the in-depth analysis of the influence of the motivational fit between aspiring entrepreneurs and their role models, the dependent variables (i.e., ESE & ATE) require evaluation:

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[14] Full SPSS output enclosed in Appendix IV-B.

For all four vignettes, the reliability of the scales measuring the ESE and ATE is assessed by Cronbach's alpha[15], as disclosed in Table 7.

Table 7

Reliability of Scale Items Measuring the DVs

DV	Vignette A		Vignette B		Vignette C		Vignette D	
	α	No. of items	α	No. of items	α	No. of items	α	No. of items
ESE	.909	4	.790	4	.842	4	.869	4
ATE	.880	3	.821	3	.765	3	.884	3

As the scales measuring ATE and ESE are reliable for all four vignettes, the multi-item scales are aggregated into single variables for the four vignettes[16].

To comply with normality assumptions of the deployed tests in subsequent analyses (§4.2), the skewness and kurtosis of the DVs are evaluated and verified to be within the benchmark boundaries[17]. Complemented by the Central Limit Theorem and the equal meaning of intervals between Likert scale points, both dependent variables may be assumed to be (approximately) normally distributed.

4.1.3 Manipulation Check

To evaluate whether the manipulations have been perceived as intended, the interpreted motive of the role models is checked. As stated in section 3.4.3, respondents expressed their interpretation of the role models' motive on 5-points Likert scales.

Repeated measure ANOVA[18] is deployed for all manipulation checks. With exception of the family business role model, Mauchly's test indicates that all manipulation checks meet the sphericity condition ($W_{\text{family business}} = .723$, $\chi^2(5)_{\text{family business}} = 25.501$, $p_{\text{family business}} < .001$; $W_{\text{wealth-seeking}} = .936$, $\chi^2(5)_{\text{wealth-seeking}} = 5.177$, $p_{\text{wealth-seeking}} = .395$; $W_{\text{impact purpose}} = .904$, $\chi^2(5)_{\text{impact purpose}} = 7.910$, $p_{\text{impact purpose}} = .161$; $W_{\text{necessity}} = .943$, $\chi^2(5)_{\text{necessity}} = 4.661$, $p_{\text{necessity}} = .459$). This entails that only for the vignette A the Huyh-Feldt correction is applied[19].

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[15] Full SPSS output enclosed in Appendix IV-C.
[16] Averages of the scale items computed into the new variables representing the DVs:
ESE_a; ESE_b; ESE_c; ESE_d & ATE_a; ATE_b; ATE_c; ATE_d
[17] Skewness: all within the range of -1 – +1; kurtosis all within range of -2.2 – +2.2; SPSS outputs enclosed in Appendix IV-D.
[18] Full SPSS output enclosed in Appendix IV-E.
[19] Based on value of $\varepsilon = .855 > .75$ (threshold by Field, 2013).

Figure 3
Plots of Manipulation Check
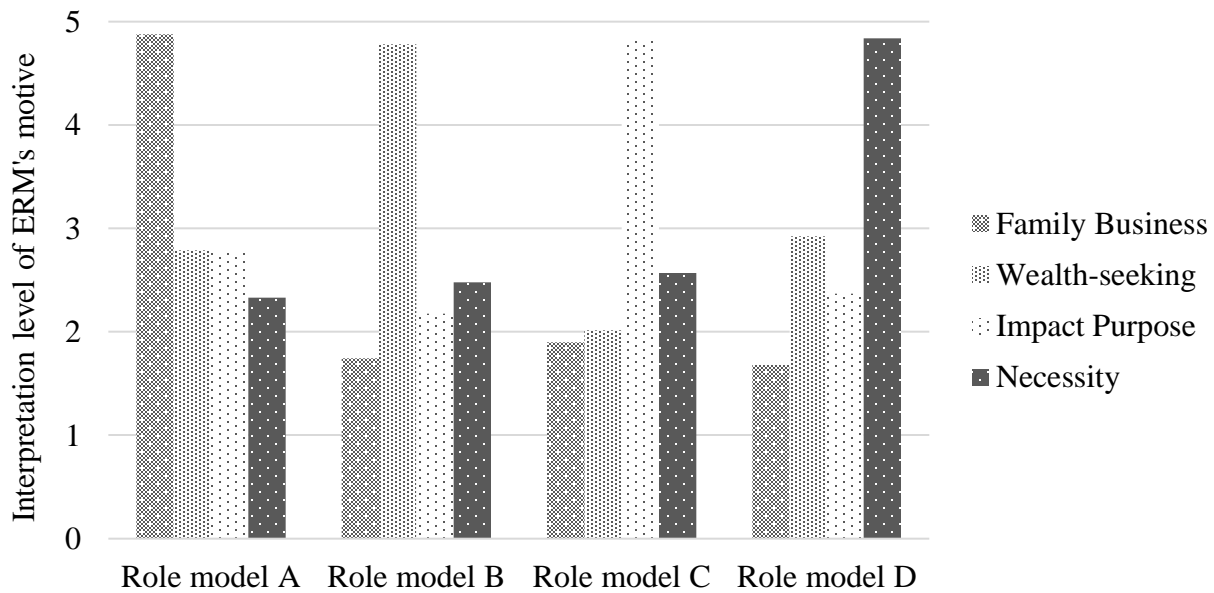
For all items that measured to what extent a participant perceived a certain motive of the presented role model, significant differences are found between the four vignettes ($F_{family\ business}(2.657,212.539) = 292.643$, $p_{family\ business} < .001$; $F_{wealth-seeking}(3,240) = 102.556$, $p_{wealth-seeking} < .001$; $F_{impact}(3,240) = 129.385$, $p_{impact} < .001$; $F_{necessity}(3,240) = 106.864$, $p_{necessity} < .001$). As graphically represented in Figure 3, higher scores on the evaluation scales[20] are found for the motive of the respectively presented role model. Thus, in each vignette, the expressed motive of the role model was interpreted consistent with the manipulation intention. The following details elucidate this:

In tune with the intended manipulation, the motive of continuing family business was perceived significantly stronger for the role model in vignette A ($M_A = 4.877$) compared to the vignettes B ($M_B = 1.741$, $p < .001$), C ($M_C = 1.901$, $p < .001$), and D ($M_D = 1.679$, $p < .001$).

Significant differences are likewise found for the wealth-seeking motive expressed by the role model in vignette B ($M_B = 4.778$) compared to the models A ($M_A = 2.790$, $p < .001$), C ($M_C = 2.012$, $p < .001$), and D ($M_D = 2.926$, $p < .001$).

In terms of the impact purpose motive, participants interpreted the role model in vignette

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[20] (Q19, Q50, Q56 & Q62 in Appendix III)

C significantly more correct (M_C = 4.815) in comparison to vignettes A (M_A = 2.778, $p < .001$), B (M_B = 2.173, $p < .001$), and D (M_D = 2.370, $p < .001$).

With regards to the necessity motive, similar findings are found: The correct motive of role model D (M_D = 4.840) was perceived significantly stronger compared to vignettes A (M_A = 2.333, $p < .001$), B (M_B = 2.481, $p < .001$), and C (M_C = 2.568, $p < .001$).

4.2 Analysis of the Influence of the Motivational Fit

In this section, the hypotheses as developed in the theoretical framework are tested. The approach is as follows: for each of the four groups of participants (reflecting one entrepreneurial type based on the main motive) the (outcomes of the) statistical test is reported. The reliability and normality of the DVs is assessed in section 4.1; remaining assumption checks are addressed with each test. For each analysis, the dataset is filtered to the entrepreneurs of interest only. The full outputs of all performed tests are enclosed in Appendix IV. As previously mentioned, Table 2 summarises which ERM belongs to which vignette; the even-numbered tables in subsections 4.2.1 – 4.2.4 indicate this information as well.

4.2.1 Family Business Entrepreneurs

The following results only apply to participants who engage in entrepreneurial activities to continue a family business[21] for which the estimated marginal means of both DVs are summarised in Table 8.

ESE

As the sphericity condition is violated for ESE ($\chi^2(5)$ = 14.906, p = .012), the Huyh-Feldt correction is applied[22] to the repeated measures ANOVA, which did not indicate significant differences in the ESE between the four role models ($F(2.263, 15.838)$ = .331, $p < .748$), with an insignificant control variable (p = .129). The role model with a matching motive does not significantly impact the ESE for family business entrepreneurs, as no significant differences are found between any of the vignettes, as 33ummarised in Table 9.

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[21] Full SPSS output enclosed in Appendix IV-F.
[22] Due to $\varepsilon = 0.528$ (cf. Field, 2013)

ATE

With regards to the ATE, sphericity may be assumed ($\chi^2(5) = 2.968$, $p = .709$). Repeated measures ANOVA determined no significant differences are held in the ATE between the four role models. ($F(3,21) = .315$, $p = .815$), with an insignificant control variable ($p = .162$). One coincidental significant difference is identified in the post hoc pairwise comparisons: for aspiring family business entrepreneurs, the ATE is significantly more positive when inspired by a role model with the motive of acquiring great wealth, compared to a role model who started out of necessity ($M_{RM2} - M_{RM4} = .741$, $p = .028$).

For this type of entrepreneurs, a motivational fit was achieved with the role model in vignette A. As the ATE value for vignette A is not significantly higher compared to the other vignettes, the findings indicate a motivational fit does not influence the ATE for participants with the dominant motive of continuing a family business. Table 9 summarises all pairwise comparisons.

Table 8
Estimated Marginal Means for Family Business Entrepreneurs

	ESE			ATE	
	Mean[a]	Std Error		Mean[a]	Std Error
ERM$_A$: Family Business	4.028	.234		4.407	.142
ERM$_B$: Acquisition of Wealth	3.917	.189		4.519	.128
ERM$_C$: Impact purpose	3.694	.239		4.037	.291
ERM$_D$: Necessity	3.500	.356		3.778	.236

[a] Covariates appearing in the model are evaluated at the following values:
Prior Entrepreneurial Experience = .3333.

Table 9
*Mean Differences for Pairwise Comparisons for Family Business Entrepreneurs (rows – columns)[a]**

		ERM$_A$	ERM$_B$	ERM$_C$	ERM$_D$
ESE	**ERM$_A$**		.111(.699)	.333(.315)	.528(.302)
	ERM$_B$	-111(.699)		.222(423)	.417(.178)
	ERM$_C$	-333(.315)	-.222(423)		.194(.440)
ATE	**ERM$_A$**		-.111(.616)	.371(.304)	.630(.099)
	ERM$_B$	.111(.616)		.482(.205)	.741(.028)*
	ERM$_C$	-.371(.304)	-.482(.205)		.259(.406)

[a] *p*-values in brackets
* significant at $\alpha = 0.05$

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4.2.2 Wealth-seeking Entrepreneurs

The following results only apply to participants that want to become entrepreneurs to acquire great wealth.[23] Table 10 captures their estimated marginal means of both DVs.

ESE

As the sphericity condition is violated ($\chi^2(5) = 15.167$, $p = .010$), the Huyh-Feldt correction is applied[24] to the repeated measures ANOVA, which indicated significant differences in the ESE between the four role models ($F(2.658,50.500) = 4.911$, $p = .006$). As the control variable is insignificant ($p = .590$), the differences cannot be explained by participants' prior entrepreneurial experience. Pairwise comparisons post hoc indicate significant differences between the role models of vignette A and B, A and C, and between C and D. In more detailed terms: Role model A leads to a significantly lower ESE than role models B and C, and the same finding holds for role model D compared to C. Thus, support for the relevance of a motivational fit is only found compared to the family business role model. Table 11 encompasses all pairwise comparisons.

ATE

The Greenhouse-Geisser correction[25] is applied due to violation of the sphericity assumption ($\chi^2(5) = 12.751$, $p = .026$). The repeated measures ANOVA found marginally significant differences for ATE ($F(2.279,42.164) = 2.489$, $p = .088$). These are independent from the control variable ($p = .314$). Post hoc comparisons reveal that role model B leads to significantly more positive attitudes towards entrepreneurship, compared to all other role models, as shown in Table 11. This entails that a motivational fit (which is present with role model B for wealth-seeking entrepreneurs) significantly improves entrepreneurs' ATE.

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[23] Full SPSS output enclosed in Appendix IV-G.
[24] Due to $\varepsilon = 0.740$ (cf. Field, 2013)
[25] Due to $\varepsilon = 0.760$ (cf. Field, 2013)

Table 10

Estimated Marginal Means for Wealth-seeking Entrepreneurs

	ESE		ATE	
	Mean[a]	Std Error	Mean[a]	Std Error
ERM$_A$: Family Business	2.988	.240	3.937	.241
ERM$_B$: Acquisition of Wealth	3.893	.191	4.698	.096
ERM$_C$: Impact purpose	3.905	.209	4.158	.142
ERM$_D$: Necessity	3.524	.206	3.905	.221

[a] Covariates appearing in the model are evaluated at the following values:
Prior Entrepreneurial Experience = .4286.

Table 11

Mean Differences for Pairwise Comparisons for Wealth-seeking Entrepreneurs (rows − columns)[a]*

		ERM$_A$	ERM$_B$	ERM$_C$	ERM$_D$
ESE	**ERM$_A$**		-.905(.004)*	-.917(.009)*	-536(.066)
	ERM$_B$	.905(.004)*		-.012(.966)	.369(.219)
	ERM$_C$	.917(.009)*	.012(.966)		.381(.017)*
ATE	**ERM$_A$**		-.762(.002)*	-.222(.468)	.032(.897)
	ERM$_B$	.762(.002)*		.540(.003)*	.794(.003)*
	ERM$_C$	.-.222(.468)	-.540(.003)*		.253(.308)

[a] *p*-values in brackets
* significant at $\alpha = 0.05$

4.2.3 Impact Purpose Entrepreneurs

The following results only apply to participants with the purpose to have an impact as the main motivation for engaging in entrepreneurship.[26] The estimated marginal means of both DVs are enclosed in Table 12.

ESE

As the sphericity assumption is violated ($\chi^2(5) = 22.123$, $p < .001$), the Huyn-Feldt correction[27] is applied to the repeated measures ANOVA, which found significant differences in ESE between the four role models ($F(2.389,102.746) = 10.474$, $p < .001$), unaffected by the control variable ($p = .416$). As Table 13 summarises, post hoc comparisons pointed out that for impact purpose entrepreneurs, both role models B and C lead to significantly higher ESE compared to role models

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[26] Full SPSS output enclosed in Appendix IV-H.
[27] Due to $\varepsilon = 0.737$ (cf. Field, 2013)

A and D. Additionally, comparison between role model A and D indicated a stronger effect on ESE for the necessity-driven role model. With regards to the motivational fit, it is thus noted that the congruent role model only triumphs the family business and necessity-driven role models, but not the wealth-seeking. Section 4.3 addresses the implications thereof.

ATE

Repeated measures ANOVA (meeting the sphericity condition ($\chi^2(5) = 7.090$, $p = .214$) indicated significant differences in ATE between the four role models for entrepreneurs with the impact purpose as main driver ($F(3,129) = 3.360$, $p = .021$), which are not influenced by prior entrepreneurial experience ($p = .403$). Post hoc comparisons (shown in Table 13) specified that the matching role model (i.e., role model C) impacted the ATE of participants, by resulting in significantly higher values compared to role models A and D. Additionally, role model B is found to lead to significant higher values of ATE opposed to role model D.

Table 12
Estimated Marginal Means for Impact Purpose Entrepreneurs

	ESE		ATE	
	Mean[a]	Std Error	Mean[a]	Std Error
ERMA: **Family Business**	3.256	.153	4.178	.099
ERMB: **Acquisition of Wealth**	3.989	.105	4.356	.107
ERMC: **Impact purpose**	4.117	.094	4.511	.076
ERMD: **Necessity**	3.672	.109	4.030	.118

[a] Covariates appearing in the model are evaluated at the following values:
Prior Entrepreneurial Experience = .4000.

Table 13
Mean Differences for Pairwise Comparisons for Impact Purpose Entrepreneurs (rows − columns)[a]*

		ERM_A	ERM_B	ERM_C	ERM_D
ESE	**ERM**A		-.733(.000)*	-.861(.000)*	-.417(.013)*
	ERMB	.733(.000)*		-.128(.238)	.317(.005)*
	ERMC	.861(.000)*	.128(.238)		.444(.001)*
ATE	**ERM**A		-.178(.170)	-.334(.004)*	.148(.235)
	ERMB	.178(.170)		-.156(.119)	.326(.005)*
	ERMC	.334(.004)*	.156(.119)		.482(.000)*

[a] *p*-values in brackets
* significant at $\alpha = 0.05$

4.2.4 Necessity-driven Entrepreneurs

The following results only apply to participants with necessity[28] as main driver, for which the estimated marginal means of both DVs are summarised in Table 14.

ESE

As the assumption regarding sphericity is satisfied ($\chi^2(5) = 4.992$, $p = .443$), repeated measures ANOVA pointed out significant differences in ESE between the four role models ($F(3,12) = 4.739$, $p = .021$), unrelated to the control variable ($p = .723$). Post hoc comparisons found that in terms of ESE, the matching role model does not result in significantly higher ESE scores compared to non-matching role models. However, the wealth-seeking role model does lead to significantly higher ESE compared to the family business role model, as indicated in Table 15.

ATE

Repeated measures ANOVA, based on the assumption of sphericity ($\chi^2(5) = .169$, $p = .999$) identified significant differences in ATE between the four role models ($F(3,12) = 4.996$, $p = .018$), independent from prior entrepreneurial experience ($p = .688$). Pairwise comparisons pointed out that the matching role model only exceeded role model A significantly in terms of positively impacting ATE. Additionally, the wealth-seeking role model leads to significantly more positive ATE compared to the role model that continued a family business.

Table 14

Estimated Marginal Means for Necessity-driven Entrepreneurs

	ESE			ATE	
	Mean[a]	Std Error		Mean[a]	Std Error
ERMA: **Family Business**	2.333	.453		3.167	.255
ERMB: **Acquisition of Wealth**	3.958	.183		4.444	.177
ERMC: **Impact purpose**	2.792	.303		3.890	.255
ERMD: **Necessity**	3.833	.448		4.278	.206

[a] Covariates appearing in the model are evaluated at the following values:
Prior Entrepreneurial Experience = .1667.

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[28] Full SPSS output enclosed in Appendix IV-I.

Table 15

Mean Differences for Pairwise Comparisons for Necessity-driven Entrepreneurs (rows – columns)[a]*

		ERM$_A$	ERM$_B$	ERM$_C$	ERM$_D$
ESE	ERM$_A$		-1.625(.044)[*]	-458(.158)	-1.500(.066)
	ERM$_B$	1.625(.044)[*]		1.167(.054)	.125(.792)
	ERM$_C$	458(.158)	-1.167(.054)		-1.042(.166)
ATE	ERM$_A$		-.1278(.028)[*]	-.723(.134)	-1.111(.035)[*]
	ERM$_B$	.1278(.028)[*]		.554(217)	.167(623)
	ERM$_C$	.723(.134)	-.554(217)		-.388(.336)

[a] *p*-values in brackets
[*] significant at $\alpha = 0.05$

4.3 Summary of Hypothesis Testing

In order to formulate the final answer to the hypotheses, the pure operational definition of the motivational fit is reviewed. Technically, a motivational fit only exists when the main driver of the aspiring entrepreneur matches with the driver of the role model. The effectiveness of the motivational fit is subsequently expressed as the significantly stronger influence of the matching role model opposed to every other (i.e., non-matching) role model. With this operational definition established, Table 16 summarises the results of the tested hypotheses:

Table 16

Summarised Results of Hypotheses Testing

Hypothesis	Support	Outcome
H1	No	For no type of (tested) entrepreneurs, a role model with matching motive leads to significantly higher entrepreneurial self-efficacy compared to all other role models.
H2	Partial	For wealth-seeking entrepreneurs, the role model with a motivational fit leads to significantly more positive attitudes towards entrepreneurship.

Chapter 5   Discussion

This study contributes to a better understanding of the influence of a motivational fit between aspiring entrepreneurs and role models. For the wealth-oriented entrepreneurs, a motivational fit with their ERMs yields a more positive attitude towards entrepreneurship. Inferred from that, this type of entrepreneurs is supposed to be more motivated to engage in wealth-creation-entrepreneurship, when exposed to a role model with the same motivational driver.

Although for the other types of aspiring entrepreneurs the results indicate some role models are more effectively fitting in terms of increasing ESE and/or ATE, no indisputable impact of a motivational fit was found. Nevertheless, the nuances in the data (e.g., some models fitting better as highlighted in §4.2) suggest that for some types of aspiring entrepreneurs pairing with certain role models results in outperforming other combinations in terms of affecting ESE and/or ATE. This also entails that certain pairs of aspiring entrepreneurs and role models could be interpreted as mismatches (e.g., necessity-driven ERMs exert a clearly inferior influence on both ESE and ATE of aspiring impact purpose entrepreneurs[29]).

