School of Management and Marketing

Who Wants to be a Social Entrepreneur? Modelling Antecedents that Matter in Social Entrepreneurial Intention

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DECLARATION

To the best of my knowledge and belief, this thesis contains no material previously published by any other person except where due acknowledgement has been made.

This thesis contains no material which has been accepted for the award of any other degree or diploma in any university.

The research presented and reported in this thesis was conducted in accordance with the National Health and Medical Research Council National Statement on Ethical Conduct in Human Research (2007) (updated March 2014). The proposed research study received human research ethics approval from the Curtin University Human Research Ethics Committee (EC00262), Approval Number – HRE2018-0775.

Signature:

Date: 25 February 2022

DEDICATION

This thesis is dedicated to my loving parents, my father Sqn. Ldr. Mahmood Iqbal (Retd) and my mother Syeda Sharifa Akber. You are the biggest inspiration behind my PhD in social entrepreneurship. You have been my therapists, healers and biggest supporters for life. I thank you for providing me with the best that life could offer. I love you.

ABSTRACT

Research demand and empirical interest in social entrepreneurial intention have grown significantly in the last decade leading to several research investigations. These studies mostly focus on individual-level antecedents. Even though attention has been given to individual-level antecedents, possible interrelationships between these antecedents have received only limited focus. In the context of social entrepreneurial intention, very few studies have combined both individual- and institutional-level antecedents and even fewer studies have tested moderating effects. Accordingly, this research aims to identify the relevant institutional- and individual-level antecedents to determine social entrepreneurial intention in the context of Bangladesh. The three main objectives of this research are: (1) to identify the relationship between institutional- and individual-level antecedents that impact on social entrepreneurial intention; (2) to investigate the interrelationships between individual-level constructs that impact on social entrepreneurial intention; and (3) to explore the moderating effects of prior experience and age as they impact on the relationship between individual-level antecedents and social entrepreneurial intention.

The proposed conceptual model is derived from this study's extensive review of the literature on social entrepreneurial intention (SEI). It is based on two prominent theories: the three pillars of institutions (TPI) framework and the Mair Noboa model (MNM). This research integrates the TPI framework and the MNM to address the knowledge gap that neither theory on its own could independently fill. Primarily, the TPI framework is applied to represent institutional-level antecedents. The constructs of the TPI framework are regulatory institutional environment (REG), normative institutional environment (NORM) and cognitive institutional environment (COG). The MNM is applied to represent individual-level antecedents. These MNM constructs are moral obligation (MO), empathy (EMP), perceived social support (PSS) and social entrepreneurial self-efficacy (SESE). Based on the literature review, 10 hypotheses were developed, proposing two direct relationships, six mediating relationships and two moderating relationships.

The conceptual model proposed REG, NORM and COG as the direct and indirect antecedents of SEI through the mediation of MO, EMP, PSS and SESE. The model also proposed MO as the antecedent to SEI directly and indirectly through the mediation of EMP, PSS and SESE. Similarly, EMP is proposed as the direct and indirect antecedent to SEI through the mediation of PSS and SESE. Likewise, PSS is proposed as the direct and indirect antecedent to SEI through the mediation of SESE. Moreover, prior experience and age were proposed as the moderators impacting on the relationship between SEI and all MNM antecedents.

Due to limited research on SEI in Bangladesh, prior to the main study, a pilot study was conducted to collect data with quantitative methods employed. The pilot study findings were insightful and indicated a few discrepancies, such as heavy cross-loadings between MO, EMP, SESE and SEI items. The questionnaire was subsequently revised, with several items added to the main study's questionnaire. In the main study, a data set of 412 valid responses was received from students across 12 universities in Bangladesh. Data analysis was carried out based on the covariance-based structural equation modelling (SEM) technique to confirm the hypotheses. The final measurement and structural models met all the requirements for reliability, model fit, convergent validity and discriminant validity. The proposed hypotheses were tested based on direct relationships, mediating effects and moderating effects. The study's findings suggest that REG is a direct and indirect antecedent to SEI through the mediation of PSS and SESE. Likewise, the findings suggest that COG is the direct and indirect antecedent to SEI through the mediation of SESE and MO. However, NORM positively affects SEI only indirectly through the mediation of PSS and MO. The findings also indicate that MO positively affects SEI only through the mediation of EMP, PSS and SESE. Similarly, EMP positively affects SEI only through the mediation of SESE. Furthermore, PSS acts as a direct and indirect antecedent to SEI through the mediation of SESE. Meanwhile, age strengthens or moderates the relationship between SESE and SEI, unlike the non-significant moderating influence of prior experience.

These research findings offer key theoretical, methodological and practical implications to advance the knowledge on social entrepreneurship. They also extend the SEI literature by addressing the gap in the knowledge on the combined effects of institutional- and individual-level antecedents. To the best of the researcher's knowledge, this study's model is the first to integrate the MNM and the TPI framework. In doing so, this research extends the antecedents of both the TPI framework and the MNM by providing perspectives on the direct and indirect relationships between the constructs. The interrelationships between the MNM constructs also offer unique perspectives on the role and impact of these individual-level antecedents. These research findings are derived from multi-step mediation analyses which, to date, have received little attention in the SEI and methodological literature. This research, through its finding on the positive effects of REG, has identified the important role played by policy makers and interested governmental organisations in boosting social entrepreneurial behaviour. Similarly, the positive effects of COG imply that interested governmental and non-governmental organisations, venture capitalists, incubators, accelerators and education providers need to promote knowledge and expertise to build and manage social enterprises. Moreover, based on the positive indirect effects of NORM, support organisations need to build positive mindsets towards, and admiration for, the overall concept of social entrepreneurship in Bangladesh. Similarly, interested support organisations need to foster MO as it has the strongest influence on both institutional- and individual-level antecedents. This study has limitations regarding its research methods, scope and data collection. Future research could apply mixed methodologies to gain more insight on this proposed model. Additionally, future research needs to broaden the scope to developing and developed countries to validate this dynamic model.

Keywords: social entrepreneurial intention, regulatory institutional environment, normative institutional environment, cognitive institutional environment, moral obligation, empathy, perceived social support, social entrepreneurial self-efficacy, prior experience, age, three pillars of institutions framework, the Mair Noboa model.

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ABBREVIATIONS

β	standardised coefficient
AGFI	Adjusted Goodness-of-Fit Index
AMOS	analysis of a moment structures
AVE	average variance extracted
BC	bias-corrected
BIDS	Bangladesh Institute of Development Studies
BRAC	Building Resources across Communities (formerly Bangladesh Rural Advancement Committee)
BU	BRAC University
BUP	Bangladesh University of Professionals
CB-SEM	covariance-based structural equation modelling
CFA	confirmatory factor analysis
CFI	Comparative Fit Index
CI	confidence interval
CIA	Central Intelligence Agency
CIPS	Country Institutional Profile Scale
COG	cognitive institutional environment
CoU	Comilla University
CR	composite reliability
CR	critical ratio
CU	Chittagong University
df	degrees of freedom
DIU	Daffodil International University
DU	Dhaka University
EFA	exploratory factor analysis
EMP	empathy
EWU	East West University
GEM	Global Entrepreneurship Monitor
GFI	Goodness-of-Fit Index
HDR	higher degree by research
HTMT	heterotrait–monotrait
IMF	International Monetary Fund
JU	Jahangirnagar University
KMO	Kaiser–Meyer–Olkin
MaxR (H)	McDonald Construct Reliability
MIST	Military Institute Science and Technology
ML	maximum-likelihood
MNM	Mair Noboa model
MO	moral obligation
MOOC	massive online open course
MSV	maximum shared variance

NFI	Normed Fit Index
NGO	non-governmental organisation
NNFI	Non-Normed Fit Index
NORM	normative institutional environment
NSU	North South University
NU	Northern University
PCA	principal component analysis
PO	promax oblique
PriorExp	prior experience
PSS	perceived social support
R^2	coefficient of determination
REG	regulatory institutional environment
RMSEA	root mean square error of approximation
SDGs	Sustainable Development Goals
SE	social entrepreneurship
SEAS	Social Entrepreneurial Antecedents Scale
SEE	Shapero's entrepreneurial event
SEI	social entrepreneurial intention
SEM	structural equation modelling
SESE	social entrepreneurial self-efficacy
SMEs	small and medium-sized enterprises
SPSS	IBM SPSS Statistics (was Statistical Package for the Social Sciences)
SRMR	standardised root mean squared residual
SUB	Southern University Bangladesh
THE	Times Higher Education
TLI	Tucker–Lewis Index
TPB	theory of planned behaviour
TPI	three pillars of institutions (theory/framework)
TRA	theory of reasoned action
UIU	United International University
UK	United Kingdom
ULAB	University of Liberal Arts Bangladesh
UNISA	University of South Asia
US/USA	United States/United States of America
VO	Varimax Oblique
χ^2	chi-square
χ^2/df	chi-square/degrees of freedom

1. INTRODUCTION

1.1 INTRODUCTION TO THE CHAPTER

This chapter presents the background and the rationale for selecting social entrepreneurial intention (SEI) for this doctoral study and thesis. This section begins by narrating the overview of the research study, followed by a discussion on the background of social entrepreneurship and its definitions by researchers over the years. The foundation of intention and SEI is next discussed to validate the topic of this study. A step-by-step rationale of the research problem and the gap in the literature are then introduced. Based on the rationale of the research problem, the research questions and objectives are identified. The chapter then highlights the potential contribution that this research aims to offer. The context of Bangladesh with its current and potential social entrepreneurial activities is then discussed. The chapter concludes with the presentation of the thesis structure to provide a snapshot of the overall process.

1.2 OVERVIEW OF THE RESEARCH STUDY

Social entrepreneurship (SE) has the distinct combined features of performing philanthropic activities and generating revenue. Campos et al. (2020) and Hockerts (2017) defined social entrepreneurship as a venture that generates income to accomplish social purposes. Thus, social entrepreneurship tends to play a vital role in attaining social transformation by developing sustainable solutions (Miller et al., 2012a; Tracey & Phillips, 2007). Although interest in social entrepreneurship is growing, it faces many challenges; for example, maintaining the balance between economic and social value commonalities and conflicts in differentiating social entrepreneurship from a commercial enterprise or a non-governmental organisation (NGO) (Dacin et al., 2011).

Institutional voids (Mair & Martí, 2006) or/and perceived market failure (McMullen, 2011) tend to trigger the emergence of social enterprises in developing countries. In certain contexts, lack of governmental support can act as a trigger to the development of social enterprises. Therefore, the institutional context tends to have a significant impact on the development of social entrepreneurship. Additionally, Miller et al. (2012b) emphasise the intrinsic satisfaction of following heart and head in developing social enterprises. Thus, individual factors are essential, impacting on the intrinsic

satisfaction of becoming a social entrepreneur. According to Saebi, Foss and Linder (2019), social entrepreneurship is inherently a multi-level phenomenon. Hence, this research focuses on identifying the relevant institutional and individual antecedents and the potential role they play in an individual becoming a social entrepreneur.

Social entrepreneurial intention (SEI) is a motivational factor influencing an individual's behaviour to become a social entrepreneur (Tan et al., 2020). It is still considered to be a budding field of study (Ahuja et al., 2019; Tan et al., 2020). Empirical studies on SEI are dominated to date by those conducted in developed countries. Sousa-Filho et al. (2020) emphasised the difference in the influence on SEI between developed and developing countries due to the institutional context. This research aims to examine the multi-level antecedents for SEI in the context of a developing country, Bangladesh.

1.3 BACKGROUND ON SOCIAL ENTREPRENEURSHIP

Social entrepreneurship (SE) is a dynamic concept for achieving sustainable development through generating income to support societal needs (Chandra, 2018). In past studies, many researchers have pinpointed the importance of social entrepreneurship (e.g., Saebi et al., 2019). For example, Mair and Martí (2006) and Nicholls (2008) indicated that social entrepreneurship can help in attaining social transformation. Similarly, Tracey and Phillips (2007) specified that social entrepreneurship can develop economically sustainable solutions to social problems (Miller et al., 2012a). Recently, Campos et al. (2020) argued that social entrepreneurship has the potential to achieve economic, social and environmental sustainability. It also contributes to meeting community goals (Bornstein, 1996; Hockerts, 2006) as it is driven by internal values and motivations (Dees, 1998, 2012). Due to social entrepreneurship's unique features (Rahdari et al., 2016), it is a critical agent in achieving the Sustainable Development Goals (SDGs) (developed by the United Nations [UN, 2022]).

Social Enterprise UK (2015) refers to social entrepreneurship as addressing and advancing some of the major challenges that the SDGs are designed to target (Littlewood & Holt, 2018). According to Littlewood and Holt (2018), the SDGs can be addressed and achieved through the social entrepreneurship value chain. The authors demonstrated the social entrepreneurship value chain, starting from sourcing

ethical raw materials as inputs, employing underprivileged groups for the operations, producing sustainable products (solar lights, affordable sanitation and sanitary pads, etc.) and distributing the generated profits to a social cause or projects (Littlewood & Holt, 2018). Also, Building Resources across Communities (BRAC), an international development organisation based in Bangladesh, strongly addresses the SDGs in its multiple ventures, especially the BRAC paper and for-profit venture, Aarong, which, throughout its value chain, contributes to multiple SDGs (Littlewood & Holt, 2018). Similarly, Grameen Bank runs various social business initiatives such as Grameen Danone, Grameen Shakti, Grameen UNIQLO, Grameen Kalyan, Grameen Shikkha etc. to achieve the SDGs in Bangladesh (Akter et al., 2020).

1.3.1 Social Entrepreneurship

The definition of social entrepreneurship is not yet distinct, with the term 'social enterprise' continuing to be contested (Saebi et al., 2019). Differences in opinions are also expressed regarding the origin of the social enterprise term. According to Chipeta (2019), the term 'social enterprise' first appeared in 1954 in William Parker's review on the types of enterprise in Germany. Parker (1954) suggested that social enterprises had the potential to offer an alternative career choice in Germany, depending on the individual's own ambition and the flexibility of the social structure. In their bibliometric analysis, Rey-Martí et al. (2016) argued that the social enterprise term first appeared in 1964 but that the social entrepreneurship concept truly began after 2003. Ebrashi (2013) and Hossain et al. (2017) argued that the history of social enterprises began from 1970 when social enterprise emerged as a concept to solve society's problems. The term 'social entrepreneur' was stated by Joseph Banks in 1972 as a managerial skill that enhances entrepreneurial and business-related activities (Ebrashi, 2013, p.188). In late 1980, social entrepreneurship was acknowledged as a business practice guiding some enterprises to address social ways of carrying out entrepreneurial practices (Ebrashi, 2013). In 1990, the non-profit enterprise domain viewed social entrepreneurship as an action to create social wealth (Weerawardena & Sullivan Mort, 2006). Based on the past literature, Lortie and Cox (2018) argued that social entrepreneurship can be positioned in the broader spectrum of entrepreneurship.

In 2000, social entrepreneurship was finally recognised as a separate discipline in academic research and gained extensive recognition in practice (Saebi et al., 2019).

However, the number of documents published from 2003–2014 on social entrepreneurship was still low (Rey-Martí et al., 2016). Although the concept of the social enterprise evolved over a long time, social entrepreneurship developed into a significant field in the past decade (Saebi et al., 2019). The concept of social entrepreneurship practice originates from an individual mission that sought social transformation (Rey-Martí et al., 2016; Yunus, 2009). As mentioned earlier, social entrepreneurship to date has no unified definition as researchers continue to define it, depending on different perspectives, such as process, operation and outcomes (Choi & Majumdar, 2014; Saebi et al., 2019; Zahra et al., 2009). Moreover, Social enterprises are the ventures built to perform social tasks under the wider umbrella of social entrepreneurship (Luke & Chu, 2013). In other words, social entrepreneurship is the process to address and achieve social transformation by developing social enterprises (Akter et al., 2020). Therefore, social entrepreneurship and social enterprises terms are used interchangeably.

In an earlier definition, Thompson (2002) defined the social enterprise as an operation conducted by the non-profit sector and developed for social purposes. Austin et al. (2006), Dorado (2006) and Nga and Shamuganathan (2010) argued that social entrepreneurship can operate across non-profit, profit and even public government sectors to address social issues and create social value. Similarly, Anderson and Dees (2008) advocated that the social entrepreneurship business model can range from non-profit to for-profit. Noble laureate Professor Yunus defined the social enterprise as a self-sustained operation, unlike the non-governmental organisation (NGO) (Yunus et al., 2010). An NGO depends on funding, whereas a social business recovers the cost and expenses by selling goods and reinvesting the profit within the business (Yunus et al., 2010). Based on this, Akter et al. (2020) and Westlund and Gawell (2012) argued that social entrepreneurship applies the combined perspectives of the social business and the NGO by generating income and receiving grants while operating social projects.

Littlewood and Holt (2018) and Zografos (2007) emphasised prioritising social value over economic value for social entrepreneurship. Similarly, Ebrashi (2013) highlighted the achievement of a social mission to create sustainable welfare for society, whereas Estrin et al. (2013) referred to social entrepreneurship as the socially motivated form of entrepreneurship. Similarly, Doherty et al. (2014) emphasised that social

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entrepreneurship, as its main priority, meets social objectives, such as alleviating poverty, reducing inequality and homelessness by creating jobs. Likewise, Defourny and Nyssens (2008) and Peattie and Morley (2008) argued that the existence and activities of social entrepreneurship solely depend on achieving its social and environmental mission. Additionally, Mair and Schoen (2007) and Miller et al. (2012a) highlighted that social entrepreneurship has the potential to create social value through the creation of economic value. Similarly, Hockerts (2017), Mair and Noboa (2006), Politis et al. (2016) and Yang et al. (2015) defined social entrepreneurship as a unique venture which operates to meet social value and financial value. Based on all these definitions, social entrepreneurship can be specified as a unique venture simultaneously creating social value and economic value.