5.1 Incorporation of Results into Conceptual Model

As depicted in the conceptual model in Figure 1, EI are shaped by various antecedents, of which the commonly studied ESE and ATE were included in this thesis. Furthermore, following Karimi et al. (2013) and Nowiński & Haddoud (2019), the model included role models and their impact on these antecedents, acting as mediators to EI. This thesis has extended or deepened that sequence[30], by providing insights how the fit with the role model influences the antecedent(s) of EI, thus examining how the motivational fit affects EI through the antecedents ESE and ATE.

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[29]As discussed in §4.2.3.
[30] As visualised in Figure 4.

Figure 4

Positioning of Main Finding along Current Literature on Formation Sequence
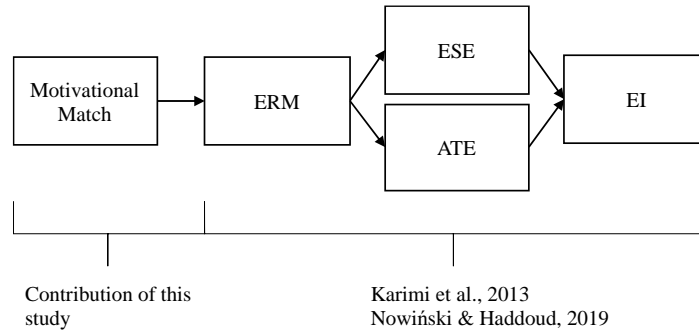
Prior research included the degree of similarity in terms of demographic aspects (e.g., gender and ethnicity (Hernandez, 1995; Maccoby & Jacklin, 1978; Ruef, Aldrich & Carter, 2003)), and business-related aspects (e.g., industry/sector/domain (Bosma et al., 2012; Lockwood & Kunda, 1997)). Higher degrees of similarity were found to result in greater role model impact Bosma et al. (2012). Based on this, the aim of this study was to include the motivational driver into the fit between aspiring entrepreneurs and ERMs, by testing if the homophily-based reasoning likewise holds for this aspect.

In that capacity, and aligned with the conceptual model, a possible indirect effect of (A) the motivational fit between aspiring entrepreneurs and role models on (B) the formation of EI has been demonstrated[31]. Noted is that the increase of EI through stimulating the ESE/ATE could be the result of other factors than the ERMs, inhibiting claims regarding pure verification of the proposed indirect pathway. Rather, the potential of a motivational fit in terms of indirectly stimulating EI has been established.

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[31] (i.e., as aforementioned, the higher degree in similarity resulting from the motivational fit leads to a more positive ATE for wealth-seeking entrepreneurs)

5.2 Elaboration on the Evaluation of Hypotheses Testing

The results of the hypothesis testing can be contextualised through linking with the different types, functions and perceptions of role models as introduced in section 2.3.2. The models in the experiment are presented and observed through bogus newspaper articles. This "intervening media", that facilitated the exposure and observance, is one of the aspects of distant role models as described by Gibson (2004, p.148).

Both the lack of support for H1 (i.e., a motivational match leading to improved ESE) and the obtained partial support for H2 (i.e., a motivational match leading to improved ATE) are in line with Gibson's (2004) conceptualisation of distant role models: "model[s] who [are] outside the individual's workgroup or department, and with whom the individual interacts infrequently or not at all" (Gibson 2004, p.144). This absence of interaction is aligned with distant ERMs' function of providing inspiration for people, but results in their limited "actual impact on the individual's [i.e., observant's] development of competence and self-definition" (Gibson, 2004, p.148). Evidently, the motivational aspect in that quote closely relates to the ATE, whereas the development of competence and self-definition reflects the ESE. Hence, this type of role models is not likely to enable the improvement of the observant's ESE, as opposed to close models, that explain in detail how a job should be executed according to the desired style and deliver feedback on the performance of the observer (Ashford, 1986). Thus, the findings of this study's hypotheses testing support the notion that closer models are more relevant in terms of affecting ATE, whereas distant models are more relevant for ESE.

5.3 Findings Embedded in Broader Context

Furthermore, the key finding regarding matching role model's influence on the ATE of wealth-seeking entrepreneurs fits in an overarching entrepreneurial context and could be embedded in the larger and recent discourse around entrepreneurship. Iconic examples as Elon Musk, Bill Gates and Jeff Bezos have provided success cases of becoming incredibly wealthy and successful (e.g., CNN, 2020; Fiegerman, 2017). This fuels and triggers motivation among young people/entrepreneurs to start a venture and aim for unicorn status. However, concerns are raised about creating false allure and unrealistic expectations around entrepreneurship, as these high-wealth outcomes are extremely rare (Aarons-Mele, 2016) and engaging in entrepreneurial activity is negative in terms of earnings compared to employment in a regular job (Åstebro, 2014). These

concerns could be explained by the findings of this study, considering successful wealth-seeking entrepreneurs' significant positive impact on observants' attitude towards entrepreneurship.

5.4 Theoretical Contributions

The core finding of this thesis (i.e., the partial support for the significant greater impact of a motivational fit on ATE) extends the backing for the positive link between exposure to role models and attitudes (e.g., Carr & Sequeira, 2007; Fellnhofer & Puumalainen, 2017; Liñán & Chen, 2009). Role models' potential to arouse positive emotions, as found by Laviolette, Lefebvre and Brunel (2012), is reinforced and deepened in the sense that the degree of arousal is possibly larger in case of a motivational match with the observer. The support for the motivational match is found for the ATE variable in the subgroup of wealth-seeking entrepreneurs, which echoes the attribute of super star role models by Lockwood and Kunda (1997): "making observers believe their own futures could be as bright as the super stars" (p.101), and in that capacity provides new empirical backing for their claim.

Furthermore, the core finding advances the understanding of (entrepreneurial) role model effectiveness, by continuing on and adding to the homophily-based reasoning (Bosma et al., 2012), which in turn found its origins in Gibson's role identification theory (2004). Based on the partial support for hypothesis 2, the 'motivational diver' can be conditionally added to the literature describing aspects that ERMs and observers tend to be (highly) similar in (e.g., as previously cited: Bosma et al., 2012; Hernandez, 1995; Ibarra, 1997; Kalleberg et al., 1996; Maccoby & Jacklin, 1978; Reskin, McBrier & Kmec, 1999; Ruef, Aldrich & Carter, 2003)

Additionally, this study has integrated two streams of literature that address the formation of EI. The Theory of Planned Behaviour, with role models as exogenous factor (Karimi et al., 2013; Nowiński & Haddoud, 2019) served as foundational stream. Connected to this was the stream concerned with identification and comprehension of drivers or motives to engage in entrepreneurship. As such, the two streams are fused throughout the thesis (i.e., most notably in the experiment and thus embedded in all results). This could be considered as an initial push forward in the development of a more holistic view on the dynamics and mechanisms by which aspirations to become an entrepreneur (reflecting the formation of EI) are shaped.

5.5 Practical Implications

As introduced in the opening chapter of this thesis, understanding the ways that increase entrepreneurship is crucial for society as a whole, as entrepreneurship is considered as the engine for innovation, job creation, and economic growth (Nowiński & Haddoud, 2019; Van Praag & Versloot, 2007). The gained insight regarding stimulating EI through enhancement of ATE resulting from a matching role model can serve as input for practical settings, such as education. For instance, students enrolled in entrepreneurship courses, could be encouraged to actively evaluate if they have an entrepreneurial role model, and to what extent this model reflects themselves in terms of motives. Stimulating students to assess such congruence and contemplate about the impact thereof possibly results in switching or finding additional role models, which in turn could affect the antecedents of EI, and may thus lead to an increase of entrepreneurial activity. In the light of this thesis, role models could be considered as an instrument to tune the process of forming EI, based on the identification of better fitting models depending on the main driver of the aspiring entrepreneur[32]. Universities could present a wide range of ERMs in order to better cater individual students, through facilitating exposure to a fitting/matching model. The most tangible example would be to pair entrepreneurship students aiming to acquire great wealth with role models that have that driver in common.

In the capacity of backing the aforementioned concerns in society (§5.3), this study potentially spurs the debate/dilemma regarding encouraging young people to become highly successful entrepreneurs, and the slight probability of achieving their unrealistic objectives. Aspiring entrepreneurs should be informed about the pitfalls, caveats, and possible disappointment resulting from not reaching the same levels as their role models.

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[32] E.g., for aspiring necessity-driven entrepreneurs, wealth-oriented ERMs would be more effective in terms of affecting ESE and ATE compared to family business ERMs.

5.6 Limitations

The following limitations are reflected on: First, the findings are predominantly relevant for the distant type role model[33] (Gibson, 2004). As participants observed the role models in bogus newspaper articles, the image of (a somewhat) famous entrepreneur was created vis-à-vis a closer role model (e.g., mentor/coach). In a like manner, all fictive role models were successful in terms of fulfilling their motivational driver, and as such only positive role models (i.e., sought out for emulation, examples to be followed (Gibson, 2004)) are tested. The findings and implications are not related to failed entrepreneurs or negative examples (that must not be followed).

Another limitation is found in the homogeneity of the sample: all participants studied (at least some courses of) entrepreneurship. As a result, high values for ESE and ATE had been provisioned. However, as the analysis was based on the change within a subject (and not between), this is only of limited impact.

A third reflection concerns the static aspect of this study: Whereas role models' influence changes over time (Gibson 2003), the scope of this thesis has been limited to the initial stage of an entrepreneur's career, in which intentions are still developing.[34]

The penultimate reflection refers to the mediocre correlations between participants' measured driver and their self-assessment of the congruence with the fictive role models. Although all correlations were found to be significant, stronger correlations were expected, as all role models were interpreted correctly[35], and the scores on the items measuring participants' motivation indisputable.

The final limitation is found in the oversimplification of the real situation of forming EI. This is a highly complex phenomenon (Krueger & Kickul, 2006), affected by myriad factors (e.g., personality traits (Brandstätter, 2011)), that are disregarded in the development of this (highly controlled) experiment. Likewise, in order to isolate the influence of the motivational fit, subjective norms were disregarded from the TPB as antecedent of EI, which could be interesting in the light of role models in family-owned businesses. However, these simplifications have enabled this study's feasibility and the answering of the research question. The assignment to

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[33] However, it is noted that since "[t]he dominant underlying mechanism and main function of a role model is 'learning by example'" (Bosma et al., 2012, p.422), the results of this study are applicable to the majority of ERMs.
[34] Even considering that some limited entrepreneurial experience was held by some participants in the sample.
[35] As indicated by the manipulation checks in section 4.1.3.

emphasise and imagine having the presented role model as one's own may be considered as precarious – on which is elaborated in the recommendations for future research.

5.7 Recommendations for Future Research

The first three recommendations for future research are derived from this study's limitations:

The heterogeneity of the role models could be increased by testing the impact of a motivational fit with close role models[36] as defined by Gibson (2004), for instance through inclusion of the supporting and teaching ERM-functions.

Apropos the limitation of the static nature of this experiment opposed to role models' dynamic influence, repeating the study when participants have advanced to early-stage entrepreneurial activity and later phases could provide insights into the influence of a motivational match over time.

To address the final limitation (i.e., the imagination of having the fictive role model), it is recommended to research the actual role models of aspiring entrepreneurs (i.e., the entrepreneurs they are genuinely inspired by, or they seek to emulate); does a motivational fit exist between them and their examples – and what is its related impact?

Last mentioned recommendation could be elaborated: a more explorative approach possibly enables the acquisition of richer insights into the (influence of the) fit between aspiring entrepreneurs and their role models. Deeper understanding of the 'why' and 'how' – *the mechanisms through which* – would complement this study's hint at the existence of a motivational fit.

Along similar lines, this proposed additional inductive approach could enable the analytical inclusion of more heterogenous role models; for instance, in terms of their success (i.e., including negative examples) and distance to the observer (i.e., closer models as mentors and coaches) – and as such overcome the first-mentioned limitation.

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[36] In particular interesting in light of their impact on observants' ESE, as discussed in section 5.2.

Chapter 6   Conclusion

The research question of this thesis is: "*Does a motivational fit between aspiring entrepreneurs and their role models lead to improved antecedents of entrepreneurial intentions?*". In this question the antecedents served as DVs, but simultaneously reflect the mediating variables to EI in the enveloping TPB-based model. The aim of the study is to test if the homophily-based reasoning, that holds for various attributes of observants and their role model, is likewise applicable to the driver for engaging in entrepreneurship. Through a vignette experiment, the motivational match between aspiring entrepreneurs and role models was found to significantly improve the ATE for aspiring wealth-seeking entrepreneurs. As such, partial support for one of this study's hypothesis is found and a potential pathway, based on the motivational fit, to stimulate the formation of EI through role model exposure is discovered. In conclusion, this study integrated two streams ((i) drivers to engage in entrepreneurship, and (ii) formation of EI) and as such deepened the understanding of role models' effectiveness in terms of stimulating aspiring entrepreneurs' development process of EI. In that capacity, this study preliminary introduces the concept of the motivational fit between aspiring entrepreneurs and role models. This is predominantly useful for educational settings, in which entrepreneurship can be aroused more effectively, ultimately benefitting society through economic growth.

References

Aarons-Mele, M. (2016). Why We Need to Tell Different Stories About Entrepreneurs, *Wall Street Journal*, 21 November, Available Online: https://www.wsj.com/articles/why-we-need-to-tell-different-stories-about-entrepreneurs-1479697620 [Accessed 13 May 2021].

Abecassis-Moedas, C., BenMahmoud-Jouini, S., Manceau, D. & Pereira, J. (2021). Imprinting of Founders' Entrepreneurial Motivations on Enterprises' Practices and Processes: The Context of Creative Industries, *Creativity and Innovation Management*, vol. 30, no. 1, pp.182–197.

Ajzen, I. (1988). Attitudes, Personality, and Behavior, Buckingham, UK: Open University Press.

Ajzen, I. (1991). The Theory of Planned Behavior, *Organizational Behavior and Human Decision Processes*, vol. 50, no. 2, pp.179–211.

Akerlof, G. A. & Kranton, R. E. (2000). Economics and Identity*, *The Quarterly Journal of Economics*, vol. 115, no. 3, pp.715–753.

Allen, M. (2017). The SAGE Encyclopedia of Communication Research Methods, [e-book] 2455 Teller Road, Thousand Oaks California 91320: SAGE Publications, Inc, Available Online: https://sk.sagepub.com/reference/the-sage-encyclopedia-of-communication-research-methods/ [Accessed 25 March 2021].

American Psychological Association. (2017). Ethical Principles of Psychologists and Code of Conduct, Available Online: https://www.apa.org/ethics/code [Accessed 12 April 2021].

Amit, R., MacCrimmon, K., Zietsma, C. & Oesch, J. (2001). Does Money Matter?: Wealth Attainment as the Motive for Initiating Growth-Oriented Technology Ventures, *Journal of Business Venturing*, vol. 16, no. 2, pp.119–143.

Aragon-Sanchez, A., Baixauli-Soler, S. & Carrasco-Hernandez, A. J. (2017). A Missing Link: The Behavioral Mediators between Resources and Entrepreneurial Intentions, *International Journal of Entrepreneurial Behavior & Research*, vol. 23, no. 5, pp.752–768.

Ashford, S. J. (1986). Feedback-Seeking in Individual Adaptation: A Resource Perspective, *Academy of Management Journal*, vol. 29, no. 3, pp.465–487.

Åstebro, T. (2014). Earnings from Entrepreneurship: Less than Salaried Employment or Just Less Measurable?, *Earnings from Entrepreneurship: Less than Salaried Employment or Just Less Measurable?*, Available Online: https://www.hec.edu/en/knowledge/articles/earnings-entrepreneurship-less-salaried-employment-or-just-less-measurable [Accessed 13 May 2021].

Atzmüller, C. & Steiner, P. (2010). Experimental Vignette Studies in Survey Research, *Methodology: European Journal of Research Methods for The Behavioral and Social Sciences*, vol. 6, no. 3, pp.128–138.

Austin, M. J. & Nauta, M. M. (2016). Entrepreneurial Role-Model Exposure, Self-Efficacy, and Women's Entrepreneurial Intentions, *Journal of Career Development*, vol. 43, no. 3, pp.260–272.

Autio, E., Keeley, R. H., Klofsten, M., Parker, G. G. C. & Hay, M. (2001). Entrepreneurial Intent among Students in Scandinavia and in the USA, *Enterprise and Innovation Management Studies*, vol. 2, no. 2, pp.145–160.

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*, vol. 23, pp.373–403.

Bagozzi, R. P., Baumgartner, J. & Youjae, Y. (1989). An Investigation into the Role of Intentions as Mediators of the Attitude-Behavior Relationship, *Journal of Economic Psychology*, vol. 10, no. 1, pp.35–62.

Bandura, A. (1977). Self-Efficacy: Toward a Unifying Theory of Behavioral Change, *Psychological Review*, vol. 84, no. 2, pp.191–215.

Bandura, A. (1986). Social Foundations of Thought and Action: A Social Cognitive Theory, Englewood Cliffs, NJ, US: Prentice-Hall, Inc, pp.xiii, 617.

Bandura, A. (1997). Self-Efficacy: The Exercise of Control, New York, NY, US: W H Freeman/Times Books/ Henry Holt & Co, pp.ix, 604.

BarNir, A., Watson, W. E. & Hutchins, H. M. (2011). Mediation and Moderated Mediation in the Relationship Among Role Models, Self-Efficacy, Entrepreneurial Career Intention, and Gender, *Journal of Applied Social Psychology*, vol. 41, no. 2, pp.270–297.

Basow, S. A. & Howe, K. G. (1980). Role-Model Influence: Effects of Sex and Sex-Role Attitude in College Students, *Psychology of Women Quarterly*, vol. 4, no. 4, pp.558–572.

Basu, A. & Altinay, E. (2002). The Interaction between Culture and Entrepreneurship in London's Immigrant Businesses, *International Small Business Journal*, vol. 20, no. 4, pp.371–393.

Bayon, M. C., Vaillant, Y. & Lafuente, E. (2015). Initiating Nascent Entrepreneurial Activities: The Relative Role of Perceived and Actual Entrepreneurial Ability, *International Journal of Entrepreneurial Behavior & Research*, vol. 21, no. 1, pp.27–49.

Billinger, S., Stieglitz, N. & Schumacher, T. R. (2014). Search on Rugged Landscapes: An Experimental Study, *Organization Science*, vol. 25, no. 1, pp.93–108.

Blandford, A., Cox, A. L. & Cairns, P. (2008). Controlled Experiments, 1, in P. Cairns & A. Cox (eds), *Research Methods for Human Computer Interaction*, [e-book] Cambridge University Press, pp.1–16, Available Online: https://discovery.ucl.ac.uk/id/eprint/14774/ [Accessed 17 May 2021].

Block, J. H., Kohn, K., Miller, D. & Ullrich, K. (2015). Necessity Entrepreneurship and Competitive Strategy, *Small Business Economics*, vol. 44, no. 1, pp.37–54.

Block, J. & Sandner, P. (2009). Necessity and Opportunity Entrepreneurs and Their Duration in Self-Employment: Evidence from German Micro Data, *Journal of Industry, Competition and Trade*, vol. 9, no. 2, pp.117–137.

Bosma, N., Hessels, J., Schutjens, V., Praag, M. & Verheul, I. (2012). Entrepreneurship and Role Models, *Journal of Economic Psychology - J ECON PSYCH*, vol. 33.

Bosma, N., Hill, S., Ionescu-Somers, A., Kelley, D., Levie, J. & Tarnawa, A. (2019). GEM Global Report 2019/2020, Regents Park, London NW1 4SA, UK: Global Entrepreneurship Research Association, London Business School, p.232, Available Online: https://www.gemconsortium.org/file/open?fileId=50443.

Boyd, N. G. & Vozikis, G. S. (1994). The Influence of Self-Efficacy on the Development of Entrepreneurial Intentions and Actions, *Entrepreneurship Theory and Practice*, vol. 18, no. 4, pp.63–77.

Brandstätter, H. (2011). Personality Aspects of Entrepreneurship: A Look at Five Meta-Analyses, *Personality and Individual Differences*, vol. 51, no. 3, pp.222–230.

Bryman, A. & Bell, E. (2015). Business Research Methods, 4th edition., Cambridge, United Kingdom ; New York, NY, United States of America: Oxford University Press.

Cachon, J.-C., J.-Ch. ,. JC, Barragan, J., Eccius-Wellmann, C., Mcgraw, E. & Myers, D. (2013). Entrepreneurial Motives and Performance: Evidence from North America, *Journal of Management Policy and Practice*, vol. 14, no. 3, pp.50–77.

Cantillon. (1931). Essai Sur La Nature Du Commerce in Général (Essay on the Nature of Trade in General), [e-book], Available Online: https://www.econlib.org/library/NPDBooks/Cantillon/cntNT.html [Accessed 24 February 2021].

Cardon, M., Wincent, J. & Drnovsek, M. (2009). The Nature and Experience of Entrepreneurial Passion, *The Academy of Management Review*, vol. 34, no. 3, pp.511–532.

Carr, J. C. & Sequeira, J. M. (2007). Prior Family Business Exposure as Intergenerational Influence and Entrepreneurial Intent: A Theory of Planned Behavior Approach, *Journal of Business Research*, vol. 60, no. 10, pp.1090–1098.