1.3.2 Social Entrepreneurs

Social entrepreneurs possess the self-acknowledged belief and commitment to start a social venture (Bacq & Alt, 2018; Politis et al., 2016). They tend to have some unique characteristics that differentiate them from other entrepreneurs. In 2019, Saebi et al. compiled the main characteristics of a social entrepreneur based on 395 peer-reviewed articles. According to them, the unique characteristics of the social entrepreneur are: social value creation, visionary, social change agent, risk-taking, innovativeness, opportunity recognition, resourcefulness and moral agency (Saebi et al., 2019).

The social entrepreneur tends to be visionary and innovative in recognising opportunity, while also following strong morality and ethics (Bornstein, 1996; Catford, 1998). Moreover, Dees (1998), Estrin et al. (2016) and Peredo and McLean (2006) referred to the social entrepreneur as an active change agent who creates social value by pursuing new opportunities and engaging in continuous innovation. Likewise, Alvord et al. (2004) and Austin et al. (2006) defined social entrepreneurs as sustainable social transformers who address social issues with creative innovativeness. Similarly, Sharir and Lerner (2006) pinpointed that the social entrepreneur is the change agent, working towards creating and sustaining social value. Zahra et al. (2009) emphasised social entrepreneurs' contribution to enhancing social wealth by their discovery of opportunities or either by their creation of a new venture or the management of existing ones. They create wealth only to pursue the social mission (Chell, 2007; Jiao, 2011). Similarly, Bacq and Alt (2018) emphasised social entrepreneurs' mission is to help the

needy rather than serving their own self-interest. Urban and Teise (2015) defined the social entrepreneur as the addresser of social and economic challenges. Based on these definitions, the social entrepreneur can be specified as a social transformer, creating wealth to promote social initiatives and serve the underprivileged.

1.3.3 Social Entrepreneurial Intention

Intention is a motivational factor that is considered to be a reliable indicator to measure the willingness to perform behaviour (Tan et al., 2020). The concept of intention dates back to the time of Socrates who studied people's intention towards evil behaviour (Krueger, 2017). According to Krueger (2000), intention is the belief that an individual will be performing a certain behaviour. It stipulates the effort and willingness of an individual to perform a certain task (Ajzen, 1991; Krueger, 1993; Krueger, 2017). It can be the most powerful predictor in a situation where the actual behaviour tends to be difficult to observe (Krueger et al., 2000). Intention can also be measured immediately, as it does not reflect the issues of unpredictable or unrealistic time lags (Krueger et al., 2000).

In the context of entrepreneurship, intention has been considered as the strong and unbiased predictor of behaviour (Ajzen, 1991, 2001; Fishbein & Ajzen, 1980; Fishbein & Azjen, 1975; Krueger et al., 2009; Krueger et al., 2000). Bird (1988) was one of the first researchers to establish intention as a core step towards the entrepreneurial process. The current study highlights social entrepreneurial intention (SEI) as a proxy for determining actual social entrepreneurial behaviour. SEI occurs when an individual is motivated to obtain knowledge, develop ideas and implement plans to develop a social enterprise in the near future (Hockerts, 2006; Mair & Noboa, 2006; Tan et al., 2020). It can be defined as an individual's belief, desire and determination to build a new social enterprise (Tran & Von Korflesch, 2016). On a simpler note, SEI refers to the intention to start a social enterprise (Mair & Noboa, 2003, 2006).

The research demand for, and empirical interest in, SEI began to grow from 2010 (Tan et al., 2020). In a systematic literature review, Tan et al. (2020) retrieved a total of only 36 articles relevant to SEI. Likewise, Kruse et al. (2020) could retrieve only 17 relevant SEI studies in a meta-analysis. This demonstrates the need for more empirical research in this context to identify and determine the SEI antecedents.

1.4 RESEARCH PROBLEM AND GAP

Despite the growing interest and awareness over the years, the overall theoretical and empirical analyses on social entrepreneurship are still underdeveloped (Rawhouser et al., 2019; Rey-Martí et al., 2016). In the post-pandemic era, it is predicted that social entrepreneurship will play a strong unique role in shaping the new economy. Thus, policy makers need to improve the incentive policies to inspire the nascent social entrepreneurs' intention into behaviour (Tan et al., 2020). Gaps exist in the literature regarding investigating multi-level modelling and interrelationships between the antecedents to measure social entrepreneurial intention (SEI). Therefore, the current study has been conducted to increase SEI understanding and knowledge.

In the literature, Tan et al. (2020) demonstrated a knowledge gap on institutional and environmental factors influencing social entrepreneurial intention (SEI). These researchers further indicated the extreme dependency on the individual-level factors for determining SEI as well (Tan et al., 2020). Likewise, Saebi et al. (2019) stressed on the importance of multi-level antecedents to avoid misrepresentations on the SE knowledge. They advocated to look beyond the individual-level antecedents by including institutional- or organisational-level antecedents to advance the knowledge (Saebi et al., 2019). While conducting a meta-analysis, Kruse et al. (2020) findings suggested the importance of both individual-level and social-level constructs in predicting SEI. Similarly, Sousa-Filho et al. (2020) emphasised the importance of considering socio-historical factors impacting on social entrepreneurial intention (SEI). Additionally, Muñoz and Kibler (2016) argued on comprising multiple institutional factors for better explaining the SE phenomenon. Furthermore, Sahasranamam and Nandakumar (2020) elaborated on the importance of formal institutions for SE as the country's law requires to be favourable even to start a social enterprise. Likewise, Stephan et al. (2015) demonstrated the positive effect multiple institutions have on supporting the likelihood of pursuing social entrepreneurship.

In the context of SE, Stephan et al. (2015), Urban (2013), Urban and Kujinga (2017), Vyas et al. (2014) and Wannamakok and Chang (2020) investigated both formal and informal institutional factors, namely, the regulatory institution, normative institution and cognitive institution. From the SE perspective, regulatory institutions are associated with the country's rules and regulations towards social enterprises, whereas normative institutions are associated with the social norms and values on social

enterprises; cognitive institutions are associated with the cognitive knowledge to start and operate a social enterprise (Urban, 2013; Urban & Kujinga, 2017). These environmental institutions are from Scott's (1995, 2014) three pillars of institutions theory which is an extension of institutional theory. Chapter 2 will elaborate on the theoretical development of the three pillars of institutions. Although three pillars of institutions offer more explanatory power on institutional circumstances, this theory has been barely applied to empirically test social entrepreneurial intention (SEI). To date, Urban and Kujinga (2017) and Wannamakok and Chang (2020) have applied the three pillars of institutions framework for assessing SEI. Hence, gaps exist in the literature on applying the three pillars of institutions framework to determine SEI. Estrin et al. (2013, 2016) also argued the importance of both institutional- and individual-level factors in their effects on social entrepreneurial activity.

Little attention has been paid on the institutional environment impacting the individual social behaviour in the SE literature (Urban & Kujinga, 2017). For example, Estrin et al. (2013) and Sahasranamam and Nandakumar (2020) investigated a country's formal institutions and the individual's capital as it affects social entrepreneurial entry. Conversely, Estrin et al. (2016) emphasised the country's formal institutions moderating the relationship between human capital and social entrepreneurial entry. To date, only Kujinga (2016), Urban and Kujinga (2017) and Wannamakok and Chang (2020) focused on the three pillars of institutions affecting individual antecedents such as feasibility and desirability while determining social entrepreneurial intention. Furthermore, Estrin et al. (2013, 2016) argued on the strength of such institutional and individual level modelling on addressing aggregation and disaggregation biases (Peterson et al., 2012). Both level investigation allows the opportunity to test both institutional- and individual-level relationships on SEI at the same time.

As mentioned earlier in this section, SEI articles are extremely dependent on individual-level factors such as personality traits and individual background (Saebi et al., 2019; Tan et al., 2020). Mair and Noboa (2006) were the first to develop a model specifically for social entrepreneurial intention. The Mair Noboa model (MNM) was developed from the theory of planned behaviour (Ajzen, 1991) and Shapero's entrepreneurial event (Shapero & Sokol, 1982). Chapter 2 will elaborate on the MNM's step-by-step theoretical development. The MNM concentrated on constructs such as empathy, moral obligation, perceived social support and social entrepreneurial

self-efficacy which strongly differentiates social entrepreneurial intention from commercial entrepreneurial intention (Ernst, 2011; Kruse, 2020; Mair & Noboa, 2006). From the social entrepreneurship perspective, empathy refers to the individual emotional feeling towards the margins of the society, whereas moral obligation refers to the individual's beliefs about acceptable social behaviour in addressing the needs of underprivileged groups (Hockerts, 2015, 2017; Mair & Noboa, 2006). Perceived social support refers to the individual's expectation on receiving support from their personal networks to start a social enterprise and social entrepreneurial self-efficacy refers to the individual confidence on building a social enterprise (Bacq & Alt, 2018; Hockerts, 2015, 2017; Mair & Noboa, 2006). Some studies in the literature have implemented these MNM constructs to investigate social entrepreneurial intention (SEI). However, no study has yet incorporated the MNM and three pillars of institutions to determine SEI, to the best of this researcher's knowledge. Therefore, an opportunity exists to address the literature gap by exploring the integration between the antecedents of the MNM and three pillars of institutions.

Additionally, gaps exist in the literature on exploring possible interrelationships among the individual-level factors. Although individual-level factors are vastly applied to measure SEI, the literature on investigating the interrelationships between the individual-level factors (Urban & Galawe, 2019) is scarce. Studies such as Aure et al. (2019), Bacq and Alt (2018), Kazmi et al. (2019), Urban and Galawe (2019) and Younis et al. (2020) have provided a new perspective to the SE literature by exploring relationships between factors at the same level. For instance, Urban and Galawe (2019) investigated the role of social entrepreneurial self-efficacy mediating the relationship between empathy, moral judgement and social opportunity recognition. On the other hand, Bacq and Alt (2018) and Younis et al. (2020) studied the social entrepreneurial self-efficacy mediating relationship between empathy and social entrepreneurial intention (SEI). Similarly, Kazmi et al. (2019) examined the social entrepreneurial self-efficacy mediating the relationship between SEI and moral obligation. Likewise, Aure et al. (2019) assessed the role of social entrepreneurial self-efficacy mediating the relationship between SEI and perceived social support. These few studies in the literature have attempted to fill the knowledge gap on the interrelationships that impact on social entrepreneurship. Recently, Sousa-Filho et al. (2020) advocated on investigating the inter-variable relationships among the MNM constructs to understand

their role and impact. The concept of such interrelationship can be replicated from Heuer and Liñán's (2013) modified theory of planned behaviour. Therefore, this research aims to investigate the interrelationship among the MNM constructs and their impact on SEI. Moreover, Saebi et al. (2019) pointed out the lack of studies on individual factors moderating effect on SEI research. Thus, moderating effects of individual factors such as prior experience and age will be tested. Chapter 2 will elaborate on these moderating variables and their relationship with the MNM and SEI.

1.5 RESEARCH OBJECTIVES

This research purposes to develop more knowledge into social entrepreneurial intention by integrating antecedents of the three pillars of institutions and the Mair Noboa model (MNM). Based on this purpose, the overarching research questions can be defined as:

RQ1: *To what extent do the constructs of the Mair Noboa model mediate the relationship between the antecedents of three pillars of institutions and social entrepreneurial intention?*

RQ2: *To what extent do the interrelationships between the constructs of the Mair Noboa model influence social entrepreneurial intention?*

Based on these research questions, this research will address the following main objectives and sub-objectives to achieve better understanding on social entrepreneurial intention.

Objective 1: This research aims to identify the mediating effects of the constructs of the Mair Noboa model as they impact on the relationship between the three pillars of institutions constructs and social entrepreneurial intention:

- To understand the relationships between the antecedents of three pillars of institutions and the Mair Noboa model

- To examine the influence of the constructs of the three pillars of institutions on social entrepreneurial intention

Objective 2: This research aims to investigate the interrelationships between the constructs of the Mair Noboa model as they impact on social entrepreneurial intention.

- To investigate the interrelationships between the constructs of the Mair Noboa model

- To examine the influence of the constructs of the Mair Noboa model on social entrepreneurial intention

Objective 3: This study will look into moderators (prior experience and age) that impact on the relationship between the Mair Noboa model antecedents and social entrepreneurial intention.

- To identify the moderating impact of prior experience on the relationships between Mair Noboa model antecedents and social entrepreneurial intention.

- To identify the moderating impact of age on the relationships between Mair Noboa model antecedents and social entrepreneurial intention.

1.6 RESEARCH SETTING: BANGLADESH

Bangladesh is the home of two largest social enterprises in the world: Grameen Bank and Bangladesh Rural Advancement Committee (BRAC) (Bangladesh Social Enterprise Project, 2010). The past social entrepreneurship (SE) studies on Bangladesh were heavily dependent on building case studies on BRAC and Grameen Bank. For example, Agrawal and Hockerts (2013), Faruk et al. (2017) and Hossain and Hossain (2012) developed conceptual papers based on the structures of BRAC and Grameen Bank. Besides, Mair and Marti (2009) developed a case study on the institutional voids affecting the social entrepreneurial activity of BRAC. Similarly, Akter et al. (2020) and Therese Hackett (2010) highlighted the social enterprise activities in Bangladesh based on Grameen Bank. The country is under-represented in the SEI literature. To date, only Akhter et al. (2020), Ashraf (2020) and Hassan (2020) investigated the social entrepreneurial intention in Bangladesh. Hence, an opportunity exists to build and validate a theoretically supported SEI model for Bangladesh. This research purposes to investigate SEI in Bangladesh through the integrated framework combining the three pillars of institutions and the Mair Noboa model (MNM).

Bangladesh encountered institutional voids and financial and infrastructural turmoil after gaining independence in 1971 (British Broadcasting Corporation [BBC], 2019). According to Aponte et al. (2019), high levels of inequalities and institutional voids are the reason behind the prospering social entrepreneurship activities in less

developed economies (Sousa-Filho et al., 2020). Due to the lack of governmental, infrastructural and financial assistance, BRAC was developed to support the newborn country (Mair & Marti, 2009). Sir Fazle Hasan Abed founded BRAC (Bangladesh Rural Advancement Committee) in 1972 to assist and rehabilitate the war refugees at first (Khanna, 2014). Over the years, BRAC has expanded in Bangladesh and developed 12 social enterprises that operate on an inclusive ecosystem to achieve the SDGs (Littlewood & Holt, 2018). It was later renamed as Building Resources across Communities (BRAC), now operating in the United Kingdom (UK), the United States of America (USA), alongside 11 other countries across Asia and Africa (Bhagat, 2020). In 2017, it was ranked as the number one non-governmental development organisation measured by innovation, impact and governance (BRAC, 2020).

Noble laureate Muhammad Yunus founded Grameen Bank in 1983 to reduce the income gap (Grameen Bank, 2020). Professor Yunus pioneered the micro-credit concept in 1970s by providing micro-loans to empower the needy (Grameen Bank, 2020). Grameen Bank is also called the "Bank for the Poor" as it aims to support the margins of the society despite the inequalities and institutional voids (Grameen Bank, 2020; Hackett, 2010). In 2019, Grameen Bank was nominated as one of the top five innovative and impactful social enterprises (Forbes, 2019). To support such a cause, Grameen Foundation was also formed to practice the micro-credit philosophy, which now operates around fifty-eight countries (Grameen Bank, 2020). Additionally, Yunus Centre was founded in 2008 to support social business start-ups in Bangladesh (Yunus Centre, 2020).

1.6.1 Social Entrepreneurial Activities in Bangladesh

In Bangladesh, approximately 150,000 enterprises are operating as social enterprises (British Council Report, 2016a). It has also been ranked as number one in social entrepreneurial activities, including agri-business, healthcare and renewable energy sectors compared to Afghanistan, Bhutan, Maldives, Nepal, Pakistan and Sri Lanka (World Bank Group, 2017).

The current policies developed by ministries of governments are focused more into sectoral-level developments (British Council Report, 2016a). These policies favourably impact on social enterprises. For example, policies on microfinance, non-governmental organisations (NGOs) and civil society, small and medium-sized

enterprises (SMEs), Islamic philanthropy, private sector developments do favourably affects social enterprises in Bangladesh (British Council Report, 2016a). The Ministry of Planning prepared the "7th Five-Year national plan" to meet the Sustainable Development Goals (SDGs) and the social enterprise goals by implementing steps towards alleviating extreme poverty, eliminating hunger, encouraging empowerment, ensuring gender equality, developing healthcare facilities and so on (Bangladesh Planning Commission, 2015). Moreover, SME Foundation, Bangladesh Bank, Ministry of Social Welfare and Ministry of Commerce tend to implement policies for the overall development of the country (British Council Report, 2016a). For example, the Ministry of Social Welfare initiates programs and provides services to underprivileged groups to improve their livelihood.

The Bangladeshi government also established the venture capital company "Start-up Bangladesh Limited" to play a prominent role in building sustainable start-up ecosystems (Startup Bangladesh, 2019). The Bangladeshi government also initiated support programs, such as incubators and accelerators, to support the growth of social enterprises. Some of the prominent incubators are Spark Bangladesh, YYGoshti, Toru and accelerators are TekShoi, OPEN accelerator are working to enhance social entrepreneurial activities in Bangladesh (British Council Report, 2016a). Furthermore, Yunus Centre, Bangladesh Enterprise Institute, LightCastle Partners provides advisory services, whereas the World Bank, Asian Development Bank (ADB) and SME Foundation provide technical assistance to facilitate social entrepreneurial activities in Bangladesh (British Council Report, 2016a; World Bank Group, 2017).