Casson, M. (1982). The Entrepreneur: An Economic Theory, [e-book] Totowa, N.J: Barnes & Noble Books, Available Online: https://books.google.se….

Chen, C., Greene, P. G. & Crick, A. (1998). Does Entrepreneurial Self-Efficacy Distinguish Entrepreneurs from Managers?, *Journal of Business Venturing*, vol. 13, no. 4, pp.295–316.

CNN. (2020). In Pictures: Billionaire Entrepreneur Elon Musk, *In Pictures: Billionaire Entrepreneur Elon Musk*, Available Online: https://www.cnn.com/2020/05/13/us/gallery/elon-musk/index.html [Accessed 13 May 2021].

Collis, J. & Hussey, R. (2013). Business Research: A Practical Guide for Undergraduate and Postgraduate Students, 4th edn, [e-book] Palgrave Macmillan, Available Online: https://books.google.se/books/about/Business_Research.html?id=uPgcBQAAQBAJ&redir_esc=y [Accessed 25 March 2021].

Di Stefano, G. & Gutierrez, C. (2019). Under a Magnifying Glass: On the Use of Experiments in Strategy Research - Giada Di Stefano, Cédric Gutierrez, 2019, *Strategic Organization*, vol. 17, no. 4, pp.497–507.

Dillman, D. A. (2007). Mail and Internet Surveys: The Tailored Design Method, Hoboken, NJ: John & Wiley Sons.

Drews, C.-C., Stephan, U., Hart, M. & Mickiewic, T. (2015). Understanding Motivations for Entrepreneurship: A Review of Recent Research Evidence, Department for Business Innovation & Skills, Available Online: https://www.researchgate.net/profile/Cord-Christian-Drews/publication/279885236_Understanding_Motivations_for_Entrepreneurship_A_Revie w_of_Recent_Research_Evidence/links/559d2a2408aeb45d171541ad/Understanding-Motivations-for-Entrepreneurship-A-Review-of-Recent-Research-Evidence.pdf.

European Commission. (2003). Rural Development in the European Union. European Communities, European Commission, Available Online: http://ec.europa.eu/agriculture/publi/fact/rurdev2003/en.pdf [Accessed 28 April 2021].

Fairlie, R. W. (2013). Entrepreneurship, Economic Conditions, and the Great Recession, *Journal of Economics & Management Strategy*, vol. 22, no. 2, pp.207–231.

Fellnhofer, K. & Kraus, S. (2015). Examining Attitudes towards Entrepreneurship Education: A Comparative Analysis among Experts, *International Journal of Entrepreneurial Venturing*, vol. 7, pp.396–411.

Fellnhofer, K. & Puumalainen, K. (2017). Can Role Models Boost Entrepreneurial Attitudes?, *Int. Journal of Entrepreneurship and Innovation Management*, vol. Vol. 21, no. No. 3, pp.274–290.

Fiegerman, S. (2017). Jeff Bezos Is the Smartest Guy in Business, *Jeff Bezos Is the Smartest Guy in Business*, Available Online: https://money.cnn.com/2017/06/16/technology/business/jeff-bezos-business/index.html [Accessed 13 May 2021].

Field, A. (2013). Discovering Statistics Using IBM SPSS Statistics: And Sex and Drugs and Rock 'n' Roll, 4th Edition, 4th edn, [e-book] London: Sage, Available Online: http://www.uk.sagepub.com/field4e/default.htm [Accessed 29 April 2021].

Finch, J. (1987). The Vignette Technique in Survey Research, *Sociology*, vol. 21, no. 1, pp.105–114.

Fini, R., Grimaldi, R., Marzocchi, G. L. & Sobrero, M. (2012). The Determinants of Corporate Entrepreneurial Intention within Small and Newly Established Firms, *Entrepreneurship Theory and Practice*, vol. 36, no. 2, pp.387–414.

Forbes. (2021). Forbes 30 Under 30 2021, *Forbes*, Available Online: https://www.forbes.com/30-under-30/2021/ [Accessed 25 February 2021].

GEM Consortium. (2020). Questionnaire Adult Population Survey 2020.

Germak, A. J. & Robinson, J. A. (2014). Exploring the Motivation of Nascent Social Entrepreneurs, *Journal of Social Entrepreneurship*, vol. 5, no. 1, pp.5–21.

Gibson, D. (2003). Developing the Professional Self-Concept: Role Model Construals in Early, Middle, and Late Career Stages, *Organization Science*, vol. 14, no. 5, pp.591–610.

Gibson, D. E. (2004). Role Models in Career Development: New Directions for Theory and Research, *Journal of Vocational Behavior*, vol. 65, no. 1, pp.134–156.

Haynie, J. M. & Shepherd, D. (2011). Toward a Theory of Discontinuous Career Transition: Investigating Career Transitions Necessitated by Traumatic Life Events, *The Journal of Applied Psychology*, vol. 96, no. 3, pp.501–524.

Herbert, R. F. & Link, A. N. (1988). The Entrepreneur: Mainstream Views and Radical Critiques, 2nd Edition, 2nd edition., New York: Praeger.

Hernandez, A. E. (1995). Do Role Models Influence Self Efficacy and Aspirations in Mexican American At-Risk Females?, *Hispanic Journal of Behavioral Sciences*, vol. 17, no. 2, pp.256–63.

Ibarra, H. (1997). Paving an Alternative Route: Gender Differences in Managerial Networks, *Social Psychology Quarterly*, vol. 60, no. 1, pp.91–102.

Jackson, S. L. (2009). Research Methods and Statistics: A Critical Thinking Approach, 3rd edition., Australia: Wadsworth Publishing.

Jafari-Sadeghi, V. (2020). The Motivational Factors of Business Venturing: Opportunity versus Necessity? A Gendered Perspective on European Countries, *Journal of Business Research*, vol. 113, pp.279–289.

Jenkins, L., Lin, R. & Jeske, D. (2016). Influences and Benefits of Role Models on Social Media, 15th IFIP Conference on E-Business e-Services & e-Society (I3E), Swansea, September 2016, Swansea: Springer International Publishing, pp.1–12.

Kalleberg, A. L., Knoke, D. H., Marsden, P. V. & Spaeth, J. L. (eds). (1996). Organizations in America: Analysing Their Structures and Human Resource Practices, 1st edition., Thousand Oaks, Calif: SAGE Publications, Inc.

Karimi, S., Biemans, H., Lans, T., Chizari, M. & Mulder, M. (2013). Understanding Role Models and Gender Influences on Entrepreneurial Intentions Among College Students, *Procedia - Social and Behavioral Sciences*, vol. 93, pp.204–214.

Kickul, J., Gundry, L. K., Barbosa, S. D. & Whitcanack, L. (2009). Intuition versus Analysis? Testing Differential Models of Cognitive Style on Entrepreneurial Self–Efficacy and the New Venture Creation Process, *Entrepreneurship Theory and Practice*, vol. 33, no. 2, pp.439–453.

Knight, F. H. (1921). Risk, Uncertainty and Profit, [e-book] Rochester, NY: Social Science Research Network, Available Online: https://papers.ssrn.com/abstract=1496192 [Accessed 24 February 2021].

Kolvereid, L. (1996). Prediction of Employment Status Choice Intentions, *Entrepreneurship Theory and Practice*, vol. 21, no. 1, pp.47–58.

Krueger, N. F. & Brazeal, D. V. (1994). Entrepreneurial Potential and Potential Entrepreneurs, *Entrepreneurship Theory and Practice*, vol. 18, no. 3, pp.91–104.

Krueger, N. F. & Kickul, J. (2006). So You Thought the Intentions Model Was Simple? Cognitive Style and the Specification of Entrepreneurial Intentions Models, *Entrepreneurship & the Social Sciences eJournal*, [e-journal], Available Online: https://www.academia.edu/3540443/So_You_Thought_the_Intentions_Model_Was_Simple _Cognitive_Style_and_the_Specification_of_Entrepreneurial_Intentions_Models [Accessed 10 March 2021].

Krueger, N. F., Reilly, M. D. & Carsrud, A. L. (2000). Competing Models of Entrepreneurial Intentions, *Journal of Business Venturing*, vol. 15, no. 5, pp.411–432.

Krumboltz, J. D., Mitchell, A. & Jones, G. B. (1976). A Social Learning Theory of Career Selection, *The Counseling Psychologist*, vol. 6, no. 1, pp.71–81.

Laviolette, E. M., Lefebvre, M. R. & Brunel, O. (2012). The Impact of Story Bound Entrepreneurial Role Models on Self-efficacy and Entrepreneurial Intention, *International Journal of Entrepreneurial Behavior & Research*, vol. 18, no. 6, pp.720–742.

Lee, N. & Lings, I. (2008). Doing Business Research: A Guide to Theory and Practice, Los Angeles ; London: SAGE Publications Ltd.

Liñán, F. & Chen, Y. (2009). Development and Cross–Cultural Application of a Specific Instrument to Measure Entrepreneurial Intentions, *Entrepreneurship Theory and Practice*, vol. 33, no. 3, pp.593–617.

Liñán, F. & Fayolle, A. (2015). A Systematic Literature Review on Entrepreneurial Intentions: Citation, Thematic Analyses, and Research Agenda, *International Entrepreneurship and Management Journal*, vol. 11, no. 4, pp.907–933.

Lockwood, P. & Kunda, Z. (1997). Superstars and Me : Predicting the Impact of Role Models on the Self, *American Psychological Association*, vol. 73, no. 1, pp.91–103.

Lüthje, C. & Franke, N. (2003). The 'Making' of an Entrepreneur: Testing a Model of Entrepreneurial Intent among Engineering Students at MIT, *R&D Management*, vol. 33, no. 2, pp.135–147.

Maccoby, E. E. & Jacklin, C. N. (1978). The Psychology of Sex Differences, Vol. 2, Stanford University Press.

Mahy, E. (2018). Instagram Stars: From Influencers to Entrepreneurs, *BBC News*, 18 March, Available Online: https://www.bbc.com/news/business-43389924 [Accessed 25 February 2021].

Malhotra, N. (2008). Completion Time and Response Order Effects in Web Surveys, *Public Opinion Quarterly*, vol. 72, no. 5, pp.914–934.

McGee, J. E., Peterson, M., Mueller, S. L. & Sequeira, J. M. (2009). Entrepreneurial Self–Efficacy: Refining the Measure, *Entrepreneurship Theory and Practice*, vol. 33, no. 4, pp.965–988.

McPherson, M., Smith-Lovin, L. & Cook, J. M. (2001). Birds of a Feather: Homophily in Social Networks, *Annual Review of Sociology*, vol. 27, no. 1, pp.415–444.

Meichenbaum, D. H. (1971). Examination of Model Characteristics in Reducing Avoidance Behavior, *Journal of Personality and Social Psychology*, vol. 17, no. 3, pp.298–307.

Miller, D. & Le Breton-Miller, I. (2017). Underdog Entrepreneurs: A Model of Challenge–Based Entrepreneurship, *Entrepreneurship Theory and Practice*, vol. 41, no. 1, pp.7–17.

Miller, T., Grimes, M., McMullen, J. & Vogus, T. (2012). Venturing for Others with Heart and Head: How Compassion Encourages Social Entrepreneurship, *The Academy of Management Review*, vol. 37, no. 4, pp.616–640.

Moriano, J. A., Gorgievski, M., Laguna, M., Stephan, U. & Zarafshani, K. (2012). A Cross-Cultural Approach to Understanding Entrepreneurial Intention, *Journal of Career Development*, vol. 39, no. 2, pp.162–185.

Nauta, M. M. & Kokaly, M. L. (2001). Assessing Role Model Influences on Students' Academic and Vocational Decisions, *Journal of Career Assessment*, vol. 9, no. 1, pp.81–99.

Nowiński, W. & Haddoud, M. (2019). The Role of Inspiring Role Models in Enhancing Entrepreneurial Intention, *Journal of Business Research*, vol. 96, pp.183–193.

OECD. (2009). Measuring Entrepreneurship: A Collection of Indicators, 2009 Edition, SSRN Scholarly Paper, ID 1581491, Rochester, NY: Social Science Research Network, Available Online: https://papers.ssrn.com/abstract=1581491 [Accessed 18 May 2021].

Parker, S. (2009). The Economics of Entrepreneurship.

Patzelt, H. & Shepherd, D. A. (2011). Recognizing Opportunities for Sustainable Development, *Entrepreneurship Theory and Practice*, vol. 35, no. 4, pp.631–652.

Raaijmakers, A. G. M., Vermeulen, P. A. M., Meeus, M. T. H. & Zietsma, C. (2014). I Need Time! Exploring Pathways to Compliance under Institutional Complexity, *Academy of Management Journal*, vol. 58, no. 1, pp.85–110.

Renko, M. (2013). Early Challenges of Nascent Social Entrepreneurs, *Entrepreneurship Theory and Practice*, vol. 37, no. 5, pp.1045–1069.

Reskin, B. F., McBrier, D. B. & Kmec, J. A. (1999). The Determinants and Consequences of Workplace Sex and Race Composition, *Annual Review of Sociology*, vol. 25, pp.335–361.

Ruef, M., Aldrich, H. & Carter, N. (2003). The Structure of Founding Teams: Homophily, Strong Ties, and Isolation among U.S. Entrepreneurs, *American Sociological Review*, vol. 68, pp.195–222.

Salkind, N. (2010). Encyclopedia of Research Design, [e-book] Thousand Oaks, California, Available Online: https://sk.sagepub.com/reference/researchdesign [Accessed 25 March 2021].

Saunders, M., Lewis, P. & Thornhill, A. (2009). Research Methods for Business Students, 5th edn, Pearson Education Ltd.

Saunders, M., Lewis, P. & Thornhill, A. (2016). Research Methods for Business Students, 7th edn, Pearson Education Ltd.

Schumpeter, J. A. (1934). The Theory of Economic Development — Joseph A. Schumpeter, [e-book], Available Online: https://www.hup.harvard.edu/catalog.php?isbn=9780674879904 [Accessed 24 February 2021].

Shane, S., Kolvereid, L. & Westhead, P. (1991). An Exploratory Examination of the Reasons Leading to New Firm Formation across Country and Gender, *Journal of Business Venturing*, vol. 6, no. 6, pp.431–446.

Shane, S., Locke, E. A. & Collins, C. J. (2003). Entrepreneurial Motivation, *Human Resource Management Review*, vol. 13, no. 2, pp.257–279.

Shapiro, E., Haseltine, F. & Rowe, M. (1978). Moving Up: Role Models, Mentors, and the 'Patron System' - ProQuest, *Sloan Management Review*, vol. 19, no. 3, pp.19–47.

Steiner, P. M., Atzmüller, C. & Su, D. (2017). Designing Valid and Reliable Vignette Experiments for Survey Research: A Case Study on the Fair Gender Income Gap, 2, *Journal of Methods and Measurement in the Social Sciences*, vol. 7, no. 2, pp.52–94.

Stoutenbourgh, J. W. (2008). Demographic Measures, in *Encyclopedia of Survey Research Methods*, [e-book] Thousand Oaks, Calif.: SAGE Publications, Available Online: http://www.credoreference.com/book/sagesurveyr [Accessed 18 May 2021].

Urbano, D., Toledano, N. & Ribeiro-Soriano, D. (2011). Socio-Cultural Factors and Transnational Entrepreneurship: A Multiple Case Study in Spain, *International Small Business Journal*, vol. 29, no. 2, pp.119–134.

Van Auken, H., Fry, F. & Stephens, P. (2006). The Influence of Role Models on Entrepreneurial Intentions, *Journal of Developmental Entrepreneurship (JDE)*, vol. 11, no. 2, pp.157–167.

Van Auken, H., Stephens, P., Fry, F. L. & Silva, J. (2006). Role Model Influences on Entrepreneurial Intentions: A Comparison between USA and Mexico, *The International Entrepreneurship and Management Journal*, vol. 2, no. 3, pp.325–336.

Van Praag, M. & Versloot, P. (2007). What Is the Value of Entrepreneurship? A Review of Recent Research, *Small Business Economics*, vol. 29, no. 4, pp.351–382.

Westhead, P. & Wright, M. (1998). Novice, Portfolio, and Serial Founders: Are They Different?, *Journal of Business Venturing*, vol. 13, no. 3, pp.173–204.

Wright, K. B. (2005). Researching Internet-Based Populations: Advantages and Disadvantages of Online Survey Research, Online Questionnaire Authoring Software Packages, and Web Survey Services, *Journal of Computer-Mediated Communication*, [e-journal] vol. 10, no. 3, Available Online: http://onlinelibrary.wiley.com/doi/abs/10.1111/j.1083-6101.2005.tb00259.x [Accessed 25 March 2021].

Wright, S., Wong, A. & Newill, C. (1997). The Impact of Role Models on Medical Students, *Journal of General Internal Medicine*, vol. 12, no. 1, pp.53–56.

Zhao, H., Seibert, S. E. & Hills, G. E. (2005). The Mediating Role of Self-Efficacy in the Development of Entrepreneurial Intentions, *The Journal of Applied Psychology*, vol. 90, no. 6, pp.1265–1272.

Appendices

Appendix I: Vignettes of Experiment

Vignette A
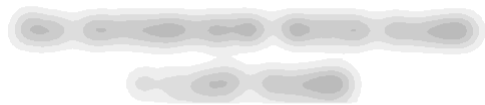
What will be your biggest accomplishment at the end of your career? "I hope that the company has thrived and grown, and that the next generation is prepared to take over."

For what reason did you decide to become an entrepreneur? "This company has been in the family for 2 generations now. My grandparents founded it nearly 75 years ago. For me, continuing their legacy was the only option that made sense. So, like my grandparents and parents, I became an entrepreneur too!"

Vignette B

How come you founded a new venture? Frankly, I believe that starting my own company results in gaining way more money than just working as an employee, earning a common salary. When you found your own business, the sky is the limit.

What do you hope to have achieved upon retiring? "Being financially independent and being able to live a good life."

Vignette C

When is your entrepreneurial journey completed? I hope to have contributed to solving the bigger issues our society is facing. I hope to have made a positive change in the world, to have done good for people and planet.

What was your motive to begin with your start-up? "There are so many problems in the world that need to be solved. I firmly believe entrepreneurs have a crucial role in contributing there. We need to initiate the start of the solving process. Personally, I want to leave the world way beter behind me than I found it. I want to make a change in this world!"

Vignette D

When has your entrepreneurial career been succesful? "If I can continue my business and as such can remain employed at my own company. I don't want to be forced to go job seeking again, it can be so hard to find a job today as well."

Why did you start your own business? When I started my business, the economy was not doing great. There weren't too many jobs around, and finding something that enabled a decent living was very tricky. In a way, I had no other choice but to make my own living.

Appendix II: Scale Items

Appendix II-A   Main driver

1. I am becoming an entrepreneur to continue a family tradition
2. My motive to become an entrepreneur is to run a venture that is part of my family
3. I am becoming an entrepreneur to take over the role of a family member in a family-owned company
4. My reason to start an own business is to acquire great wealth and/or increase personal income
5. I am becoming an entrepreneur to earn a lot of money
6. My reason for founding a company is to become a rich person
7. I am starting my own business to make a difference in the world
8. I am becoming an entrepreneur because I have the clear purpose to make an impact
9. Because I want to make the world better, I am becoming an entrepreneur
10. I am starting my own company, because jobs are too scarce
11. In order to make a living, I am becoming an entrepreneur
12. I have no other option / better choice than becoming an entrepreneur

(A Likert scale ranging from 1 (totally disagree) to 5 (totally agree) was used; items presented in mixed order, please refer to Appendix III)

Appendix II-B   Entrepreneurial Self-Efficacy

How confident are you in successfully …

1. … identifying new business opportunities,
2. … creating new products,
3. … thinking creatively
4. … commercializing an idea or new development

(A Likert scale ranging from 1 (no confidence) to 5 (complete confidence) was used)
(Zhao, Seibert & Hills, 2005)

Appendix II-C   Attitudes Towards Entrepreneurship

1. In general, starting a business is...worthless/worthwhile
2. In general, starting a business is...disappointing/rewarding
3. In general, starting a business is...negative/positive

(A Likert scale ranging from 1 to 5 was used)
(McGee et al., 2009)

Appendix III: Questionnaire

Survey Flow

> **Block: Intro & Consent (1 Question)**
> **Standard: Sample Filtering Question (2 Questions)**
> **Standard: Motive(s) of participant (13 Questions)**
> **Standard: Intro to Experiment (1 Question)**
>
> **BlockRandomizer: 4 - Evenly Present Elements**
>
> > **Standard: Vignette_A (9 Questions)**
> > **Standard: Vignette_B (9 Questions)**
> > **Standard: Vignette_C (9 Questions)**
> > **Standard: Vignette_D (9 Questions)**
>
> **Standard: Demographics (7 Questions)**
>
> Page Break

Questionnaire[37]

Start of Block: Intro & Consent

Q1
This study is part of a Master Thesis at Lund University School of Economics and Management. The topic is entrepreneurial role models.