Moreover, educational institutions have a strong potential to trigger social entrepreneurial activities. The education institutions host the social business case competition, social business champ, social business youth convention, Bangladesh Start-up cup social and BRACathon to increase the awareness of social entrepreneurship among the students (British Council Report, 2016a). For example, North South University (NSU) has started NSU Start-ups Next (https://nsustartupsnext.com/), an incubation program to motivate, support, and train the university students on building innovative ideas and developing strategies to become an entrepreneur.

1.6.2 Youth Social Entrepreneurs in Bangladesh

In recent years, some of the promising youth social entrepreneurs of Bangladesh were listed in "Forbes Asia 30 under 30" and won "Queen's Young Leaders Award". This positive trend started from 2016 onwards. These social entrepreneurs can be role models for the interested individuals to become social entrepreneurs. The following section will briefly elaborate on these successful social entrepreneurs.

In 2016, Osama Bin Noor list on 'Forbes Asia under 30 Social Entrepreneurs' and won 'Queen's Young Leaders Award' for youth career-building initiatives (Dhaka Tribune, 2016; Forbes, 2016). Mr Noor developed a global platform named 'Youth Opportunities', which connect young people by offering valuable skills and career-building opportunities (Dhaka Tribune, 2016).

In 2017, Mizanur Rahman and Shougat Nazbin Khan were on the 2017 list of 'Forbes Asia under 30 Social Entrepreneurs' (Forbes, 2017a; The Daily Star, 2017a). Mr Rahman founded 'Physically-Challenged Development Foundation' to help and support the disabled youth of Bangladesh. Ms Khan founded 'H. A. Foundation' to provide education through digital tools in the northern part of Bangladesh. Ms Khan also received the 'Commonwealth Youth Award' for Asia in 2016 for helping more than 600 rural poor children (The Daily Star, 2017a).

In 2017, Minhaj Chowdhury was listed in 'Forbes 30 under 30 Impact Challenge' (The Daily Star, 2017b). Mr Chowdhury cofounded 'Drinkwell' to offer safe drinking water in the specific region of Bangladesh and India where the water supply was contaminated with arsenic, fluoride and iron (The Daily Star, 2017b). He was also listed in 'Forbes under 30 Social Entrepreneurs' for the Drinkwell initiative in 2015 (Forbes, 2017b; The Daily Star, 2017b).

In 2018, Ayman Sadiq was on the list of 'Forbes Asia under 30 Social Entrepreneurs' and one of the winners of the 'Queen's Young Leaders Award' (Dhaka Tribune, 2018; Forbes, 2018). Mr Sadiq has founded a free online education platform, '10 Minute School' to improve access to education for different groups of young people in Bangladesh (Forbes, 2018). It is now the largest online education platform in Bangladesh, accessing more than 1.5 million students through website, mobile application and social media of 10 Minute School (https://10minuteschool.com/). Along with Mr Sadiq, Zaiba Tahyya was also one of the awardees of Queen's Young

Leaders Award in 2018. Ms Tahyya founded 'Female Empowerment Movement (FEM)' to reduce violence against women and promote gender equality (BBF Digital, 2019; Dhaka Tribune, 2018). In 2020, Raba Khan was listed on "Forbes Asia 30 under 30" entertainment category for creating content on social media to address social issues and social stereotypes (Forbes, 2020).

In 2021, nine Bangladeshi youths were listed on "Forbes Asia 30 under 30" in categories such as social impact, enterprise technology and e-commerce, which has been the highest number so far (Dhaka Tribune, 2021a; The Daily Star, 2021). This demonstrates a clear indication of the increasing potential the youths possess to prosper in Bangladesh. Especially under the social impact category, Ahmed Imtiaz Jami has founded 'Obhizatrik' Foundation, which consists of 3,500 volunteers to support underprivileged children (Dhaka Tribune, 2021a; Forbes, 2021; The Daily Star, 2021). Moreover, Rizvana Hredita and Md Zahin Rohan Razeen founded 'Hydroquo+' to offer consultation on water management to government agencies and NGOs (Dhaka Tribune, 2021a; Forbes, 2021; The Daily Star, 2021). In addition, Shomy Chowdhury and Rijve Arefin founded 'Awareness 360' to help the margins of society on personal hygiene, sanitation, and water filtration. They have 1,500 volunteers from around 23 countries for spreading awareness through workshops to help the community (Dhaka Tribune, 2021a; Forbes, 2021; The Daily Star, 2021). All of these young social entrepreneurs demonstrate strong potential for solving society's problems.

1.6.3 Potential Social Entrepreneurial Intention in Bangladesh

Bangladesh is an emerging economy. Over the years, this country has made gradual progress in reducing the poverty rate to 20.5% in 2019 from 24.3% in 2016 (Asian Development Bank, 2022). The country is experiencing steady growth in the gross domestic product (GDP) rate of 6.9% in 2021 from 5.5% in 2010 (World Bank, 2021). These positive changes have qualified Bangladesh to be on track for meeting the criteria to graduate from the United Nation's "Least Developed Countries" by 2026 (World Bank, 2021). The country has an estimated population of 167.8 million (World Population Review, 2022). Also, more than 89% of the population is Muslim (World Population Review, 2022; CIA, 2021). The Muslim community tends to practice Zakat, which is a common practice to give away 2.5 per cent of their personal assets every year for charity (British Council Report, 2016a). Also, Bangladeshi culture tends

to rely on strong family bonding and social harmony. The family members and the personal networks are heavily involved in supporting the decision making of key life events such as education, career and marriage. According to the Central Intelligence Agency (CIA), approximately 60% of the population belong to the age cluster of 15-54 compared to only 15% belonging to the cluster aged 55 and above (CIA, 2021). The culture and attractive working age group shows promising opportunity for potential social entrepreneurial activity in the country.

Despite all these positive changes, Bangladesh still has 24 million people living below the poverty line (World Bank, 2021). Also, the country reports a 4.4% overall unemployment rate in 2019 (Statista, 2020b). According to the Bangladesh Institute of Development Studies' (BIDS) report, the unemployment rate among university graduates is 38.6% (The Financial Express, 2019). The recent BIDS survey report indicates 66% of the graduated students affiliated with national/open Universities are unemployed (Dhaka Tribune, 2021b). Although the graduate unemployment rate is high, the tertiary education enrolment is still steady. In 2018, more than 15 million students were enrolled in tertiary-level education in Bangladesh (UNESCO, 2020).

Moreover, the youth social entrepreneurs, as listed in the previous section, demonstrate a potential opportunity for the university students to work towards making a difference and getting recognised for their good work. Therefore, social entrepreneurship practice can be the best possible solution for Bangladesh to create self-employment among the university graduates and support the needy. The first step is to develop social entrepreneurial intention by promoting and encouraging relevant antecedents of social entrepreneurship behaviour. This research focuses on studying Bangladeshi university students' intention towards building social enterprises to understand the impact of the integrated framework between the three pillars of institutions and the Mair Noboa model (MNM).

1.7 POTENTIAL CONTRIBUTIONS TO RESEARCH

This research proposed to make potential contributions to the field of social entrepreneurship. The following sections will elaborate on the theoretical, methodological, and practical contributions of this research. Chapter 8 (Section 8.3) describes the implications of the findings.

1.7.1 Theoretical Contributions

This research aims to contribute to the theories related to social entrepreneurship, particularly in the field of social entrepreneurial intention. Primarily, this research makes potential contributions to both the three pillars of institutions and the Mair Noboa model (MNM), as elaborated in Chapter 2. Although the three pillars of institutions framework incorporate both formal and informal institutions, little research has been conducted on its impact on social entrepreneurial intention (SEI). The regulatory, normative and cognitive institutional environments are considered to measure the SEI from an individual's perception on institutional and environmental perspective (Urban & Kujinga, 2017; Wannamakok & Chang, 2020). By applying the three pillars of institutions framework, this research also contributes to the Institutional Theory. The MNM was based on the theory of planned behaviour (TPB) and Shapero's entrepreneurial event (SEE). The MNM antecedents, empathy, moral obligation, perceived social support and social entrepreneurial self-efficacy, are vital in measuring the individual-level intention to become a social entrepreneur. By applying the MNM, this research also contributes to the theory of planned behaviour and Shapero's entrepreneurial event. Although some researchers have applied MNM to investigate SEI, very few have incorporated both MNM and institutional factors. Both the three pillars of institutions and MNM are independent theories contributing to the SEI literature. This research aims to contribute to the knowledge that was overlooked in the past literature by extending both theories through integration. Hence, examining the mediating role of MNM constructs affecting the relationship between the antecedents of three pillars of institutions and SEI can provide more holistic knowledge and understanding on intention. By proposing to articulate a holistic view of SEI, considering both the institutional- and individual-level antecedents will potentially contribute to the budding field of SEI in the social entrepreneurship era.

Furthermore, this research seeks to highlight the possible interrelationships among the constructs of MNM. From the possible findings, this thesis aims to contribute to the modified theory of planned behaviour. In previous studies, the interrelationships between the individual factors were not explored and recognised strongly in the SEI literature. Some studies emphasised the potential relationships between a few individual-level factors related to the MNM. These provide an opportunity to explore

the inter-linkages of all the antecedents related to the MNM and possibly contribute to the interrelationship knowledge in the social entrepreneurial literature.

Also, limited studies in the literature to date have examined the moderating effect on social entrepreneurial intention (SEI). This research will possibly shed some light on the moderating impact of individual factors such as prior experience and age on SEI. In so doing, this research potentially redefines the role of prior experience and age impacting on SEI. The theoretical implications are further discussed based on the findings in Chapter 8 (Section 8.3.1).

1.7.2 Methodological Contributions

This research makes a methodological contribution by developing a multi-level framework to measure and analyse social entrepreneurial intention (SEI). The conceptual framework of this research extends the existing knowledge on social entrepreneurship. The proposed linkage and integration of the theories contribute to the methodological literature on integrating theories. This study proposed direct, mediating, and moderating relationships among the antecedents of the three pillars of institutions and MNM, elaborated in Chapter 2. This methodological framework can help the practitioners to understand the significance of institutional- and individual-level antecedents' influence on the intention of the individual. The methodological implications are further discussed based on the findings in Chapter 8 (Section 8.3.2).

1.7.3 Practical Contributions

This research highlights the institutional- and individual-level factors affecting social entrepreneurial intention (SEI). It is expected that the proposed model will identify the most prominent antecedents that contribute to identifying social entrepreneurial intention. This research helps policy makers and relevant organisations seeking to promote nascent social entrepreneurs by providing valuable insight and a greater understanding of factors that promote the development of SE behaviour. The research identifies institutional and individual antecedents relevant to the individuals starting up a SE venture, elaborated in Chapter 2. This research is expected to help interested governmental and non-governmental support organisations to identify the potential antecedents to nurture the development of social entrepreneurial behaviour to promote a social entrepreneurial ecosystem. Therefore, it will help interested organisations to minimise wasted efforts and provide targeted funding of social entrepreneurship.

This research also aims to contribute by extending the Bangladeshi context as it is still under-represented in the SEI literature. Thus, the research will be applicable to countries with similar economies. In summary, this study attempts to provide rational strategies to maximise the chances of gaining new knowledge on SEI for the benefit of policy makers, interested organisations, educators, and researchers. The practical implications are further discussed based on the findings in Chapter 8 (Section 8.3.3).

1.8 THESIS STRUCTURE

Chapter 1 provides the overview of the research study and background on social entrepreneurship. This chapter identifies the research problem and knowledge gap leading towards the research questions and objectives are given. In the research setting, a discussion on Bangladeshi social entrepreneurial activities is described. The theoretical, methodological, and practical contributions are discussed in this chapter.

Chapter 2 presents an extensive review of the literature to help set the background for social entrepreneurial intention. Detailed theoretical development has been investigated on the two prominent theories of this research: i) the three pillars of institutions and ii) the Mair Noboa model (MNM). In doing so, a step-by-step literature review on the relevant SEI literature based on the theories is described and outlined. This chapter then builds on the literature review associated with the constructs relevant to the three pillars of institutions and the Mair Noboa model (MNM), simultaneously proposing related hypotheses. The chapter concludes with the development of the proposed conceptual model.

Chapter 3 presents the summary of the hypotheses developed from the literature review and outlines the related objectives and themes associated with each hypothesis. The chapter concludes with the building of the hypothesised conceptual model.

Chapter 4 focuses on the research methodology, research philosophy and the research paradigm that inform the process of selecting a particular research design. The development of the research methodology, the data collection method, and the sampling process are explained. The quantitative data collection and data analysis are later discussed.

Chapter 5 provides the data analysis of the pilot study. This chapter also describes the constructs' evaluation, exploratory factor analysis, and reliability analysis. In this

chapter, descriptive statistics on the sample respondents alongside the exploratory factor analysis and reliability analysis of the items are given.

Chapter 6 provides the analyses of the main study. This chapter describes the confirmatory factor analysis, goodness-of-fit measures, modification index and constructs validity. For the main study, descriptive statistics of the sample respondents are followed by exploratory factor analysis, with reliability analysis conducted. Later, step-by-step confirmatory factor analysis is conducted followed by a full measurement model analysis.

Chapter 7 outlines the structural analyses for the main study. A series of structural models were developed and the hypotheses were tested. In the end, a summary of the findings is presented based on the collective model.

Chapter 8 presents the main discussion of the research findings from the data analysed. This chapter explains the findings with the proposed objectives and research questions. Based on the outcome of the research, the theoretical, methodological, and practical implications are discussed.

Chapter 9 highlights the limitations of this research and offers future research directions, with this followed by presenting the conclusions of this research.

1.9 CONCLUSION

This chapter has validated the topic of this research and outlined the main objectives. To meet the knowledge gap and problems of the literature, this research aims to integrate three pillars of institutions and the Mair Noboa model (MNM) to determine social entrepreneurial intention from both the institutional- and individual-level perspectives. The chapter began by introducing the background on social entrepreneurship, social entrepreneur, and social entrepreneurial intention. To justify the research settings, overall social entrepreneurial activities in Bangladesh are explained. The chapter highlighted the potential theoretical, methodological, and practical implications. The next chapter provides an extensive literature review on the relevant theories of social entrepreneurial intention and the proposed hypotheses.

2. LITERATURE REVIEW

2.1 INTRODUCTION

This chapter provides a detailed understanding of the theoretical developments and existing literature in the budding field of social entrepreneurial intention. A review of the literature will portray a comprehensive understanding of the problem identified in the previous chapter. The focus of this research is to integrate the institutional-level and individual-level antecedents to get maximum insight towards social entrepreneurial intention (SEI). At first, a thorough theoretical development of the three pillars of institutions (TPI) framework and the Mair Noboa model (MNM) would help in setting the background of the intention-based research followed by the most relevant SEI studies in the literature. A thorough literature review was done to develop the integrated framework. Tan et al. (2020) argued that empirical interest and demand of SEI began from 2010. Therefore, the systematic search for the relevant quantitative journal articles were limited to SEI from 2010 onwards. Also, the literature search for journal articles included the key word SEI associated with institutional theory, TPI, theory of planned behaviour (TPB), Shapero's entrepreneurial event (SEE) and MNM. Considering the relevant antecedents and SEI, 12 journal articles for institutional theory (discussed in section 2.2.2) and five articles for TPI (discussed in section 2.3) were found to be relevant. Similarly, nine journal articles for TPB (discussed in section 2.4.2), 10 articles for SEE (discussed in section 2.4.4) and 12 articles for MNM (discussed in section 2.5) measuring SEI were found most relevant considering the antecedents. The proposed relationships associated with the constructs of the TPI framework and the MNM are first discussed to determine SEI, followed by building the hypotheses and the conceptual model.

2.2 THEORETICAL CONSIDERATION: THREE PILLARS OF INSTITUTIONS THEORY

The theoretical proposition of this research is underpinned by the three pillars of institutions theory, an extension of institutional theory. This section shed light on the brief development of institutional theory and the relevant social entrepreneurship studies in the literature, followed by the three pillars of institutions theory to thoroughly understand this evolution. The discussion on the institutional theory is

limited to only individual-level perceptions for better relevancy and understanding of this research.

2.2.1 Development of Institutional Theory

Scott assembled the definition of early institutional theory by different schools of thought and founded the three pillars of institutions in his book *Institutions and Organizations* (Scott, 1995, 2014). In early institutional theory, institution was defined, focused, and approached in different manners by the different schools of thought. The political science school of thought defined institutions as the moral philosophy and constitutional law as cited in Scott (1995, 2014). For example, Bill and Hardgrave (1973) defined institutions as the formal structure and legal system associated with the government. The economics school of thought argued for the view of institutions as the economy-operated social framework shaped by a set of historical and cultural forces (Gustav Schmoller, 1900–1904, cited in Scott, 1995). For instance, Veblen (1898) defined institutions as the common habit and convenience of an individual, whereas Hodgson (1989) emphasised the historical circumstances influencing the institutions from political and economic perspectives. Although the school of sociology emphasised the society and the societal structure as institutions in the early institutional theory, Sumner (1906) defined institutions as both conceptual and structural (Scott, 1995). Meanwhile, Durkheim (1957) referred institutions as systems of knowledge, belief and moral authority. Later, Durkheim (1995) defined institutions as external coercive social phenomena that are perceived by an individual. These early work on institutions tends to focus on wider institutional structures such as political systems, constitutional structure, language, religion structure, legal system, kinship and so on (Scott, 1995, 2014).