We seek to better understand the relation between role models and motivations for engaging in entrepreneurial activity. Therefore, we're interested in your motives for and feelings about entrepreneurship. Participation should take less than 10 minutes.

Participation is anonymous and voluntary and you have the right to exit the study at any point if you wish to cancel your participation. Your responses will remain confidential and the data will only be used for research purposes. By continuing, you accept these terms and conditions and give consent to participate in this study.

We greatly appreciate your participation.

If you have any questions, please contact:
wi7622va-s@student.lu.se or mi2724va-s@student.lu.se

End of Block: Intro & Consent

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[37] As mentioned in chapter 3, based on feedback on the pilot study, additional questions were added and the display order of some questions was altered; this explains why question numbering is not consecutive.

Start of Block: Sample Filtering Question

Q2 I am currently taking (an) entrepreneurship course(s) in an European university or college, or did so in the last academic year

o   Yes (4)
o   No (5)

Display This Question:
If Q2 = 5
Forced_Exit The scope of this study is limited to people taking entrepreneurship courses. Thank you for your interest.

Skip To: End of Survey If Forced_Exit Is Displayed
End of Block: Sample Filtering Question

Start of Block: Motive(s) of participant

Intro_to_Motives This section addresses your motives to become an entrepreneur. Please indicate for each statement to what extent you agree.

Q3 My reason to start an own business is to acquire great wealth and/or increase personal income
o   Strongly agree (5)
o   Somewhat agree (4)
o   Neither agree nor disagree (3)
o   Somewhat disagree (2)
o   Strongly disagree (1)

Q6 I am becoming an entrepreneur to continue a family tradition
o   Strongly agree (5)
o   Somewhat agree (4)
o   Neither agree nor disagree (3)
o   Somewhat disagree (2)
o   Strongly disagree (1)

Q10 I am starting my own business to make a difference in the world
o   Strongly agree (5)
o   Somewhat agree (4)
o   Neither agree nor disagree (3)
o   Somewhat disagree (2)
o   Strongly disagree (1)

Q12 I am starting my own company, because jobs are too scarce
o   Strongly agree (5)
o   Somewhat agree (4)
o   Neither agree nor disagree (3)
o   Somewhat disagree (2)
o   Strongly disagree (1)

Q4 I am becoming an entrepreneur to earn a lot of money
o   Strongly agree (5)
o   Somewhat agree (4)
o   Neither agree nor disagree (3)
o   Somewhat disagree (2)
o   Strongly disagree (1)

Q7 I am becoming an entrepreneur to take over the role of a family member in a family-owned company
o   Strongly agree (5)
o   Somewhat agree (4)
o   Neither agree nor disagree (3)
o   Somewhat disagree (2)
o   Strongly disagree (1)

Q9 I am becoming an entrepreneur because I have the clear purpose to make an impact
o   Strongly agree (5)
o   Somewhat agree (4)
o   Neither agree nor disagree (3)
o   Somewhat disagree (2)
o   Strongly disagree (1)

Q13 In order to make a living, I am becoming an entrepreneur
o   Strongly agree (5)
o   Somewhat agree (4)
o   Neither agree nor disagree (3)
o   Somewhat disagree (2)
o   Strongly disagree (1)

Q5 My reason for founding a company is to become a rich person
o   Strongly agree (5)
o   Somewhat agree (4)
o   Neither agree nor disagree (3)
o   Somewhat disagree (2)
o   Strongly disagree (1)

Q8 My motive to become an entrepreneur is to run a venture that is part of my family
o   Strongly agree (5)
o   Somewhat agree (4)
o   Neither agree nor disagree (3)
o   Somewhat disagree (2)
o   Strongly disagree (1)

Q11 Because I want to make the world better, I am becoming an entrepreneur
o   Strongly agree (5)
o   Somewhat agree (4)
o   Neither agree nor disagree (3)
o   Somewhat disagree (2)
o   Strongly disagree (1)

Q14 I have no other option / better choice than becoming an entrepreneur
o   Strongly agree (5)
o   Somewhat agree (4)
o   Neither agree nor disagree (3)
o   Somewhat disagree (2)
o   Strongly disagree (1)

End of Block: Motive(s) of participant

Start of Block: Intro to Experiment

Exp_Instruction In the following part, you will read 4 short excerpts from newspaper articles, in which 4 different entrepreneurs are interviewed.

Only the readable text is relevant, the rest is blurred out.

 Please, read the articles and instructions carefully.

End of Block: Intro to Experiment

Start of Block: Vignette_A

VignetteA Please read the following 2 passages of an interview with an entrepreneur, that was published in a newspaper recently.

Now, take some time* to imagine this entrepreneur as your role model for your own entrepreneurial career.
 With this in mind, please evaluate the following statements.

 [* click on the blue button to continue when ready]

timer_A Timing
First Click (1)
Last Click (2)
Page Submit (3)
Click Count (4)

Page Break

Q74 With this role model in mind ...

Q15 How confident are you in successfully...

	No Confidence (1)	Little Confidence (2)	Neutral (3)	Some Confidence (4)	Complete Confidence (5)
Identifying new business opportunities (1)	○	○	○	○	○
Creating new products (2)	○	○	○	○	○
Thinking creatively (3)	○	○	○	○	○
Commercializing an idea or new development (4)	○	○	○	○	○

Q16 In general, starting a business is...
o   Totally worthless (1)
o   Somewhat worthless (2)
o   Neither worthless nor worthwhile (3)
o   Somewhat worthwhile (4)
o   Totally Worthwile (5)

Q17 In general, starting a business is...
o   Highly disappointing (1)
o   Somewhat disappointing (2)
o   Neiter disappointing nor rewarding (3)
o   Somewhat rewarding (4)
o   Highly rewarding (5)

Q18 In general, starting a business is...
o   Very negative (1)
o   Somewhat negative (2)
o   Neither negative nor positive (3)
o   Somewhat Positive (4)
o   Very positive (5)

Q70 How accurately does this role model reflect your motives and/or preferences?
o   Not accurately at all (1)
o   Slightly accurately (2)
o   Moderately accurately (3)
o   Very accurately (4)
o   Extremely accurately (5)

Q19 Please evaluate the role model from the newspaper article. Indicate for each of the 4 statements to what extent you agree.

	Strongly disagree (1)	Somewhat disagree (2)	Neither agree nor disagree (3)	Somewhat agree (4)	Strongly agree (5)
This is a wealth-seeking entrepreneur (1)	○	○	○	○	○
This is an entrepreneur with a purpose (to have an impact) (2)	○	○	○	○	○
This is an entrepreneur that continues a family business (3)	○	○	○	○	○
This is an entrepreneur that started out of necessity (4)	○	○	○	○	○

End of Block: Vignette_A

Start of Block: Vignette_B

Q45 Please read the following 2 passages of an interview with an entrepreneur, that was published in a newspaper recently.

Now, take some time* to imagine this entrepreneur as your role model for your own entrepreneurial career.
 With this in mind, please evaluate the following statements.

 [* click on the blue button to continue when ready]

Timer_B Timing
First Click (1)
Last Click (2)
Page Submit (3)
Click Count (4)

Page Break

Q75 With this role model in mind ...

Q46 How confident are you in successfully...

	No Confidence (1)	Little Confidence (2)	Neutral (3)	Some Confidence (4)	Complete Confidence (5)
Identifying new business opportunities (1)	○	○	○	○	○
Creating new products (2)	○	○	○	○	○
Thinking creatively (3)	○	○	○	○	○
Commercializing an idea or new development (4)	○	○	○	○	○

Q47 In general, starting a business is...
o   Totally worthless (1)
o   Somewhat worthless (2)
o   Neither worthless nor worthwhile (3)
o   Somewhat worthwhile (4)
o   Totally Worthwile (5)

Q48 In general, starting a business is...
o   Highly disappointing (1)
o   Somewhat disappointing (2)
o   Neiter disappointing nor rewarding (3)
o   Somewhat rewarding (4)
o   Highly rewarding (5)

Q49 In general, starting a business is...
o   Very negative (1)
o   Somewhat negative (2)
o   Neither negative nor positive (3)
o   Somewhat Positive (4)
o   Very positive (5)

Q71 How accurately does this role model reflect your motives and/or preferences?
o   Not accurately at all (1)
o   Slightly accurately (2)
o   Moderately accurately (3)
o   Very accurately (4)
o   Extremely accurately (5)

Q50 Please evaluate the role model from the newspaper article. Indicate for each of the 4 statements to what extent you agree.

	Strongly disagree (1)	Somewhat disagree (2)	Neither agree nor disagree (3)	Somewhat agree (4)	Strongly agree (5)
This is a wealth-seeking entrepreneur (1)	○	○	○	○	○
This is an entrepreneur with a purpose (to have an impact) (2)	○	○	○	○	○
This is an entrepreneur that continues a family business (3)	○	○	○	○	○
This is an entrepreneur that started out of necessity (4)	○	○	○	○	○

End of Block: Vignette_B

Start of Block: Vignette_C

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Q51 Please read the following 2 passages of an interview with an entrepreneur, that was published in a newspaper recently.

 Now, take some time* to imagine this entrepreneur as your role model for your own entrepreneurial career.
 With this in mind, please evaluate the following statements.

 [* click on the blue button to continue when ready]

Timer_C Timing
First Click (1)
Last Click (2)
Page Submit (3)
Click Count (4)

Page Break

Q76 With this role model in mind ...

Q52 How confident are you in successfully...

	No Confidence (1)	Little Confidence (2)	Neutral (3)	Some Confidence (4)	Complete Confidence (5)
Identifying new business opportunities (1)	○	○	○	○	○
Creating new products (2)	○	○	○	○	○
Thinking creatively (3)	○	○	○	○	○
Commercializing an idea or new development (4)	○	○	○	○	○

Q53 In general, starting a business is...
o   Totally worthless (1)
o   Somewhat worthless (2)
o   Neither worthless nor worthwhile (3)
o   Somewhat worthwhile (4)
o   Totally Worthwile (5)

69

Q54 In general, starting a business is...
o   Highly disappointing (1)
o   Somewhat disappointing (2)
o   Neiter disappointing nor rewarding (3)
o   Somewhat rewarding (4)
o   Highly rewarding (5)

Q55 In general, starting a business is...
o   Very negative (1)
o   Somewhat negative (2)
o   Neither negative nor positive (3)
o   Somewhat Positive (4)
o   Very positive (5)

Q72 How accurately does this role model reflect your motives and/or preferences?
o   Not accurately at all (1)
o   Slightly accurately (2)
o   Moderately accurately (3)
o   Very accurately (4)
o   Extremely accurately (5)

Q56 Please evaluate the role model from the newspaper article. Indicate for each of the 4 statements to what extent you agree.

	Strongly disagree (1)	Somewhat disagree (2)	Neither agree nor disagree (3)	Somewhat agree (4)	Strongly agree (5)
This is a wealth-seeking entrepreneur (1)	○	○	○	○	○
This is an entrepreneur with a purpose (to have an impact) (2)	○	○	○	○	○
This is an entrepreneur that continues a family business (3)	○	○	○	○	○
This is an entrepreneur that started out of necessity (4)	○	○	○	○	○

End of Block: Vignette_C

Start of Block: Vignette_D

Q57 Please read the following 2 passages of an interview with an entrepreneur, that was published in a newspaper recently.

Now, take some time* to imagine this entrepreneur as your role model for your own entrepreneurial career.
 With this in mind, please evaluate the following statements.

 [* click on the blue button to continue when ready]

Timer_D Timing
First Click (1)
Last Click (2)
Page Submit (3)

Click Count (4)

Page Break

Q77 With this role model in mind ...

Q58 How confident are you in successfully...

	No Confidence (1)	Little Confidence (2)	Neutral (3)	Some Confidence (4)	Complete Confidence (5)
Identifying new business opportunities (1)	○	○	○	○	○
Creating new products (2)	○	○	○	○	○
Thinking creatively (3)	○	○	○	○	○
Commercializing an idea or new development (4)	○	○	○	○	○

Q59 In general, starting a business is...
o   Totally worthless (1)
o   Somewhat worthless (2)
o   Neither worthless nor worthwhile (3)
o   Somewhat worthwhile (4)
o   Totally Worthwile (5)

Q60 In general, starting a business is...
o   Highly disappointing (1)
o   Somewhat disappointing (2)
o   Neiter disappointing nor rewarding (3)
o   Somewhat rewarding (4)
o   Highly rewarding (5)

Q61 In general, starting a business is...
o   Very negative (1)
o   Somewhat negative (2)
o   Neither negative nor positive (3)
o   Somewhat Positive (4)
o   Very positive (5)

Q73 How accurately does this role model reflect your motives and/or preferences?

o   Not accurately at all (1)
o   Slightly accurately (2)
o   Moderately accurately (3)
o   Very accurately (4)
o   Extremely accurately (5)

Q62 Please evaluate the role model from the newspaper article. Indicate for each of the 4 statements to what extent you agree.

	Strongly disagree (1)	Somewhat disagree (2)	Neither agree nor disagree (3)	Somewhat agree (4)	Strongly agree (5)
This is a wealth-seeking entrepreneur (1)	O	O	O	O	O
This is an entrepreneur with a purpose (to have an impact) (2)	O	O	O	O	O
This is an entrepreneur that continues a family business (3)	O	O	O	O	O
This is an entrepreneur that started out of necessity (4)	O	O	O	O	O

End of Block: Vignette_D

Start of Block: Demographics

Q37 I identify as:
o   Male (1)
o   Female (2)
o   Non-binary / third gender (3)
o   Prefer not to say (4)

Q38 My age is:
o   younger than 18 (1)
o   18-25 (2)
o   26-35 (3)
o   36-45 (4)
o   46-55 (5)
o   56-65 (6)
o   66 or older (7)

Q39 To verify that the results of this study are meaningful, we kindly ask you to select answer '3'.
o   1 (1)
o   2 (2)
o   3 (3)
o   4 (4)

Q41 Which category best describes you?
o   White (1)
o   Hispanic, Latino or Spanish origin (2)
o   Black or African American (3)
o   Asian (4)
o   American Indian or Alaska Native (5)
o   Middle Eastern or North African (6)
o   Native Hawaiian or Other Pacific Islander (7)
o   Some other race, ethnicity or origin (8)
o   Prefer not to say (9)

Q42 What is your location?
o   Northern Europe (1)
o   Eastern Europe (2)
o   Southern Europe (3)
o   Western Europe (4)
o   Other (5)

Q43 How many years of entrepreneurial experience do you have?
(please fill in the number of years since officially starting your first company; if you haven't started a company, please fill in a 0)

_____

Q44 If you would like to be notified of the results of this study, please leave your email address below
(please note your responses are no longer anonymous)

_____

End of Block: Demographics

End of Survey

Appendix IV: SPSS Outputs

Appendix IV-A   Reliability Checks for Motivations of Participants

Family-Business Motive

		N	%
Cases	Valid	71	100.0
	Excluded[a]	0	.0
	Total	71	100.0

a. Listwise deletion based on all variables in the procedure.

Reliability Statistics

Cronbach's Alpha	N of Items
.912	3

Item-Total Statistics

	Scale Mean if Item Deleted	Scale Variance if Item Deleted	Corrected Item-Total Correlation	Cronbach's Alpha if Item Deleted
I am becoming an entrepreneur to continue a family tradition	3.89	5.673	.865	.837
I am becoming an entrepreneur to take over the role of a family member in a family-owned company	4.14	6.094	.860	.843

My motive to become an entrepreneur is to run a venture that is part of my family	4.00	6.629	.749	.932

Wealth-seeking Motive

		N	%
Cases	Valid	71	100.0
	Excluded[a]	0	.0
	Total	71	100.0

a. Listwise deletion based on all variables in the procedure.

Reliability Statistics

Cronbach's Alpha	N of Items
.884	3

Item-Total Statistics

	Scale Mean if Item Deleted	Scale Variance if Item Deleted	Corrected Item-Total Correlation	Cronbach's Alpha if Item Deleted
My reason to start an own business is to acquire great wealth and/or increase personal income	6.62	4.925	.753	.861
I am becoming an entrepreneur to earn a lot of money	6.79	4.312	.829	.789

	7.13	3.741	.772	.855
My reason for founding a company is to become a rich person				

Impact Purpose Motive

		N	%
Cases	Valid	71	100.0
	Excluded[a]	0	.0
	Total	71	100.0

a. Listwise deletion based on all variables in the procedure.

Reliability Statistics

Cronbach's Alpha	N of Items
.903	3

Item-Total Statistics

	Scale Mean if Item Deleted	Scale Variance if Item Deleted	Corrected Item-Total Correlation	Cronbach's Alpha if Item Deleted
I am starting my own business to make a difference in the world	7.41	4.159	.814	.854

		7.32	4.422	.776	.886
I am becoming an entrepreneur because I have the clear purpose to make an impact					
Because I want to make the world better, I am becoming an entrepreneur	7.61		4.042	.831	.839

Necessity Motive

Case Processing Summary

		N	%
Cases	Valid	71	100.0
	Excluded[a]	0	.0
	Total	71	100.0

a. Listwise deletion based on all variables in the procedure.

Reliability Statistics

Cronbach's Alpha	N of Items
.739	3

Item-Total Statistics

	Scale Mean if Item Deleted	Scale Variance if Item Deleted	Corrected Item-Total Correlation	Cronbach's Alpha if Item Deleted

I am starting my own company, because jobs are too scarce	5.21	3.940	.659	.531
In order to make a living, I am becoming an entrepreneur	4.20	5.246	.441	.789
I have no other option / better choice than becoming an entrepreneur	5.63	4.893	.611	.606

Appendix IV-B   Correlation Matrix

Correlations

			Mot_1 _score	Mot_2 _score	Mot_3 _score					
Spearman's rho	Mot_1_score	Correlation Coefficient	1.000	.059	-.187					
		Sig. (2-tailed)	.	.602	.095					
		N	81	81	81					
	Mot_2_score	Correlation Coefficient	.059	1.000	-.130					
		Sig. (2-tailed)	.602	.	.247					
		N	81	81	81					
	Mot_3_score	Correlation Coefficient	-.187	-.130	1.000					
		Sig. (2-tailed)	.095	.247	.					
		N	81	81	81					
	Mot_4_score	Correlation Coefficient	.101	.017	-.041					
		Sig. (2-tailed)	.371	.882	.719					
		N	81	81	81					
	How accurately does this role model	Correlation Coefficient	.095	.536[**]	-.086					
		Sig. (2-tailed)	.397	.000	.447					

reflect your motives and/or preferences?	N	81	81	81					
How accurately does this role model reflect your motives and/or preferences?	Correlation Coefficient	.452**	.103	-.157					
	Sig. (2-tailed)	.000	.359	.161					
	N	81	81	81					
How accurately does this role model reflect your motives and/or preferences?	Correlation Coefficient	-.333**	-.022	.637**					
	Sig. (2-tailed)	.002	.845	.000					
	N	81	81	81					
How accurately does this role model reflect your motives and/or preferences?	Correlation Coefficient	.215	.057	-.084					
	Sig. (2-tailed)	.054	.613	.458					
	N	81	81	81					

Appendix IV-C   Reliability of the DVs

ESE Vignette A

Reliability Statistics

Cronbach's Alpha	N of Items
.909	4

Item-Total Statistics

	Scale Mean if Item Deleted	Scale Variance if Item Deleted	Corrected Item-Total Correlation	Cronbach's Alpha if Item Deleted
How confident are you in successfully... - Identifying new business opportunities	9.58	10.822	.791	.883
How confident are you in successfully... - Creating new products	9.68	11.171	.842	.867
How confident are you in successfully... - Thinking creatively	9.68	10.371	.850	.861
How confident are you in successfully... - Commercializing an idea or new development	9.51	11.578	.699	.914

Reliability Statistics

Cronbach's Alpha	N of Items
.790	4

Item-Total Statistics

	Scale Mean if Item Deleted	Scale Variance if Item Deleted	Corrected Item-Total Correlation	Cronbach's Alpha if Item Deleted
How confident are you in successfully... - Identifying new business opportunities	11.86	4.919	.727	.677
How confident are you in successfully... - Creating new products	11.96	4.911	.673	.701
How confident are you in successfully... - Thinking creatively	11.90	5.290	.516	.780
How confident are you in successfully... - Commercializing an idea or new development	11.72	5.231	.502	.789

Reliability Statistics

Cronbach's Alpha	N of Items
.842	4

Item-Total Statistics

	Scale Mean if Item Deleted	Scale Variance if Item Deleted	Corrected Item-Total Correlation	Cronbach's Alpha if Item Deleted
How confident are you in successfully... - Identifying new business opportunities	11.69	6.516	.692	.795
How confident are you in successfully... - Creating new products	11.78	5.925	.729	.776
How confident are you in successfully... - Thinking creatively	11.58	6.322	.665	.805
How confident are you in successfully... - Commercializing an idea or new development	11.95	6.048	.630	.823

Reliability Statistics

Cronbach's Alpha	N of Items
.869	4

Item-Total Statistics

	Scale Mean if Item Deleted	Scale Variance if Item Deleted	Corrected Item-Total Correlation	Cronbach's Alpha if Item Deleted
How confident are you in successfully... - Identifying new business opportunities	10.99	6.962	.721	.833
How confident are you in successfully... - Creating new products	10.96	6.461	.775	.809
How confident are you in successfully... - Thinking creatively	10.72	6.256	.776	.809
How confident are you in successfully... - Commercializing an idea or new development	10.85	7.278	.616	.872

ATE Vignette A

Reliability Statistics

Cronbach's Alpha	N of Items
.880	3

Item-Total Statistics

	Scale Mean if Item Deleted	Scale Variance if Item Deleted	Corrected Item-Total Correlation	Cronbach's Alpha if Item Deleted
In general, starting a business is...	8.15	2.928	.748	.848
In general, starting a business is...	8.09	2.655	.775	.826
In general, starting a business is...	8.16	2.911	.785	.817

ATE Vignette B

Reliability Statistics

Cronbach's Alpha	N of Items
.821	3

Item-Total Statistics

	Scale Mean if Item Deleted	Scale Variance if Item Deleted	Corrected Item-Total Correlation	Cronbach's Alpha if Item Deleted
In general, starting a business is...	8.90	1.765	.704	.726
In general, starting a business is...	8.93	1.744	.634	.797
In general, starting a business is...	8.99	1.712	.690	.738

ATE Vignette C

Reliability Statistics

Cronbach's Alpha	N of Items
.765	3

Item-Total Statistics

	Scale Mean if Item Deleted	Scale Variance if Item Deleted	Corrected Item-Total Correlation	Cronbach's Alpha if Item Deleted
In general, starting a business is...	8.73	2.025	.530	.763
In general, starting a business is...	9.09	1.230	.648	.659
In general, starting a business is...	8.80	1.685	.674	.610

ATE Vignette D

Reliability Statistics

Cronbach's Alpha	N of Items
.884	3

Item-Total Statistics

	Scale Mean if Item Deleted	Scale Variance if Item Deleted	Corrected Item-Total Correlation	Cronbach's Alpha if Item Deleted
In general, starting a business is...	7.79	3.493	.731	.875
In general, starting a business is...	8.09	2.855	.790	.827
In general, starting a business is...	8.05	3.048	.816	.799

Appendix IV-D   Normality Checks for DVs

Descriptive Statistics

	N	Range	Minimum	Maximum	Mean	Skewness		Kurtosis	
	Statistic	Statistic	Statistic	Statistic	Statistic	Statistic	Std. Error	Statistic	
ESE_a	81	4.00	1.00	5.00	3.2037	-.232	.267	-1.213	
ESE_b	81	3.25	1.75	5.00	3.9537	-1.007	.267	1.075	
ESE_c	81	3.00	2.00	5.00	3.9167	-.845	.267	-.075	
ESE_d	81	3.25	1.75	5.00	3.6265	-.554	.267	-.724	
ATE_a	81	3.00	2.00	5.00	4.0658	-.782	.267	-.255	
ATE_b	81	2.33	2.67	5.00	4.4691	-1.006	.267	.399	
ATE_c	81	3.00	2.00	5.00	4.3210	-1.082	.267	1.074	
ATE_d	81	3.33	1.67	5.00	3.9877	-.821	.267	.140	
Valid N (listwise)	81								

Within-Subjects Factors

Measure	RM	Dependent Variable
Level_of_Agreement_wealth	1	Q19_1
	2	Q50_1
	3	Q56_1
	4	Q62_1
Level_of_Agreement_family	1	Q19_3
	2	Q50_3
	3	Q56_3
	4	Q62_3
Level_of_Agreement_impact	1	Q19_2
	2	Q50_2
	3	Q56_2
	4	Q62_2
Level_of_Agreement_necessity	1	Q19_4
	2	Q50_4
	3	Q56_4
	4	Q62_4

Multivariate Tests[a]

Effect			Value	F	Hypothesis df	Error df	Sig.
Between Subjects	Intercept	Pillai's Trace	.969	610.162[b]	4.000	77.000	.000
		Wilks' Lambda	.031	610.162[b]	4.000	77.000	.000

		Hotelling's Trace	31.697	610.162[b]	4.000	77.000	.000
		Roy's Largest Root	31.697	610.162[b]	4.000	77.000	.000
Within Subjects	RM	Pillai's Trace	.911	58.548[b]	12.000	69.000	.000
		Wilks' Lambda	.089	58.548[b]	12.000	69.000	.000
		Hotelling's Trace	10.182	58.548[b]	12.000	69.000	.000
		Roy's Largest Root	10.182	58.548[b]	12.000	69.000	.000

a. Design: Intercept
 Within Subjects Design: RM
b. Exact statistic

Mauchly's Test of Sphericity[a]

Within Subjects Effect	Measure	Mauchly's W	Approx. Chi-Square	df	Sig.	Epsilon[b] Greenhouse-Geisser		
RM	Level_of_Agreement_wealth	.936	5.177	5	.395	.960		
	Level_of_Agreement_family	.723	25.501	5	.000	.855		
	Level_of_Agreement_impact	.904	7.910	5	.161	.938		
	Level_of_Agreement_necessity	.943	4.661	5	.459	.961		

Tests of Within-Subjects Effects

Multivariate[a,b]

Within Subjects Effect		Value	F	Hypothesis df	Error df	Sig.
RM	Pillai's Trace	2.083	135.723	12.000	717.000	.000
	Wilks' Lambda	.024	160.237	12.000	627.335	.000
	Hotelling's Trace	7.909	155.326	12.000	707.000	.000
	Roy's Largest Root	4.263	254.692[c]	4.000	239.000	.000

a. Design: Intercept
 Within Subjects Design: RM

b. Tests are based on averaged variables.

c. The statistic is an upper bound on F that yields a lower bound on the significance level.

Univariate Tests

Source	Measure		Type III Sum of Squares	df	Mean Square	F	
RM	Level_of_Agreement_wealth	Sphericity Assumed	333.836	3	111.279	102.556	
		Greenhouse-Geisser	333.836	2.879	115.971	102.556	
		Huynh-Feldt	333.836	2.997	111.373	102.556	
		Lower-bound	333.836	1.000	333.836	102.556	

	Level_of_Agreement_family	Sphericity Assumed	587.025	3	195.675	292.643	
		Greenhouse-Geisser	587.025	2.565	228.902	292.643	
		Huynh-Feldt	587.025	2.657	220.957	292.643	
		Lower-bound	587.025	1.000	587.025	292.643	
	Level_of_Agreement_impact	Sphericity Assumed	357.935	3	119.312	129.385	
		Greenhouse-Geisser	357.935	2.813	127.246	129.385	
		Huynh-Feldt	357.935	2.926	122.330	129.385	
		Lower-bound	357.935	1.000	357.935	129.385	
	Level_of_Agreement_necessity	Sphericity Assumed	345.988	3	115.329	106.864	
		Greenhouse-Geisser	345.988	2.882	120.062	106.864	
		Huynh-Feldt	345.988	3.000	115.329	106.864	
		Lower-bound	345.988	1.000	345.988	106.864	
Error(RM)	Level_of_Agreement_wealth	Sphericity Assumed	260.414	240	1.085		
		Greenhouse-Geisser	260.414	230.289	1.131		
		Huynh-Feldt	260.414	239.797	1.086		
		Lower-bound	260.414	80.000	3.255		
	Level_of_Agreement_family	Sphericity Assumed	160.475	240	.669		
		Greenhouse-Geisser	160.475	205.162	.782		
		Huynh-Feldt	160.475	212.539	.755		
		Lower-bound	160.475	80.000	2.006		

Level_of_Agreement_impact	Sphericity Assumed	221.315	240	.922		
	Greenhouse-Geisser	221.315	225.035	.983		
	Huynh-Feldt	221.315	234.078	.945		
	Lower-bound	221.315	80.000	2.766		
Level_of_Agreement_necessity	Sphericity Assumed	259.012	240	1.079		
	Greenhouse-Geisser	259.012	230.539	1.124		
	Huynh-Feldt	259.012	240.000	1.079		
	Lower-bound	259.012	80.000	3.238		

Tests of Within-Subjects Contrasts

Source	Measure	RM	Type III Sum of Squares	df	Mean Square	F	Sig.
RM	Level_of_Agreement_wealth	Linear	22.519	1	22.519	16.707	.000
		Quadratic	23.361	1	23.361	27.733	.000
		Cubic	287.956	1	287.956	270.401	.000
	Level_of_Agreement_family	Linear	360.306	1	360.306	438.103	.000
		Quadratic	171.901	1	171.901	277.267	.000
		Cubic	54.817	1	54.817	97.274	.000
	Level_of_Agreement_impact	Linear	8.164	1	8.164	8.899	.004
		Quadratic	68.522	1	68.522	88.090	.000
		Cubic	281.250	1	281.250	262.544	.000
	Level_of_Agreement_necessity	Linear	234.232	1	234.232	240.955	.000
		Quadratic	91.309	1	91.309	67.830	.000
		Cubic	20.447	1	20.447	22.239	.000

Source	Measure		Type III Sum of Squares	df	Mean Square		
Error(RM)	Level_of_Agreement_ wealth	Linear	107.831	80	1.348		
		Quadratic	67.389	80	.842		
		Cubic	85.194	80	1.065		
	Level_of_Agreement_f amily	Linear	65.794	80	.822		
		Quadratic	49.599	80	.620		
		Cubic	45.083	80	.564		
	Level_of_Agreement_i mpact	Linear	73.386	80	.917		
		Quadratic	62.228	80	.778		
		Cubic	85.700	80	1.071		
	Level_of_Agreement_ necessity	Linear	77.768	80	.972		
		Quadratic	107.691	80	1.346		
		Cubic	73.553	80	.919		

Tests of Between-Subjects Effects

Transformed Variable: Average

Source	Measure	Type III Sum of Squares	df	Mean Square	F	Sig.
Intercept	Level_of_Agreement_we alth	3167.188	1	3167.188	1671.761	.000
	Level_of_Agreement_fa mily	2105.790	1	2105.790	1132.831	.000
	Level_of_Agreement_im pact	2982.373	1	2982.373	1816.077	.000
	Level_of_Agreement_ne cessity	3025.000	1	3025.000	1475.610	.000
Error	Level_of_Agreement_we alth	151.562	80	1.895		

Level_of_Agreement_family	148.710	80	1.859		
Level_of_Agreement_impact	131.377	80	1.642		
Level_of_Agreement_necessity	164.000	80	2.050		

Estimated Marginal Means

1. Grand Mean

Measure	Mean	Std. Error	95% Confidence Interval	
			Lower Bound	Upper Bound
Level_of_Agreement_wealth	3.127	.076	2.974	3.279
Level_of_Agreement_family	2.549	.076	2.399	2.700
Level_of_Agreement_impact	3.034	.071	2.892	3.176
Level_of_Agreement_necessity	3.056	.080	2.897	3.214

2. RM

Estimates

Measure	RM	Mean	Std. Error	95% Confidence Interval	
				Lower Bound	Upper Bound
Level_of_Agreement_wealth	1	2.790	.133	2.525	3.056
	2	4.778	.082	4.614	4.942
	3	2.012	.134	1.745	2.280
	4	2.926	.145	2.638	3.214
Level_of_Agreement_family	1	4.877	.048	4.782	4.972
	2	1.741	.115	1.512	1.969
	3	1.901	.131	1.641	2.162
	4	1.679	.123	1.435	1.923
Level_of_Agreement_impact	1	2.778	.135	2.509	3.046
	2	2.173	.124	1.926	2.420
	3	4.815	.075	4.666	4.964
	4	2.370	.124	2.125	2.616
Level_of_Agreement_necessity	1	2.333	.144	2.047	2.620
	2	2.481	.146	2.191	2.772
	3	2.568	.143	2.284	2.852
	4	4.840	.054	4.732	4.947

Pairwise Comparisons

Measure	(I) RM	(J) RM	Mean Difference (I-J)	Std. Error	Sig.[b]	95% Confidence Interval for Difference[b]	
						Lower Bound	Upper Bound
	1	2	-1.988[*]	.149	.000	-2.283	-1.692

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Dependent Variable	(I)	(J)	Mean Difference (I-J)	Std. Error	Sig.	Lower Bound	Upper Bound
Level_of_Agreement_wealth		3	.778*	.162	.000	.455	1.100
		4	-.136	.182	.457	-.497	.225
	2	1	1.988*	.149	.000	1.692	2.283
		3	2.765*	.163	.000	2.441	3.090
		4	1.852*	.161	.000	1.531	2.172
	3	1	-.778*	.162	.000	-1.100	-.455
		2	-2.765*	.163	.000	-3.090	-2.441
		4	-.914*	.164	.000	-1.240	-.587
	4	1	.136	.182	.457	-.225	.497
		2	-1.852*	.161	.000	-2.172	-1.531
		3	.914*	.164	.000	.587	1.240
Level_of_Agreement_family	1	2	3.136*	.125	.000	2.887	3.385
		3	2.975*	.150	.000	2.677	3.274
		4	3.198*	.147	.000	2.904	3.491
	2	1	-3.136*	.125	.000	-3.385	-2.887
		3	-.160	.112	.155	-.383	.062
		4	.062	.095	.518	-.128	.251
	3	1	-2.975*	.150	.000	-3.274	-2.677
		2	.160	.112	.155	-.062	.383
		4	.222	.133	.098	-.042	.486
	4	1	-3.198*	.147	.000	-3.491	-2.904
		2	-.062	.095	.518	-.251	.128
		3	-.222	.133	.098	-.486	.042
Level_of_Agreement_impact	1	2	.605*	.164	.000	.279	.930
		3	-2.037*	.151	.000	-2.337	-1.737
		4	.407*	.161	.013	.087	.727
	2	1	-.605*	.164	.000	-.930	-.279
		3	-2.642*	.152	.000	-2.945	-2.339
		4	-.198	.127	.124	-.451	.056

			Mean Difference	Std. Error	Sig.	Lower Bound	Upper Bound
	3	1	2.037*	.151	.000	1.737	2.337
		2	2.642*	.152	.000	2.339	2.945
		4	2.444*	.148	.000	2.150	2.739
	4	1	-.407*	.161	.013	-.727	-.087
		2	.198	.127	.124	-.056	.451
		3	-2.444*	.148	.000	-2.739	-2.150
Level_of_Agreement_ necessity	1	2	-.148	.175	.399	-.496	.200
		3	-.235	.172	.177	-.578	.108
		4	-2.506*	.158	.000	-2.821	-2.191
	2	1	.148	.175	.399	-.200	.496
		3	-.086	.147	.559	-.379	.207
		4	-2.358*	.160	.000	-2.677	-2.039
	3	1	.235	.172	.177	-.108	.578
		2	.086	.147	.559	-.207	.379
		4	-2.272*	.165	.000	-2.600	-1.944
	4	1	2.506*	.158	.000	2.191	2.821
		2	2.358*	.160	.000	2.039	2.677
		3	2.272*	.165	.000	1.944	2.600

Based on estimated marginal means

*. The mean difference is significant at the .05 level.

b. Adjustment for multiple comparisons: Least Significant Difference (equivalent to no adjustments).

Multivariate Tests

	Value	F	Hypothesis df	Error df	Sig.
Pillai's trace	.911	58.548[a]	12.000	69.000	.000
Wilks' lambda	.089	58.548[a]	12.000	69.000	.000
Hotelling's trace	10.182	58.548[a]	12.000	69.000	.000

| | Roy's largest root | 10.182 | 58.548[a] | 12.000 | 69.000 | .000 |

Each F tests the multivariate effect of RM. These tests are based on the linearly independent pairwise comparisons among the estimated marginal means.
a. Exact statistic

Appendix IV-F   DV Model – Family Entrepreneurs

Within-Subjects Factors

Measure	RM	Dependent Variable
ESE	1	ESE_a
	2	ESE_b
	3	ESE_c
	4	ESE_d
ATE	1	ATE_a
	2	ATE_b
	3	ATE_c
	4	ATE_d

Multivariate Tests[a]

Effect			Value	F	Hypothesis df	Error df	
Between Subjects	Intercept	Pillai's Trace	.994	512.094[b]	2.000	6.000	
		Wilks' Lambda	.006	512.094[b]	2.000	6.000	
		Hotelling's Trace	170.698	512.094[b]	2.000	6.000	
		Roy's Largest Root	170.698	512.094[b]	2.000	6.000	
	Prior_ent_exp	Pillai's Trace	.262	1.064[b]	2.000	6.000	
		Wilks' Lambda	.738	1.064[b]	2.000	6.000	
		Hotelling's Trace	.355	1.064[b]	2.000	6.000	

		Roy's Largest Root	.355	1.064[b]	2.000	6.000
Within Subjects	RM	Pillai's Trace	.798	1.320[b]	6.000	2.000
		Wilks' Lambda	.202	1.320[b]	6.000	2.000
		Hotelling's Trace	3.959	1.320[b]	6.000	2.000
		Roy's Largest Root	3.959	1.320[b]	6.000	2.000
	RM * Prior_ent_exp	Pillai's Trace	.923	3.998[b]	6.000	2.000
		Wilks' Lambda	.077	3.998[b]	6.000	2.000
		Hotelling's Trace	11.995	3.998[b]	6.000	2.000
		Roy's Largest Root	11.995	3.998[b]	6.000	2.000

Mauchly's Test of Sphericity[a]

Within Subjects Effect	Measure	Mauchly's W	Approx. Chi-Square	df	Sig.	Epsilon[b]	
						Greenhouse-Geisser	Huynh-Feldt
RM	ESE	.074	14.906	5	.012	.528	.754
	ATE	.595	2.968	5	.709	.792	1.000

Tests of Within-Subjects Effects

Multivariate[a,b]

Within Subjects Effect		Value	F	Hypothesis df	Error df	Sig.
RM	Pillai's Trace	.141	.529	6.000	42.000	.783
	Wilks' Lambda	.862	.513[c]	6.000	40.000	.795
	Hotelling's Trace	.157	.496	6.000	38.000	.807
	Roy's Largest Root	.133	.930[d]	3.000	21.000	.444
RM * Prior_ent_exp	Pillai's Trace	.399	1.745	6.000	42.000	.134
	Wilks' Lambda	.638	1.680[c]	6.000	40.000	.151
	Hotelling's Trace	.509	1.613	6.000	38.000	.170
	Roy's Largest Root	.337	2.360[d]	3.000	21.000	.101

a. Design: Intercept + Prior_ent_exp
 Within Subjects Design: RM

b. Tests are based on averaged variables.

c. Exact statistic

d. The statistic is an upper bound on F that yields a lower bound on the significance level.

Univariate Tests

Source	Measure		Type III Sum of Squares	df	Mean Square	F	Sig.
RM	ESE	Sphericity Assumed	.445	3	.148	.331	.803
		Greenhouse-Geisser	.445	1.584	.281	.331	.676
		Huynh-Feldt	.445	2.263	.197	.331	.748
		Lower-bound	.445	1.000	.445	.331	.583
	ATE	Sphericity Assumed	.384	3	.128	.315	.815

		Greenhouse-Geisser	.384	2.377	.162	.315	.770
		Huynh-Feldt	.384	3.000	.128	.315	.815
		Lower-bound	.384	1.000	.384	.315	.592
RM * Prior_ent_exp	ESE	Sphericity Assumed	3.079	3	1.026	2.289	.108
		Greenhouse-Geisser	3.079	1.584	1.944	2.289	.153
		Huynh-Feldt	3.079	2.263	1.361	2.289	.129
		Lower-bound	3.079	1.000	3.079	2.289	.174
	ATE	Sphericity Assumed	2.314	3	.771	1.894	.162
		Greenhouse-Geisser	2.314	2.377	.973	1.894	.177
		Huynh-Feldt	2.314	3.000	.771	1.894	.162
		Lower-bound	2.314	1.000	2.314	1.894	.211
Error(RM)	ESE	Sphericity Assumed	9.414	21	.448		
		Greenhouse-Geisser	9.414	11.087	.849		
		Huynh-Feldt	9.414	15.838	.594		
		Lower-bound	9.414	7.000	1.345		
	ATE	Sphericity Assumed	8.552	21	.407		
		Greenhouse-Geisser	8.552	16.637	.514		
		Huynh-Feldt	8.552	21.000	.407		
		Lower-bound	8.552	7.000	1.222		

Tests of Within-Subjects Contrasts

Source	Measure	RM	Type III Sum of Squares	df	Mean Square	F	Sig.
RM	ESE	Linear	.063	1	.063	.063	.809
		Quadratic	.003	1	.003	.101	.759
		Cubic	.380	1	.380	1.171	.315
	ATE	Linear	.268	1	.268	.471	.514
		Quadratic	.005	1	.005	.024	.882
		Cubic	.112	1	.112	.243	.637
RM * Prior_ent_exp	ESE	Linear	1.634	1	1.634	1.642	.241
		Quadratic	.008	1	.008	.304	.598
		Cubic	1.438	1	1.438	4.435	.073
	ATE	Linear	1.831	1	1.831	3.224	.116
		Quadratic	.445	1	.445	2.296	.173
		Cubic	.038	1	.038	.082	.783
Error(RM)	ESE	Linear	6.965	7	.995		
		Quadratic	.180	7	.026		
		Cubic	2.269	7	.324		
	ATE	Linear	3.975	7	.568		
		Quadratic	1.356	7	.194		
		Cubic	3.221	7	.460		

Tests of Between-Subjects Effects

Transformed Variable: Average

Source	Measure	Type III Sum of Squares	df	Mean Square	F	Sig.
Intercept	ESE	346.940	1	346.940	307.882	.000
	ATE	442.042	1	442.042	1184.289	.000

Prior_ent_exp	ESE	.022	1	.022	.019	.894
	ATE	.818	1	.818	2.191	.182
Error	ESE	7.888	7	1.127		
	ATE	2.613	7	.373		

Estimated Marginal Means

1. RM

Estimates

				95% Confidence Interval	
Measure	RM	Mean	Std. Error	Lower Bound	Upper Bound
ESE	1	4.028[a]	.234	3.474	4.582
	2	3.917[a]	.189	3.470	4.364
	3	3.694[a]	.239	3.130	4.259
	4	3.500[a]	.356	2.657	4.343
ATE	1	4.407[a]	.142	4.071	4.744
	2	4.519[a]	.128	4.215	4.822
	3	4.037[a]	.291	3.348	4.726
	4	3.778[a]	.236	3.220	4.335

a. Covariates appearing in the model are evaluated at the following values:
Prior Entrepreneurial Experience = .3333.