Scott (1995, 2014) highlights institutions as collaborative action in rule, norms, and meanings affecting human behaviour. Hence, Scott (2014, p.52) emphasised that "institutions [are] composed of regulative, normative and cultured-cognitive elements that, together with associated activities and resources, provide stability and meaning to social life". Likewise, Fligstein (2001) argued that institutions provide the cognitive framework and shared meaning that shape how an individual would interpret the behaviours of others. Friel (2017) states that institutions can determine the actions of an individual. Powell and DiMaggio (1991) state that institutions evolve out of

particular historical and cultural contexts. Thus, the preferences and power in a society can be defined by the institutions (Powell & DiMaggio, 1991; Thelen & Steinmo, 1992). Conversely, North (1990, 2005) suggested that institutions are consciously designed by humans to meet social goals efficiently. In other words, institutions are the rules that structure human interactions in a society (North, 1990). According to North (1990, 2005), formal institutions establish rules and regulations, while informal institutions create the socially and culturally constructed values designed by humans to meet social goals.

2.2.2 Institutional Theory and Social Entrepreneurial Activities

Institutional theory has been applied to assess the external or institutional-level impacts on social entrepreneurship. Particularly, measuring social entrepreneurial activities at the institutional level often depends on institutional theory (Saebi et al., 2019; Welter & Smallbone, 2011). Furthermore, Saebi et al. (2019) argued that the effect of social entrepreneurial activity in a country can be either aided or impeded by the role of institutions. Likewise, Dacin et al. (2010) highlighted the impact institutions have on the demand for SE activities. Similarly, Irani and Elliman (2008) and Muñoz and Kibler (2016) emphasised the application of institutional theory to determine the importance of local institutions in promoting social entrepreneurial development. However, a lack of research exists on social entrepreneurial intention (SEI) in which institutional theory is applied. The following section elaborates on the 12 journal articles retrieved from the systematic search that applied the institutional theory to assess a relevant approach to SEI.

Urbano et al. (2010) analysed the environmental factors in Spain that affect the emergence and implementation of social entrepreneurship. The authors applied North's (1990, 2005) work on formal and informal institutions in preparing multiple cases by conducting interviews with social entrepreneurs in the Spanish region of Catalonia (Urbano et al., 2010). The findings of this study highlight the importance of formal institutions in facilitating social entrepreneurship, whereas informal institutions played a prominent role in the emergence and implementation of social entrepreneurship. The result of this study reveals that the Catalan society's informal institutions such as environmental culture, social values, and social attitudes are the main triggers for social entrepreneurship emergence and implementation. In a cross-country

comparison, Ferri and Urbano (2011) investigated the environmental factors that influence social entrepreneurial activities. In this study, environmental factors, such as public spending, access to finance, and governance effectiveness were the proxies for formal institutions whereas social needs, societal attitudes and education were the proxies for informal institutions. The authors gathered data from 49 countries and found that societal attitudes (informal institution) and public spending (formal institutions) were positively and negatively associated to SE activity respectively. Hence, both formal and informal institutions influence SE activity (Ferri & Urbano, 2011). Later, Ferri and Urbano (2017) again examined the formal and informal institutions influencing SE activity across 43 countries. For this study, the authors proposed education and minimum capital requirements as the proxies for formal institutions in comparison to the role model and fear of failure as the proxies for informal institutions. The findings of this study revealed that education level, role models and fear of failure impact SE activity positively. Thus, both formal and informal institutions impact the social entrepreneurial activities across countries.

Viviers et al. (2012) focused on informal institutions, such as cultural, socio-political and economic factors that impact on the social entrepreneurial intention among university students in South Africa. The findings indicated that environmental and cultural factors were vital for students to pursue social entrepreneurship. Likewise, Griffiths et al. (2013) investigated the informal institutions impacting SE activity. The socio-political, cultural, and economic factors were considered using data from 54 countries. The result suggested that the role of political structure under socio-political factors played the most prominent impact on the rate of SE activity around the countries.

Estrin et al. (2013) emphasised the impact of formal and informal institutions on social entrepreneurial entry. In this study, government activism and constraints on the power of government acted as the proxies for formal institutions, whereas social capital (country prevalence rate) was informal institutions. Data were collected from 47 countries. The result suggested that constraints on the power of government tend to have a positive effect, whereas government activism has a negative effect on social entrepreneurial entry. Overall, the results indicated that formal institutions play a direct role on social entrepreneurial entry.

Later, Estrin et al. (2016) investigated formal institutions such as rule of law impacting on social entrepreneurial entry. Rule of law was considered as a factor for the national level, whereas general human capital with tertiary education and specific human capital with entrepreneurial experience were considered as individual-level factors. The findings of this study highlighted that individuals with tertiary education tend to have a greater willingness to choose social entrepreneurship and that the stronger rule of law did not impact on social entrepreneurial entry (Estrin et al., 2016). Both the studies of Estrin et al. (2013, 2016) took a multi-level research approach that considered both country- and individual-level factors in analysing social entrepreneurial entry.

Additionally, Urbano et al. (2014) investigated the role of informal institutions influencing the likelihood of women to become social entrepreneurs. Post-materialism, altruism and being a member of a social organisation were the proxies for informal institutions. The results indicated that altruism and being a member of a social organisation were the most important informal institutions influencing women to become a social entrepreneur. Stephan, Uhlaner and Stride developed institutional configuration perspectives in 2015 which offered a better understanding on the national context that facilitated SE. In institutional configuration perspectives, Stephan et al. (2015) argued that both formal and informal institutions jointly offer more explanatory power in shaping human behaviour. The authors advocated that three pillars of institutions (TPI) framework offer further differentiation on informal institutions. In Stephan et al. (2015), the post-materialism cultural values acted as a proxy for the cognitive institutional context, socially supportive cultural norms as the proxy for the normative institutional context, while government activism was the proxy for regulatory institutions. The findings of this study suggested that national-level government activism, post-materialism and socially supportive culture positively associate with an individual's willingness to engage in SE.

Additionally, Hoogendoorn (2016) assessed social entrepreneurial entry by examining government spending on welfare and regulatory quality as the proxies for formal institutions, and a country's per capita income and self-expression values were the proxies for informal institutions. The data was collected from across 49 countries. The findings of the study indicated that government welfare on spending (formal) and

country's self-expression values (informal) was positively associated with the social entrepreneurial entry.

Pathak and Muralidharan (2016) researched informal institutions such as societal collectivism and societal trust as impacting social entrepreneurial emergence. The authors argued that societal collectivism and societal trust were drawn from both North's (1990) informal institutions and Scott's (1995) cognitive pillars. The findings of this study suggested that in-group collectivism and interpersonal trust were positively associated with individual social entrepreneurial emergence. More recently, Sahasranamam and Nandakumar (2020) investigated the moderating role of formal institutions on the relationship between individual capital and social entrepreneurial entry. In this study, financial, education and political systems were the proxies for formal institutions, whereas individual capital comprises of financial, human and social capital. The findings indicated that the relationship between human capital and social entrepreneurial entry was positively moderated by the educational system, whereas the political system positively moderated the relationship between both human capital and financial capital with social entrepreneurial entry. Also, financial systems positively moderate the relationship between social entrepreneurial entry and financial capital. Sahasranamam and Nandakumar (2020) portray the vital role of institutions in impacting the relationship between individual-level factors and social entrepreneurial entry.

Table 2.1 summarises the review of the research studies discussed in this section. The table indicates the institutional factors examined in the different studies and the measure for social entrepreneurship. Most studies looked at both formal and informal institutions and the key take-away from this analysis is the important roles of both formal and informal institutions on social entrepreneurship.

Table 2.1 Institutional Theory in Social Entrepreneurship Research

	Authors	Year	Context	Institutional Factor	SE* Factor
1	Urbano, Teldano, Soriano	2010	Spain	Formal and Informal Institutions	Emergence and Implementation of SE
2	Ferri and Urbano	2011	Cross country	Formal and Informal Institutions	SE activity
3	Viviers, Venter, Solomon	2012	South Africa	Informal Institutions	SEI

4	Griffiths, Gundry and Kickul	2013	Cross country	Informal Institutions	SE activity
5	Estrin, Mickiewicz and Stephan	2013	Cross country	Formal and Informal Institutions	SE entry
6	Urbano, Jiménez and Noguera	2014	Cross country	Informal Institutions	Becoming Social Entrepreneur
7	Stephan, Uhlaner and Stride	2015	Cross country	Formal and Informal Institutions	Facilitate SE
8	Estrin, Mickiewicz and Stephan	2016	Cross country	Formal Institutions	SE entry
9	Hoogendoorn	2016	Cross country	Formal and Informal Institutions	SE entry
10	Pathak and Muralidharan	2016	Cross country	Informal Institutions	SE emergence
11	Ferri and Urbano	2017	Cross country	Formal and Informal Institutions	SE activity
12	Sahasranamam and Nandakumar	2020	Cross country	Formal Institutions	SE Entry

*SE=Social Entrepreneurial

2.2.3 Three Pillars of Institutions (TPI) Framework

Scott (1995, 2014) expanded the institutional theory with three analytical elements namely, regulatory, normative and cultural–cognitive, termed the "three pillars of institutions". He argued that these pillars in combination may work best in representing the theory of the institution (Scott, 1995, 2014). Each element played a pivotal role in building institutional structures while operating through distinctive mechanisms and processes. According to Hoffman (2001), these three elements form a scale that moves around from legal enforcement to being taken for granted and from the conscious to the unconscious. These pillars celebrate the strength and resilience of the institutions by contributing to a mutually reinforcing and interdependent social framework (Scott, 1995, 2014).