Pairwise Comparisons

Measure	(I) RM	(J) RM	Mean Difference (I-J)	Std. Error	Sig.[b]	95% Confidence Interval for Difference[b]	
						Lower Bound	Upper Bound
ESE	1	2	.111	.276	.699	-.541	.763
		3	.333	.308	.315	-.395	1.061
		4	.528	.474	.302	-.594	1.649
	2	1	-.111	.276	.699	-.763	.541
		3	.222	.261	.423	-.396	.840
		4	.417	.278	.178	-.241	1.074
	3	1	-.333	.308	.315	-1.061	.395
		2	-.222	.261	.423	-.840	.396
		4	.194	.237	.440	-.367	.756
	4	1	-.528	.474	.302	-1.649	.594
		2	-.417	.278	.178	-1.074	.241
		3	-.194	.237	.440	-.756	.367
ATE	1	2	-.111	.212	.616	-.613	.390
		3	.371	.334	.304	-.420	1.161
		4	.630	.331	.099	-.152	1.412
	2	1	.111	.212	.616	-.390	.613
		3	.482	.345	.205	-.334	1.298
		4	.741[*]	.268	.028	.106	1.375
	3	1	-.371	.334	.304	-1.161	.420
		2	-.482	.345	.205	-1.298	.334

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	4	.259	.293	.406	-.434	.952
4	1	-.630	.331	.099	-1.412	.152
	2	-.741*	.268	.028	-1.375	-.106
	3	-.259	.293	.406	-.952	.434

Based on estimated marginal means

*. The mean difference is significant at the .05 level.

b. Adjustment for multiple comparisons: Least Significant Difference (equivalent to no adjustments).

Multivariate Tests

	Value	F	Hypothesis df	Error df	Sig.
Pillai's trace	.821	1.531[a]	6.000	2.000	.446
Wilks' lambda	.179	1.531[a]	6.000	2.000	.446
Hotelling's trace	4.592	1.531[a]	6.000	2.000	.446
Roy's largest root	4.592	1.531[a]	6.000	2.000	.446

Each F tests the multivariate effect of RM. These tests are based on the linearly independent pairwise comparisons among the estimated marginal means.

a. Exact statistic

2. Grand Mean

Measure	Mean	Std. Error	95% Confidence Interval	
			Lower Bound	Upper Bound
ESE	3.785[a]	.177	3.366	4.203
ATE	4.185[a]	.102	3.944	4.426

a. Covariates appearing in the model are evaluated at the following values: Prior Entrepreneurial Experience = .3333.

Profile Plots

ESE
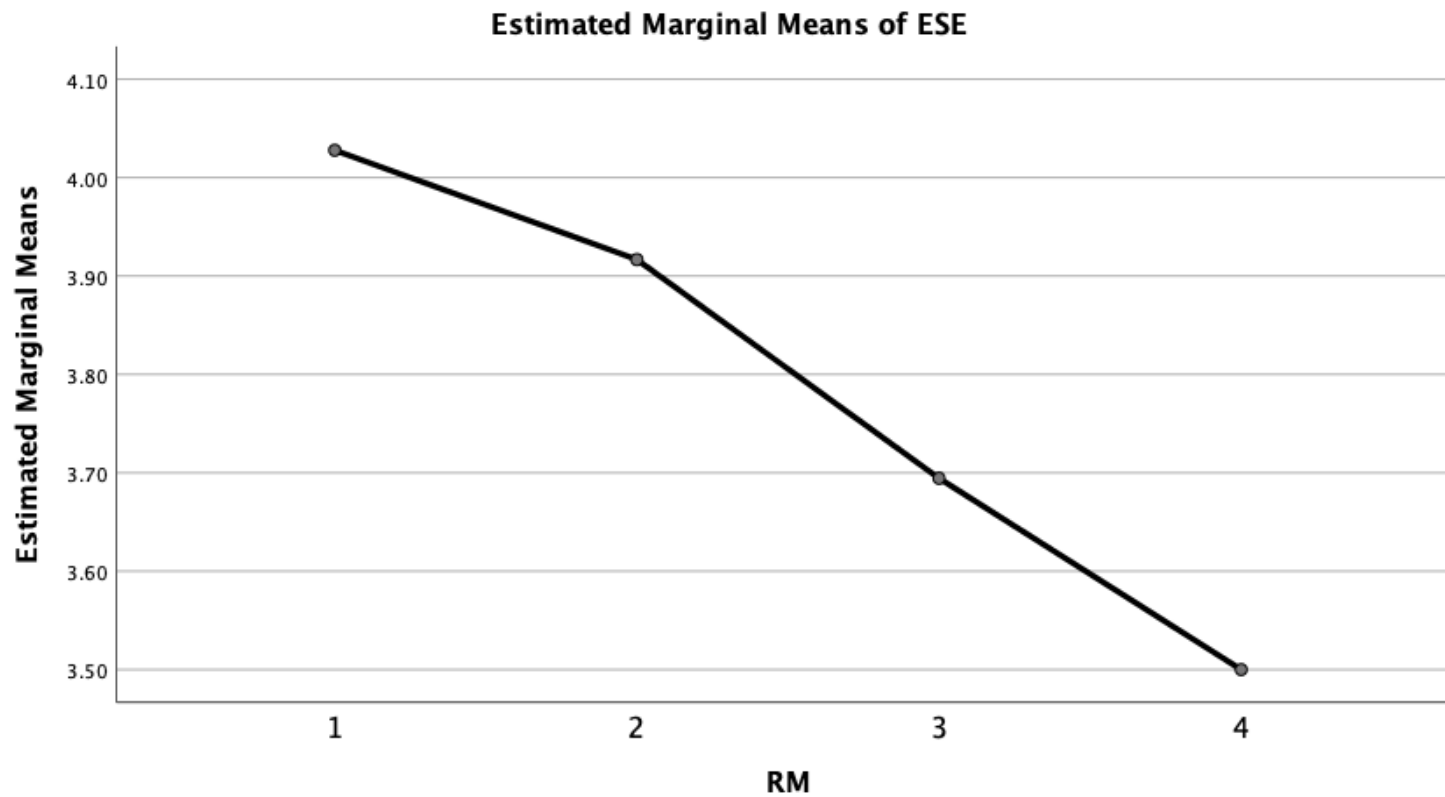
Covariates appearing in the model are evaluated at the following values: Prior Entrepreneurial Experience = .3333

ATE

Estimated Marginal Means of ATE

Covariates appearing in the model are evaluated at the following values: Prior Entrepreneurial Experience = .3333

Appendix IV-G   DV Model – Wealth-seeking Entrepreneurs

Within-Subjects Factors

Measure	RM	Dependent Variable
ESE	1	ESE_a
	2	ESE_b
	3	ESE_c
	4	ESE_d
ATE	1	ATE_a
	2	ATE_b
	3	ATE_c
	4	ATE_d

Multivariate Tests[a]

Effect			Value	F	Hypothesis df	Error df	
Between Subjects	Intercept	Pillai's Trace	.978	400.665[b]	2.000	18.000	
		Wilks' Lambda	.022	400.665[b]	2.000	18.000	
		Hotelling's Trace	44.518	400.665[b]	2.000	18.000	
		Roy's Largest Root	44.518	400.665[b]	2.000	18.000	
	Prior_ent_exp	Pillai's Trace	.251	3.015[b]	2.000	18.000	
		Wilks' Lambda	.749	3.015[b]	2.000	18.000	
		Hotelling's Trace	.335	3.015[b]	2.000	18.000	

Within Subjects							
		Roy's Largest Root	.335	3.015[b]	2.000	18.000	
Within Subjects	RM	Pillai's Trace	.570	3.092[b]	6.000	14.000	
		Wilks' Lambda	.430	3.092[b]	6.000	14.000	
		Hotelling's Trace	1.325	3.092[b]	6.000	14.000	
		Roy's Largest Root	1.325	3.092[b]	6.000	14.000	
	RM * Prior_ent_exp	Pillai's Trace	.347	1.240[b]	6.000	14.000	
		Wilks' Lambda	.653	1.240[b]	6.000	14.000	
		Hotelling's Trace	.531	1.240[b]	6.000	14.000	
		Roy's Largest Root	.531	1.240[b]	6.000	14.000	

Mauchly's Test of Sphericity[a]

Within Subjects Effect	Measure	Mauchly's W	Approx. Chi-Square	df	Sig.	Epsilon[b] Greenhouse-Geisser	Huynh-Feldt	
RM	ESE	.425	15.167	5	.010	.740	.886	
	ATE	.487	12.751	5	.026	.760	.914	

Tests of Within-Subjects Effects

Multivariate[a,b]

Within Subjects Effect		Value	F	Hypothesis df	Error df	Sig.
RM	Pillai's Trace	.245	2.648	6.000	114.000	.019
	Wilks' Lambda	.763	2.698[c]	6.000	112.000	.017
	Hotelling's Trace	.300	2.746	6.000	110.000	.016
	Roy's Largest Root	.259	4.926[d]	3.000	57.000	.004
RM * Prior_ent_exp	Pillai's Trace	.086	.853	6.000	114.000	.532
	Wilks' Lambda	.916	.842[c]	6.000	112.000	.540
	Hotelling's Trace	.091	.830	6.000	110.000	.549
	Roy's Largest Root	.065	1.236[d]	3.000	57.000	.305

a. Design: Intercept + Prior_ent_exp
 Within Subjects Design: RM

b. Tests are based on averaged variables.

c. Exact statistic

d. The statistic is an upper bound on F that yields a lower bound on the significance level.

Univariate Tests

Source	Measure		Type III Sum of Squares	df	Mean Square	F	Sig.
RM	ESE	Sphericity Assumed	11.118	3	3.706	4.911	.004
		Greenhouse-Geisser	11.118	2.219	5.010	4.911	.010
		Huynh-Feldt	11.118	2.658	4.183	4.911	.006
		Lower-bound	11.118	1.000	11.118	4.911	.039
	ATE	Sphericity Assumed	4.357	3	1.452	2.489	.069

Source							
		Greenhouse-Geisser	4.357	2.279	1.912	2.489	.088
		Huynh-Feldt	4.357	2.742	1.589	2.489	.076
		Lower-bound	4.357	1.000	4.357	2.489	.131
RM * Prior_ent_exp	ESE	Sphericity Assumed	1.389	3	.463	.613	.609
		Greenhouse-Geisser	1.389	2.219	.626	.613	.563
		Huynh-Feldt	1.389	2.658	.522	.613	.590
		Lower-bound	1.389	1.000	1.389	.613	.443
	ATE	Sphericity Assumed	2.104	3	.701	1.202	.317
		Greenhouse-Geisser	2.104	2.279	.923	1.202	.314
		Huynh-Feldt	2.104	2.742	.767	1.202	.317
		Lower-bound	2.104	1.000	2.104	1.202	.287
Error(RM)	ESE	Sphericity Assumed	43.012	57	.755		
		Greenhouse-Geisser	43.012	42.164	1.020		
		Huynh-Feldt	43.012	50.500	.852		
		Lower-bound	43.012	19.000	2.264		
	ATE	Sphericity Assumed	33.254	57	.583		
		Greenhouse-Geisser	33.254	43.294	.768		
		Huynh-Feldt	33.254	52.099	.638		
		Lower-bound	33.254	19.000	1.750		

Tests of Within-Subjects Contrasts

Source	Measure	RM	Type III Sum of Squares	df	Mean Square	F	Sig.
RM	ESE	Linear	3.209	1	3.209	3.012	.099
		Quadratic	7.720	1	7.720	11.545	.003
		Cubic	.190	1	.190	.358	.556
	ATE	Linear	.133	1	.133	.187	.671
		Quadratic	3.517	1	3.517	4.191	.055
		Cubic	.706	1	.706	3.609	.073
RM * Prior_ent_exp	ESE	Linear	.673	1	.673	.632	.436
		Quadratic	.710	1	.710	1.062	.316
		Cubic	.005	1	.005	.010	.920
	ATE	Linear	1.716	1	1.716	2.400	.138
		Quadratic	.032	1	.032	.038	.847
		Cubic	.356	1	.356	1.819	.193
Error(RM)	ESE	Linear	20.243	19	1.065		
		Quadratic	12.705	19	.669		
		Cubic	10.063	19	.530		
	ATE	Linear	13.589	19	.715		
		Quadratic	15.947	19	.839		
		Cubic	3.719	19	.196		

Tests of Between-Subjects Effects

Transformed Variable: Average

Source	Measure	Type III Sum of Squares	df	Mean Square	F	Sig.
Intercept	ESE	582.762	1	582.762	382.674	.000
	ATE	904.167	1	904.167	810.209	.000

Prior_ent_exp	ESE	.969	1	.969	.636	.435
	ATE	3.075	1	3.075	2.755	.113
Error	ESE	28.934	19	1.523		
	ATE	21.203	19	1.116		

Estimated Marginal Means

1. Grand Mean

Measure	Mean	Std. Error	95% Confidence Interval	
			Lower Bound	Upper Bound
ESE	3.577[a]	.135	3.296	3.859
ATE	4.174[a]	.115	3.933	4.416

a. Covariates appearing in the model are evaluated at the following
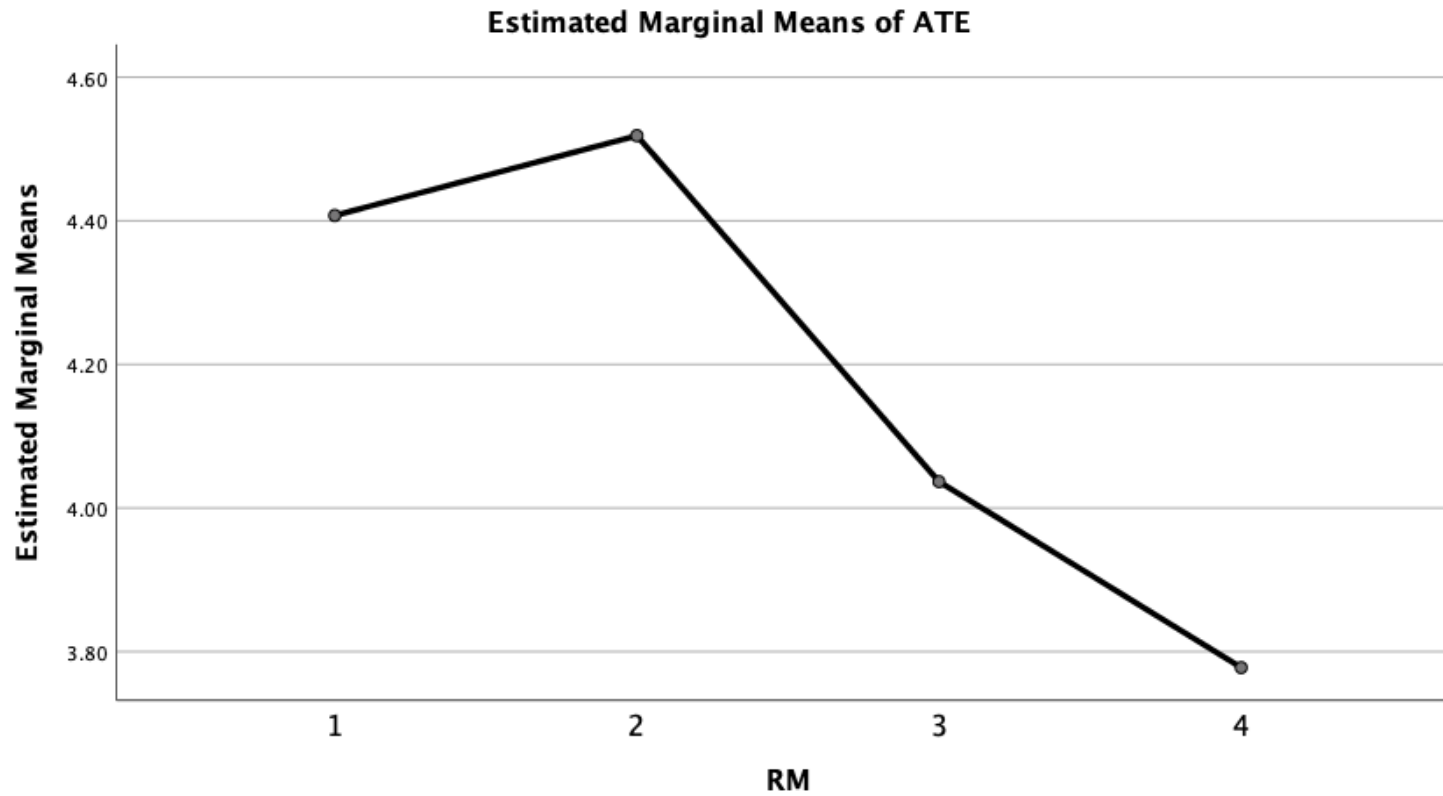values: Prior Entrepreneurial Experience = .4286.

2. RM

Estimates

Measure	RM	Mean	Std. Error	95% Confidence Interval	
				Lower Bound	Upper Bound
ESE	1	2.988[a]	.240	2.486	3.491
	2	3.893[a]	.191	3.493	4.292
	3	3.905[a]	.209	3.467	4.342
	4	3.524[a]	.206	3.092	3.956
ATE	1	3.937[a]	.241	3.431	4.442
	2	4.698[a]	.096	4.497	4.899
	3	4.158[a]	.142	3.860	4.456
	4	3.905[a]	.221	3.443	4.367

a. Covariates appearing in the model are evaluated at the following values:
Prior Entrepreneurial Experience = .4286.

Pairwise Comparisons

Measure	(I) RM	(J) RM	Mean Difference (I-J)	Std. Error	Sig.[b]	95% Confidence Interval for Difference[b]	
						Lower Bound	Upper Bound
ESE	1	2	-.905[*]	.274	.004	-1.478	-.331
		3	-.917[*]	.314	.009	-1.574	-.259
		4	-.536	.274	.066	-1.110	.038
	2	1	.905[*]	.274	.004	.331	1.478
		3	-.012	.277	.966	-.592	.568
		4	.369	.291	.219	-.239	.977
	3	1	.917[*]	.314	.009	.259	1.574
		2	.012	.277	.966	-.568	.592
		4	.381[*]	.145	.017	.077	.685
	4	1	.536	.274	.066	-.038	1.110
		2	-.369	.291	.219	-.977	.239

ATE	(I)	(J)	Mean Difference	Std. Error	Sig.	Lower Bound	Upper Bound
		3	-.381*	.145	.017	-.685	-.077
ATE	1	2	-.762*	.211	.002	-1.203	-.320
		3	-.222	.299	.468	-.848	.405
		4	.032	.243	.897	-.477	.540
	2	1	.762*	.211	.002	.320	1.203
		3	.540*	.167	.004	.192	.889
		4	.794*	.233	.003	.306	1.281
	3	1	.222	.299	.468	-.405	.848
		2	-.540*	.167	.004	-.889	-.192
		4	.253	.242	.308	-.252	.759
	4	1	-.032	.243	.897	-.540	.477
		2	-.794*	.233	.003	-1.281	-.306
		3	-.253	.242	.308	-.759	.252

Based on estimated marginal means

*. The mean difference is significant at the .05 level.

b. Adjustment for multiple comparisons: Least Significant Difference (equivalent to no adjustments).

Multivariate Tests

	Value	F	Hypothesis df	Error df	Sig.
Pillai's trace	.763	7.530[a]	6.000	14.000	.001
Wilks' lambda	.237	7.530[a]	6.000	14.000	.001
Hotelling's trace	3.227	7.530[a]	6.000	14.000	.001
Roy's largest root	3.227	7.530[a]	6.000	14.000	.001

Each F tests the multivariate effect of RM. These tests are based on the linearly independent pairwise comparisons among the estimated marginal means.

a. Exact statistic

Profile Plots

ESE

Estimated Marginal Means of ESE

Covariates appearing in the model are evaluated at the following values: Prior Entrepreneurial Experience = .4286

ATE

Estimated Marginal Means of ATE
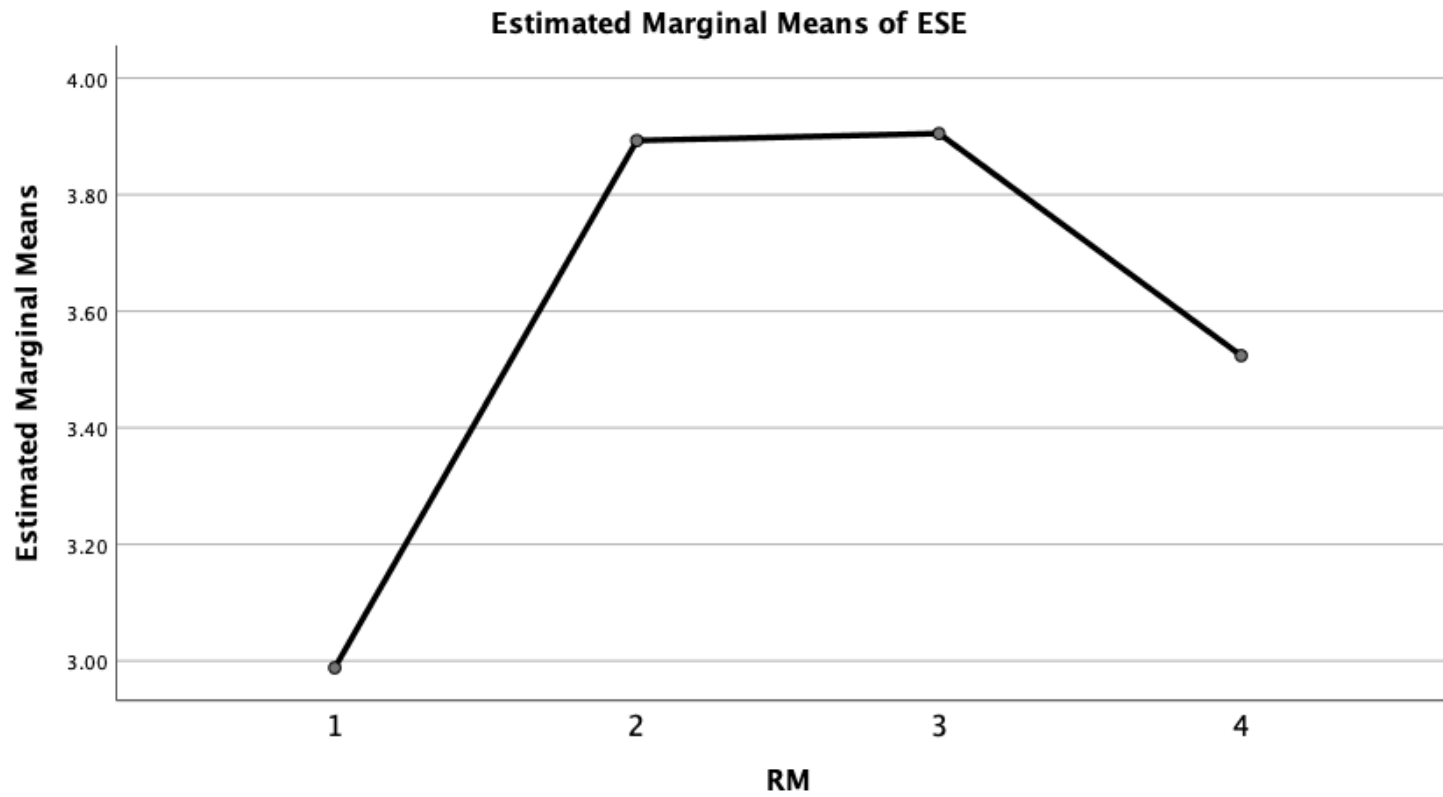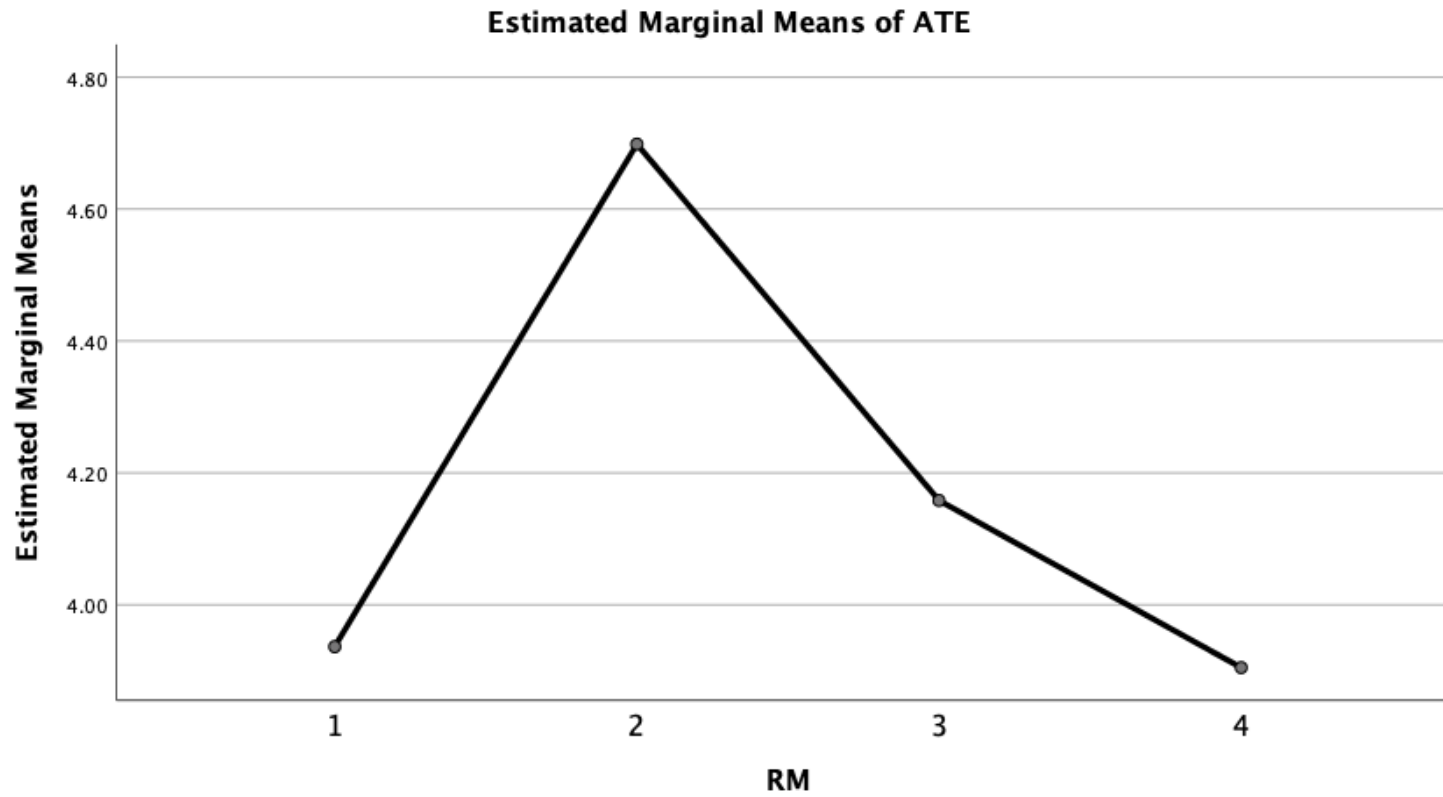
Covariates appearing in the model are evaluated at the following values: Prior Entrepreneurial Experience = .4286

Appendix IV-H   DV Model – Impact Purpose Entrepreneurs

Within-Subjects Factors

Measure	RM	Dependent Variable
ESE	1	ESE_a
	2	ESE_b
	3	ESE_c
	4	ESE_d
ATE	1	ATE_a
	2	ATE_b
	3	ATE_c
	4	ATE_d

Multivariate Tests[a]

Effect			Value	F	Hypothesis df	Error df	
Between Subjects	Intercept	Pillai's Trace	.982	1152.527[b]	2.000	42.000	
		Wilks' Lambda	.018	1152.527[b]	2.000	42.000	
		Hotelling's Trace	54.882	1152.527[b]	2.000	42.000	
		Roy's Largest Root	54.882	1152.527[b]	2.000	42.000	
	Prior_ent_exp	Pillai's Trace	.088	2.019[b]	2.000	42.000	
		Wilks' Lambda	.912	2.019[b]	2.000	42.000	
		Hotelling's Trace	.096	2.019[b]	2.000	42.000	

Within Subjects			Value	F	Hypothesis df	Error df	Sig.
Within Subjects		Roy's Largest Root	.096	2.019[b]	2.000	42.000	
	RM	Pillai's Trace	.346	3.344[b]	6.000	38.000	
		Wilks' Lambda	.654	3.344[b]	6.000	38.000	
		Hotelling's Trace	.528	3.344[b]	6.000	38.000	
		Roy's Largest Root	.528	3.344[b]	6.000	38.000	
	RM * Prior_ent_exp	Pillai's Trace	.142	1.049[b]	6.000	38.000	
		Wilks' Lambda	.858	1.049[b]	6.000	38.000	
		Hotelling's Trace	.166	1.049[b]	6.000	38.000	
		Roy's Largest Root	.166	1.049[b]	6.000	38.000	

Mauchly's Test of Sphericity[a]

Within Subjects Effect	Measure	Mauchly's W	Approx. Chi-Square	df	Sig.	Epsilon[b]	
						Greenhouse-Geisser	Huynh-Feldt
RM	ESE	.588	22.123	5	.000	.737	.796
	ATE	.844	7.090	5	.214	.915	1.000

Tests of Within-Subjects Effects

Multivariate[a,b]

Within Subjects Effect		Value	F	Hypothesis df	Error df	Sig.
RM	Pillai's Trace	.228	5.536	6.000	258.000	.000
	Wilks' Lambda	.778	5.703[c]	6.000	256.000	.000
	Hotelling's Trace	.277	5.867	6.000	254.000	.000
	Roy's Largest Root	.244	10.512[d]	3.000	129.000	.000
RM * Prior_ent_exp	Pillai's Trace	.032	.698	6.000	258.000	.652
	Wilks' Lambda	.968	.695[c]	6.000	256.000	.654
	Hotelling's Trace	.033	.692	6.000	254.000	.656
	Roy's Largest Root	.028	1.184[d]	3.000	129.000	.319

a. Design: Intercept + Prior_ent_exp
 Within Subjects Design: RM

b. Tests are based on averaged variables.

c. Exact statistic

d. The statistic is an upper bound on F that yields a lower bound on the significance level.

Univariate Tests

Source	Measure		Type III Sum of Squares	df	Mean Square	F	Sig.
RM	ESE	Sphericity Assumed	14.882	3	4.961	10.474	.000
		Greenhouse-Geisser	14.882	2.210	6.733	10.474	.000
		Huynh-Feldt	14.882	2.389	6.228	10.474	.000
		Lower-bound	14.882	1.000	14.882	10.474	.002
	ATE	Sphericity Assumed	3.034	3	1.011	3.360	.021

		Greenhouse-Geisser	3.034	2.745	1.105	3.360	.025
		Huynh-Feldt	3.034	3.000	1.011	3.360	.021
		Lower-bound	3.034	1.000	3.034	3.360	.074
RM * Prior_ent_exp	ESE	Sphericity Assumed	1.308	3	.436	.921	.433
		Greenhouse-Geisser	1.308	2.210	.592	.921	.410
		Huynh-Feldt	1.308	2.389	.548	.921	.416
		Lower-bound	1.308	1.000	1.308	.921	.343
	ATE	Sphericity Assumed	.888	3	.296	.983	.403
		Greenhouse-Geisser	.888	2.745	.323	.983	.398
		Huynh-Feldt	.888	3.000	.296	.983	.403
		Lower-bound	.888	1.000	.888	.983	.327
Error(RM)	ESE	Sphericity Assumed	61.094	129	.474		
		Greenhouse-Geisser	61.094	95.044	.643		
		Huynh-Feldt	61.094	102.746	.595		
		Lower-bound	61.094	43.000	1.421		
	ATE	Sphericity Assumed	38.833	129	.301		
		Greenhouse-Geisser	38.833	118.040	.329		
		Huynh-Feldt	38.833	129.000	.301		
		Lower-bound	38.833	43.000	.903		

Tests of Within-Subjects Contrasts

Source	Measure	RM	Type III Sum of Squares	df	Mean Square	F	Sig.
RM	ESE	Linear	5.400	1	5.400	10.945	.002
		Quadratic	9.481	1	9.481	16.195	.000
		Cubic	.000	1	.000	.001	.971
	ATE	Linear	.040	1	.040	.146	.705
		Quadratic	2.783	1	2.783	8.030	.007
		Cubic	.211	1	.211	.757	.389
RM * Prior_ent_exp	ESE	Linear	1.307	1	1.307	2.648	.111
		Quadratic	.001	1	.001	.002	.968
		Cubic	.001	1	.001	.002	.963
	ATE	Linear	.719	1	.719	2.592	.115
		Quadratic	.005	1	.005	.015	.904
		Cubic	.163	1	.163	.586	.448
Error(RM)	ESE	Linear	21.216	43	.493		
		Quadratic	25.175	43	.585		
		Cubic	14.703	43	.342		
	ATE	Linear	11.934	43	.278		
		Quadratic	14.903	43	.347		
		Cubic	11.996	43	.279		

Tests of Between-Subjects Effects

Transformed Variable: Average

Source	Measure	Type III Sum of Squares	df	Mean Square	F	Sig.
Intercept	ESE	1426.447	1	1426.447	1324.784	.000
	ATE	1942.288	1	1942.288	2078.902	.000

Prior_ent_exp	ESE	4.156	1	4.156	3.860	.056
	ATE	.209	1	.209	.223	.639
Error	ESE	46.300	43	1.077		
	ATE	40.174	43	.934		

Estimated Marginal Means

1. Grand Mean

Measure	Mean	Std. Error	95% Confidence Interval	
			Lower Bound	Upper Bound
ESE	3.758[a]	.077	3.602	3.914
ATE	4.269[a]	.072	4.123	4.414

a. Covariates appearing in the model are evaluated at the following values: Prior Entrepreneurial Experience = .4000.

2. RM

Estimates

Measure	RM	Mean	Std. Error	95% Confidence Interval	
				Lower Bound	Upper Bound
ESE	1	3.256[a]	.153	2.946	3.565
	2	3.989[a]	.105	3.776	4.201
	3	4.117[a]	.094	3.927	4.307
	4	3.672[a]	.109	3.452	3.893
ATE	1	4.178[a]	.099	3.978	4.377
	2	4.356[a]	.107	4.140	4.571
	3	4.511[a]	.076	4.358	4.664
	4	4.030[a]	.118	3.792	4.267

a. Covariates appearing in the model are evaluated at the following values:
Prior Entrepreneurial Experience = .4000.

Pairwise Comparisons

Measure	(I) RM	(J) RM	Mean Difference (I-J)	Std. Error	Sig.[b]	95% Confidence Interval for Difference[b]	
						Lower Bound	Upper Bound
ESE	1	2	-.733*	.182	.000	-1.099	-.367
		3	-.861*	.170	.000	-1.205	-.517
		4	-.417*	.160	.013	-.740	-.093
	2	1	.733*	.182	.000	.367	1.099
		3	-.128	.107	.238	-.343	.087
		4	.317*	.108	.005	.100	.534
	3	1	.861*	.170	.000	.517	1.205
		2	.128	.107	.238	-.087	.343
		4	.444*	.125	.001	.193	.696
	4	1	.417*	.160	.013	.093	.740
		2	-.317*	.108	.005	-.534	-.100

	(I)	(J)	Mean Difference (I-J)	Std. Error	Sig.	Lower Bound	Upper Bound
		3	-.444*	.125	.001	-.696	-.193
ATE	1	2	-.178	.128	.170	-.435	.079
		3	-.334*	.109	.004	-.554	-.113
		4	.148	.123	.235	-.100	.396
	2	1	.178	.128	.170	-.079	.435
		3	-.156	.098	.119	-.353	.042
		4	.326*	.110	.005	.104	.548
	3	1	.334*	.109	.004	.113	.554
		2	.156	.098	.119	-.042	.353
		4	.482*	.123	.000	.233	.731
	4	1	-.148	.123	.235	-.396	.100
		2	-.326*	.110	.005	-.548	-.104
		3	-.482*	.123	.000	-.731	-.233

Based on estimated marginal means

*. The mean difference is significant at the .05 level.

b. Adjustment for multiple comparisons: Least Significant Difference (equivalent to no adjustments).

Multivariate Tests

	Value	F	Hypothesis df	Error df	Sig.
Pillai's trace	.442	5.018[a]	6.000	38.000	.001
Wilks' lambda	.558	5.018[a]	6.000	38.000	.001
Hotelling's trace	.792	5.018[a]	6.000	38.000	.001
Roy's largest root	.792	5.018[a]	6.000	38.000	.001

Each F tests the multivariate effect of RM. These tests are based on the linearly independent pairwise comparisons among the estimated marginal means.

a. Exact statistic

Profile Plots

ESE

Estimated Marginal Means of ESE

Covariates appearing in the model are evaluated at the following values: Prior Entrepreneurial Experience = .4000

ATE

Estimated Marginal Means of ATE
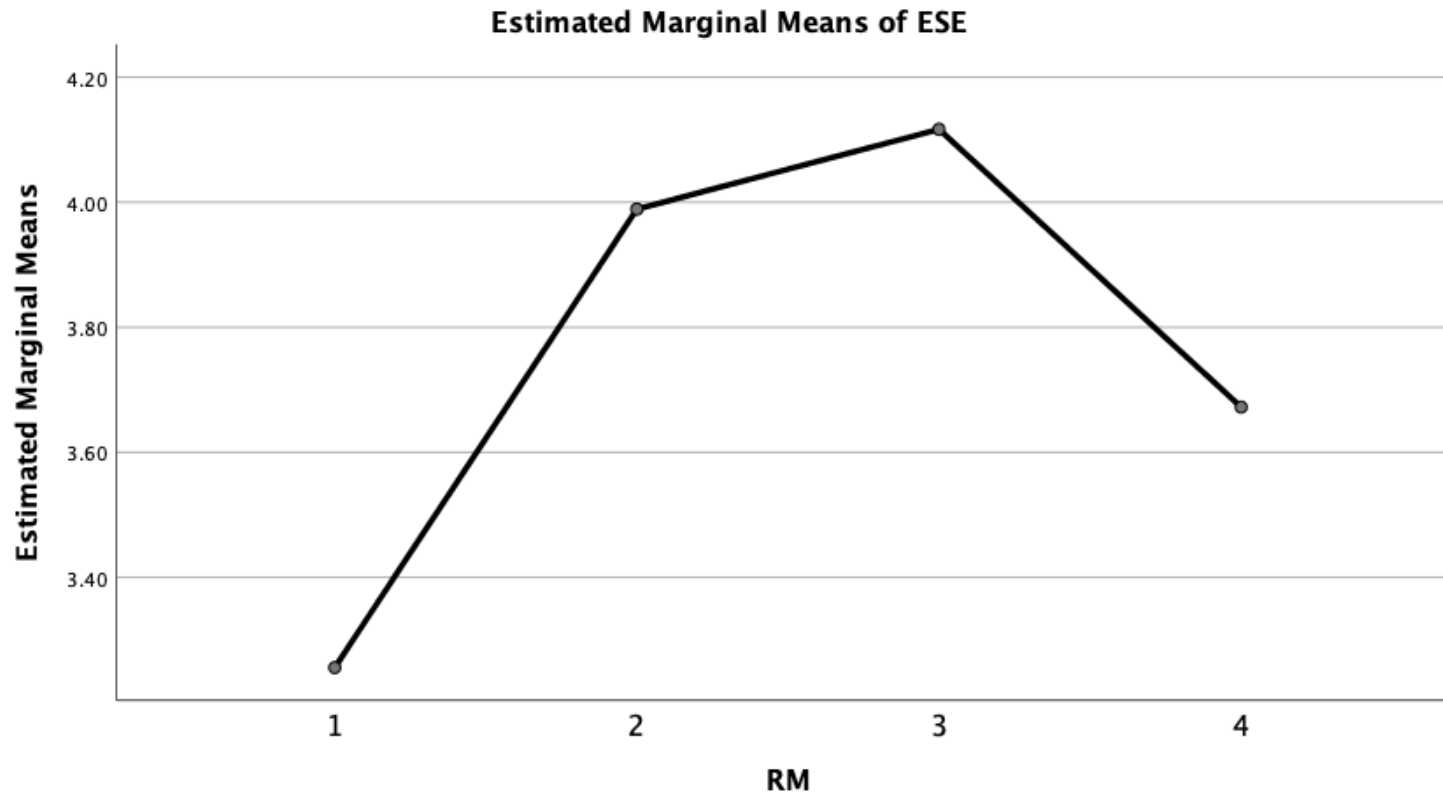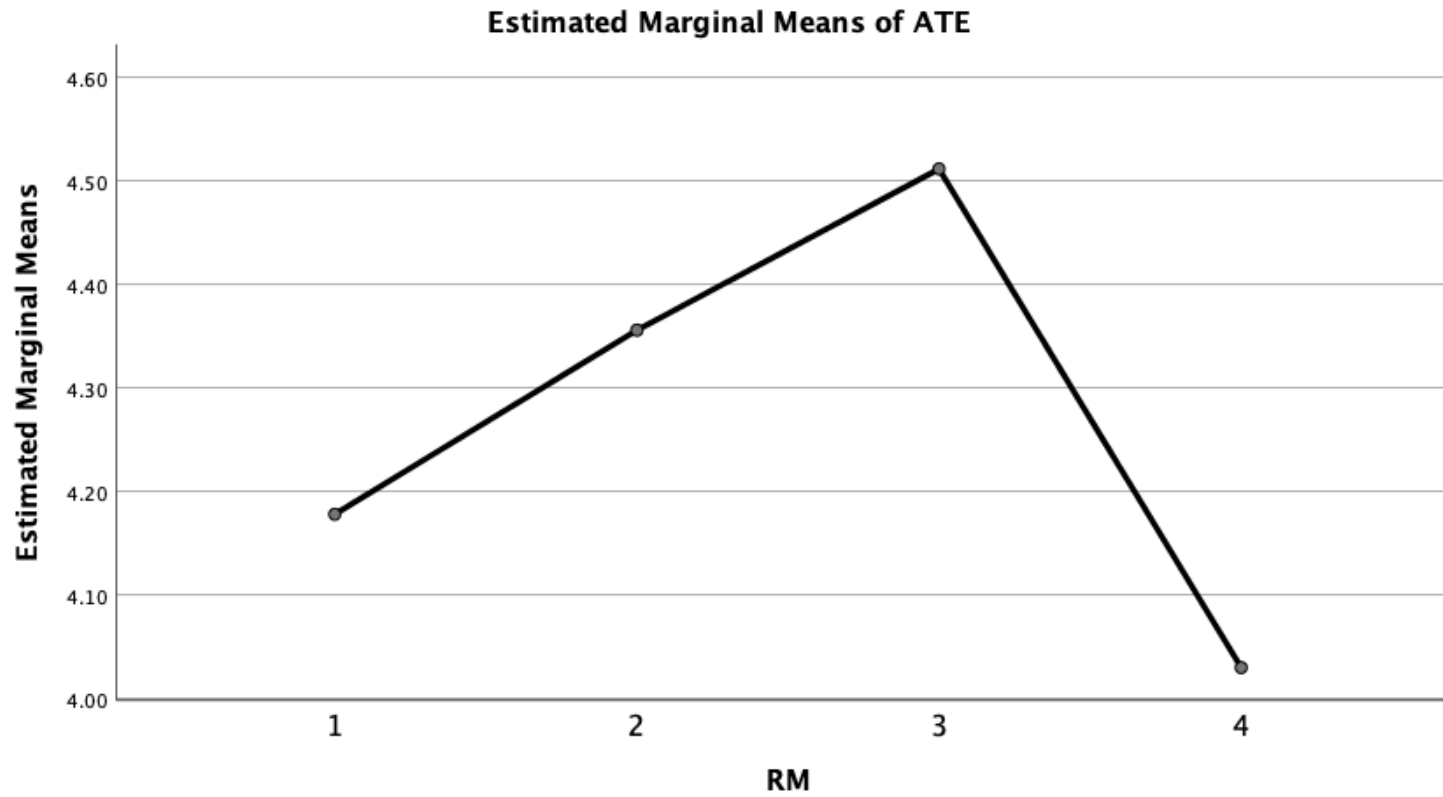
Covariates appearing in the model are evaluated at the following values: Prior Entrepreneurial Experience = .4000

Appendix IV-I   DV Model – Necessity-driven Entrepreneurs

Within-Subjects Factors

Measure	RM	Dependent Variable
ESE	1	ESE_a
	2	ESE_b
	3	ESE_c
	4	ESE_d
ATE	1	ATE_a
	2	ATE_b
	3	ATE_c
	4	ATE_d

Multivariate Tests[a]

Effect			Value	F	Hypothesis df	Error df	
Between Subjects	Intercept	Pillai's Trace	.999	2723.578[b]	2.000	3.000	
		Wilks' Lambda	.001	2723.578[b]	2.000	3.000	
		Hotelling's Trace	1815.719	2723.578[b]	2.000	3.000	
		Roy's Largest Root	1815.719	2723.578[b]	2.000	3.000	
	Prior_ent_exp	Pillai's Trace	.964	40.185[b]	2.000	3.000	
		Wilks' Lambda	.036	40.185[b]	2.000	3.000	
		Hotelling's Trace	26.790	40.185[b]	2.000	3.000	

Within Subjects	RM		Value	F	Hypothesis df	Error df	Sig.
		Roy's Largest Root	26.790	40.185[b]	2.000	3.000	
Within Subjects	RM	Pillai's Trace	.[c]	.	.	.	
		Wilks' Lambda	.[c]	.	.	.	
		Hotelling's Trace	.[c]	.	.	.	
		Roy's Largest Root	.[c]	.	.	.	
	RM * Prior_ent_exp	Pillai's Trace	.[c]	.	.	.	
		Wilks' Lambda	.[c]	.	.	.	
		Hotelling's Trace	.[c]	.	.	.	
		Roy's Largest Root	.[c]	.	.	.	

Mauchly's Test of Sphericity[a]

Within Subjects Effect	Measure	Mauchly's W	Approx. Chi-Square	df	Sig.	Epsilon[b]	
						Greenhouse-Geisser	Huynh-Feldt
RM	ESE	.160	4.992	5	.443	.611	1.000
	ATE	.940	.169	5	.999	.964	1.000

Tests of Within-Subjects Effects

Multivariate[a,b]

Within Subjects Effect		Value	F	Hypothesis df	Error df	Sig.
RM	Pillai's Trace	.730	2.300	6.000	24.000	.068
	Wilks' Lambda	.355	2.490[c]	6.000	22.000	.054
	Hotelling's Trace	1.580	2.634	6.000	20.000	.048
	Roy's Largest Root	1.411	5.642[d]	3.000	12.000	.012
RM * Prior_ent_exp	Pillai's Trace	.289	.675	6.000	24.000	.671
	Wilks' Lambda	.729	.629[c]	6.000	22.000	.706
	Hotelling's Trace	.349	.581	6.000	20.000	.741
	Roy's Largest Root	.255	1.021[d]	3.000	12.000	.418

a. Design: Intercept + Prior_ent_exp
 Within Subjects Design: RM

b. Tests are based on averaged variables.

c. Exact statistic

d. The statistic is an upper bound on F that yields a lower bound on the significance level.

Univariate Tests

Source	Measure		Type III Sum of Squares	df	Mean Square	F	Sig.
RM	ESE	Sphericity Assumed	10.684	3	3.561	4.739	.021
		Greenhouse-Geisser	10.684	1.834	5.824	4.739	.050
		Huynh-Feldt	10.684	3.000	3.561	4.739	.021
		Lower-bound	10.684	1.000	10.684	4.739	.095
	ATE	Sphericity Assumed	5.880	3	1.960	4.996	.018

				df		F	Sig.
		Greenhouse-Geisser	5.880	2.893	2.032	4.996	.019
		Huynh-Feldt	5.880	3.000	1.960	4.996	.018
		Lower-bound	5.880	1.000	5.880	4.996	.089
RM * Prior_ent_exp	ESE	Sphericity Assumed	1.012	3	.337	.449	.723
		Greenhouse-Geisser	1.012	1.834	.552	.449	.639
		Huynh-Feldt	1.012	3.000	.337	.449	.723
		Lower-bound	1.012	1.000	1.012	.449	.539
	ATE	Sphericity Assumed	.591	3	.197	.502	.688
		Greenhouse-Geisser	.591	2.893	.204	.502	.682
		Huynh-Feldt	.591	3.000	.197	.502	.688
		Lower-bound	.591	1.000	.591	.502	.518
Error(RM)	ESE	Sphericity Assumed	9.019	12	.752		
		Greenhouse-Geisser	9.019	7.338	1.229		
		Huynh-Feldt	9.019	12.000	.752		
		Lower-bound	9.019	4.000	2.255		
	ATE	Sphericity Assumed	4.708	12	.392		
		Greenhouse-Geisser	4.708	11.574	.407		
		Huynh-Feldt	4.708	12.000	.392		
		Lower-bound	4.708	4.000	1.177		

Tests of Within-Subjects Contrasts

Source	Measure	RM	Type III Sum of Squares	df	Mean Square	F	Sig.
RM	ESE	Linear	3.901	1	3.901	6.188	.068
		Quadratic	.153	1	.153	.243	.648
		Cubic	6.631	1	6.631	6.666	.061
	ATE	Linear	2.057	1	2.057	5.659	.076
		Quadratic	.943	1	.943	2.550	.186
		Cubic	2.880	1	2.880	6.492	.063
RM * Prior_ent_exp	ESE	Linear	.570	1	.570	.905	.395
		Quadratic	.408	1	.408	.648	.466
		Cubic	.034	1	.034	.034	.863
	ATE	Linear	.012	1	.012	.033	.864
		Quadratic	.003	1	.003	.009	.928
		Cubic	.576	1	.576	1.298	.318
Error(RM)	ESE	Linear	2.521	4	.630		
		Quadratic	2.519	4	.630		
		Cubic	3.979	4	.995		
	ATE	Linear	1.454	4	.364		
		Quadratic	1.480	4	.370		
		Cubic	1.774	4	.444		

Tests of Between-Subjects Effects

Transformed Variable: Average

Source	Measure	Type III Sum of Squares	df	Mean Square	F	Sig.
Intercept	ESE	229.503	1	229.503	246.034	.000
	ATE	344.533	1	344.533	7261.480	.000

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Prior_ent_exp	ESE	3.008	1	3.008	3.225	.147
	ATE	5.081	1	5.081	107.096	.000
Error	ESE	3.731	4	.933		
	ATE	.190	4	.047		

Estimated Marginal Means

1. Grand Mean

Measure	Mean	Std. Error	95% Confidence Interval	
			Lower Bound	Upper Bound
ESE	3.229[a]	.197	2.682	3.777
ATE	3.945[a]	.044	3.821	4.068

a. Covariates appearing in the model are evaluated at the following
values: Prior Entrepreneurial Experience = .1667.

2. RM

Estimates

Measure	RM	Mean	Std. Error	95% Confidence Interval	
				Lower Bound	Upper Bound
ESE	1	2.333[a]	.453	1.076	3.591
	2	3.958[a]	.183	3.451	4.465
	3	2.792[a]	.303	1.951	3.632
	4	3.833[a]	.448	2.588	5.078
ATE	1	3.167[a]	.255	2.460	3.874
	2	4.444[a]	.177	3.952	4.937
	3	3.890[a]	.255	3.181	4.599
	4	4.278[a]	.206	3.705	4.851

a. Covariates appearing in the model are evaluated at the following values:
Prior Entrepreneurial Experience = .1667.

Pairwise Comparisons

Measure	(I) RM	(J) RM	Mean Difference (I-J)	Std. Error	Sig.[b]	95% Confidence Interval for Difference[b]	
						Lower Bound	Upper Bound
ESE	1	2	-1.625[*]	.562	.044	-3.185	-.065
		3	-.458	.264	.158	-1.192	.275
		4	-1.500	.597	.066	-3.157	.157
	2	1	1.625[*]	.562	.044	.065	3.185
		3	1.167	.431	.054	-.029	2.362
		4	.125	.443	.792	-1.104	1.354
	3	1	.458	.264	.158	-.275	1.192
		2	-1.167	.431	.054	-2.362	.029
		4	-1.042	.617	.166	-2.754	.670
	4	1	1.500	.597	.066	-.157	3.157
		2	-.125	.443	.792	-1.354	1.104

			Mean Difference	Std. Error	Sig.	Lower Bound	Upper Bound
		3	1.042	.617	.166	-.670	2.754
ATE	1	2	-1.278*	.378	.028	-2.326	-.229
		3	-.723	.386	.134	-1.795	.348
		4	-1.111*	.355	.035	-2.096	-.126
	2	1	1.278*	.378	.028	.229	2.326
		3	.554	.378	.217	-.496	1.605
		4	.167	.313	.623	-.703	1.036
	3	1	.723	.386	.134	-.348	1.795
		2	-.554	.378	.217	-1.605	.496
		4	-.388	.355	.336	-1.373	.598
	4	1	1.111*	.355	.035	.126	2.096
		2	-.167	.313	.623	-1.036	.703
		3	.388	.355	.336	-.598	1.373

Based on estimated marginal means

*. The mean difference is significant at the .05 level.

b. Adjustment for multiple comparisons: Least Significant Difference (equivalent to no adjustments).
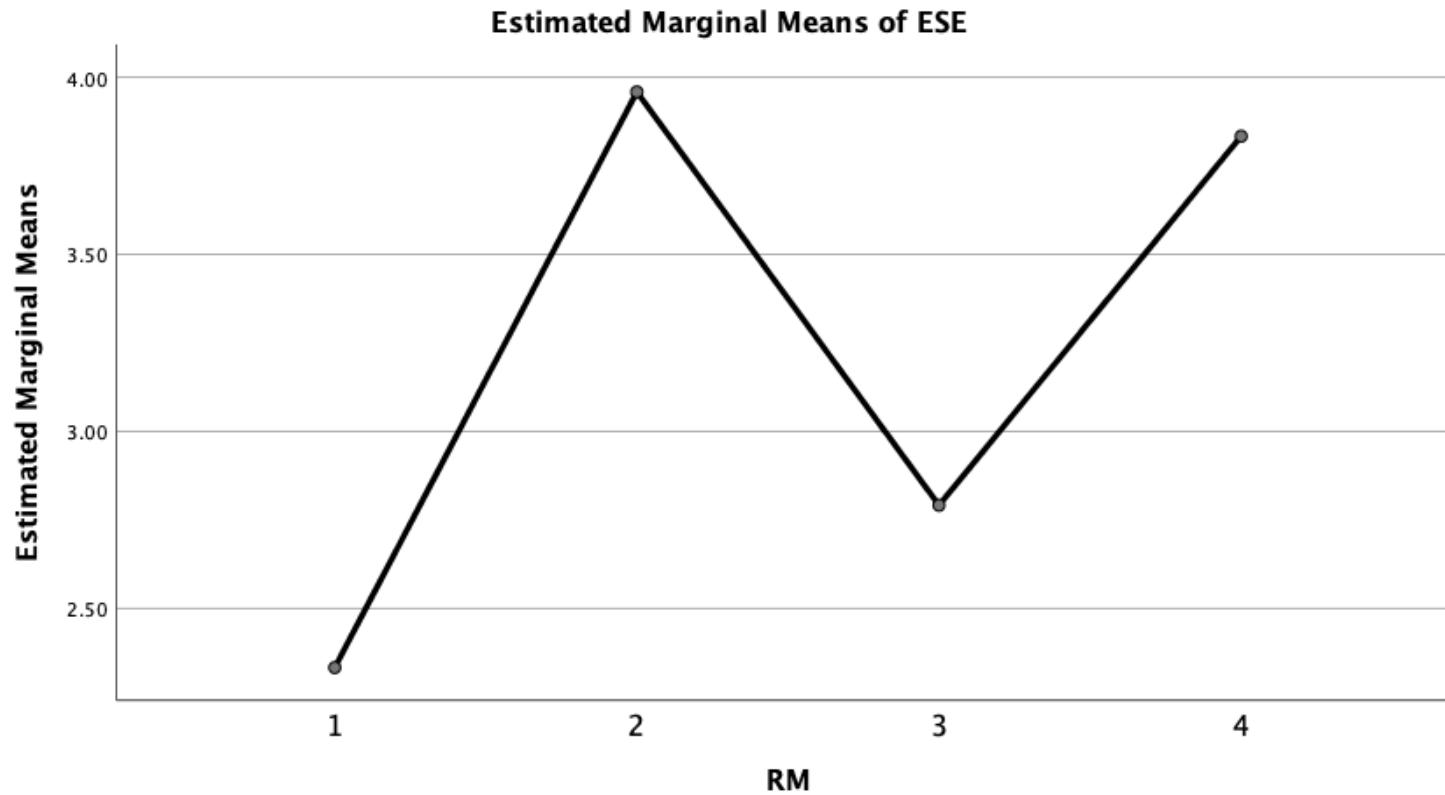
Multivariate Tests

	Value	F	Hypothesis df	Error df	Sig.
Pillai's trace	.800	1.003[a]	4.000	1.000	.626
Wilks' lambda	.200	1.003[a]	4.000	1.000	.626
Hotelling's trace	4.011	1.003[a]	4.000	1.000	.626
Roy's largest root	4.011	1.003[a]	4.000	1.000	.626

Each F tests the multivariate effect of RM. These tests are based on the linearly
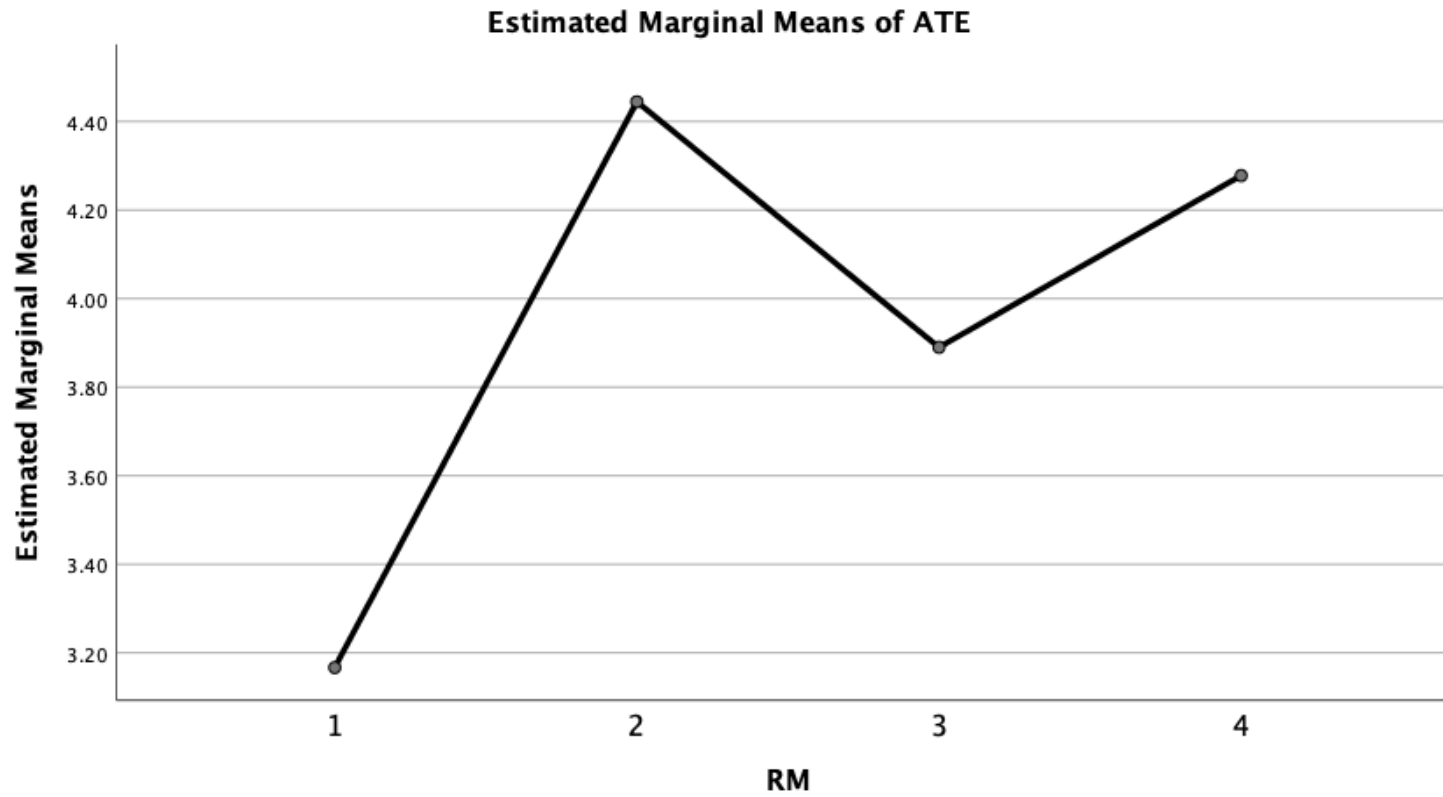independent pairwise comparisons among the estimated marginal means.

a. Exact statistic

Profile Plots

ESE

Estimated Marginal Means of ESE

Covariates appearing in the model are evaluated at the following values: Prior Entrepreneurial Experience = .1667

ATE

Estimated Marginal Means of ATE

Covariates appearing in the model are evaluated at the following values: Prior Entrepreneurial Experience = .1667