In *Institutions and Organizations*, Scott (1995, 2014) argued that scholars around the field highlighted the regulatory aspects of institutions that constrain and facilitate behaviour. Likewise, many economists viewed institutions resting primarily on a regulatory pillar. The regulatory pillar refers to the established rules, laws and sanctions to influence future behaviour for reward or punishment (Scott, 1995, 2014). This pillar follows legally sanctioned mechanisms with which to perform and comply.

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Another group of theorists viewed institutions as resting primarily on the normative pillar. Sociologists earlier embraced the normative institutions due to the focus on social obligation, shared beliefs, and values associated with social class, kinship groups, religious systems, and voluntary associations. The normative pillar highlights values and norms in social life by introducing prescriptive, evaluative and obligatory institutions. This pillar can empower and enable social action as well as impose restrictions on social behaviour (Scott, 1995, 2014). A set of institutionalists stress the importance of the cultural-cognitive pillar that constitutes the nature of social reality (Scott, 1995, 2001). The cultural-cognitive pillar addresses the internal interpretive processes that are shaped by cultural frameworks. It mediates between the external world of stimuli and the individual organism's responses to indicate common beliefs and shared logics of action. Therefore, the cultural–cognitive pillar of institutions comprises culturally supported common beliefs that comply with shared understanding (Scott, 1995, 2001). The following table 2.2 summarises the main characteristics and carriers of the three pillars of institutions.

Table 2.2 Three Pillars of Institutions Characteristics and Carriers

Source: Scott (2014, pp. 60)

Three Pillars of Institutions			
	Regulatory	*Normative*	*Cultural-Cognitive*
Characteristics			
Basics of Compliance	Expedience	Social Obligation	Taken for granted, Shared understanding
Basis of Order	Regulative rules	Binding expectations	Constitutive schema
Mechanism	Coercive	Normative	Mimetic
Logic	Instrumentality	Appropriateness	Orthodoxy
Indicators	Rules, Laws, Sanctions	Certification, Accreditation	Common belief, Shared logics of action
Basis of Legitimacy	Legally sanctioned	Morally governed	Comprehensible, Recognisable, Culturally supported
Carriers			
Symbolic systems	Rules, Laws	Values, Expectations	Categories, Typification, Schema
Relational system	Governance systems, Power systems	Regimes, Authority systems	Structural isomorphism, Identities
Routines	Protocols, Standard operating procedure	Jobs, Roles, obedience to duty	Scripts
Artefacts	Objects complying with mandated specifications	Objects meeting conventions, standards	Objects possessing symbolic value

Based on the three pillars of institutions, Kostova (1997) conceptualised and developed a country-level measurement scale termed as "Country Institutional Profile". This scale measured the country-level characteristics such as regulatory, normative, and cognitive institutions. It was validated across ten countries such as USA, Canada, Australia, UK, Argentina, France, Holland, Spain, Portugal, and Malaysia. This scale was only functional to the issue of quality management in these countries (Kostova, 1997). For entrepreneurship, Busenitz et al. (2000) introduced, refined and validated Kostova's (1997) country institutional profile scale for six countries including USA, Sweden, Norway, Spain, Italy and Germany. According to Busenitz et al. (2000), the institutional profile instrument explores the different types and levels of entrepreneurship existing in countries.

Table 2.3 below emphasises the country-specific institutional aspects of the three pillars of institutions.

Table 2.3 Operationalisation of Institutional Institutions
Source: Pinho (2017)

Three Pillars of Institutional Institutions			
Authors	*Regulatory*	*Normative*	*Cultural-Cognitive*
Scott (1995)	Rules, law, sanction	Certification, accreditation	Prevalence, isomorphism
Kostova(1997)	Regulative rules about quality of products and services	Quality-related social norms and values	Shared social knowledge about quality and quality management
Busenitz, Gomez, Spencer (2000)	Laws, regulations and government policies relating to new business	Degree of admiration for entrepreneurial activity	Knowledge and skills for establishing and operating a new business

2.3 THREE PILLARS OF INSTITUTIONS AND SOCIAL ENTREPRENEURIAL ACTIVITIES

In the context of social entrepreneurship, applying the three pillars of institutions framework is still undervalued. As discussed in an earlier section, the importance of both formal and informal institutions played a prominent role in social entrepreneurial activities. Hence, the three pillars of institutions framework suggest regulatory as formal institutions alongside dividing informal institutions into normative and cognitive institutions. In this regard, Stephan et al. (2015) advocated the importance of the three pillars of institutions' framework in facilitating social entrepreneurship. Despite this, very few studies have incorporated the three pillars of institutions' impact

on social entrepreneurial activities to date. Therefore, more research is needed to utilise this framework in capturing better explanatory power on social entrepreneurship. The following section will review five relevant quantitative studies retrieved from the systematic search that applied the three pillars of institutions to assess a relevant approach to social entrepreneurial intention.

Urban (2013) was the first to apply and validate the three pillars of institutions scale termed the institutional profile instrument (Busenitz et al., 2000) in social entrepreneurship. The author investigated the three pillars of institutions' influence on individual social entrepreneurial self-efficacy. According to Urban (2013), social entrepreneurial self-efficacy is the closest action to predict an individual's choice, behaviour and persistence to become a social entrepreneur. The author investigated the institutional environment influencing university students' self-efficacy to develop a social enterprise in South Africa. The findings of this study indicated that favourable regulatory and normative institutional environments are associated with higher levels of social-entrepreneurial self-efficacy. Similarly, Vyas et al. (2014) explored the perception of institutional environments towards social-entrepreneurial self-efficacy among the postgraduate entrepreneurial students in India. The outcome of this study suggested that positive regulatory, normative, and cognitive institutional environments are associated with higher levels of social entrepreneurial self-efficacy.

Later, Kujinga (2016) applied the three pillars of institutions framework to examine the institutional environment impacting social entrepreneurial intention (SEI) in South Africa. Recall, from chapter 1, SEI was defined as the intention to start a social enterprise. The author collected data from university students to determine the SEI through perceived feasibility and perceived desirability. The findings of this study indicated that only the regulatory institutional environment had a positive and direct relationship with both perceived feasibility and SEI. Both normative and cognitive institutional environments had negative and insignificant relationships with SEI.

Urban and Kujinga (2017) later examined SEI among the university students of South Africa with three pillars of institutions. Similar to Kujinga (2016), Urban and Kujinga (2017) also combined regulatory environment, normative environment, cognitive environment, perceived feasibility and perceived desirability to measure social entrepreneurial intention (SEI). This study assessed the mediating effects of perceived feasibility and perceived desirability on the relationship between the three pillars of

institutions and social entrepreneurial intention (SEI). The outcome of this study suggested that only the regulatory environment had strong positive impact on higher levels of both perceived feasibility and perceived desirability. However, both normative and cognitive institutional environments had insignificant relationships with perceived feasibility and perceived desirability.

Recently, Wannamakok and Chang (2020) replicated a similar model in Thailand to determine the direct and indirect effects of the institutional environment on social entrepreneurial intention (SEI). To measure SEI among Thai university students, the authors incorporated factors which were similar to past studies (Kujinga, 2016; Urban & Kujinga, 2017). The authors found that the regulatory environment and cognitive environment positively influenced SEI whereas the normative environment had no effect. Also, perceived feasibility mediates the relationship between the regulatory, normative and cognitive environment with SEI. Therefore, both the regulatory and cognitive environment had direct and indirect effects on SEI.

Table 2.4 summarises the review of the research studies discussed in this section. The table indicates the three pillars of institutions examined in the different studies. The key take-away from this analysis is the important roles of the regulatory, normative and cognitive institutional environment on social entrepreneurial self-efficacy and intention.

Table 2.4 Three Pillars of Institutions Framework for Social Entrepreneurship Research

	Authors	Year	Context	Factors
1	Urban	2013	South Africa	Regulatory institution, Normative institution, Cognitive institution, Social entrepreneurial self-efficacy
2	Vyas, Raitani and Mathur	2014	India	Regulatory institution, Normative institution, Cognitive institution, Social entrepreneurial self-efficacy
3	Kujinga	2016	South Africa	Regulatory institution, Normative institution, Cognitive institution, Perceived Feasibility, Perceived Desirability, Social Entrepreneurial Intention
4	Urban and Kujinga	2017	South Africa	Regulatory institution, Normative institution, Cognitive institution, Perceived Feasibility, Perceived Desirability, Social Entrepreneurial Intention

5	Wannamakok and Chang	2020	Thailand	Regulatory institution, Normative institution, Cognitive institution, Perceived Feasibility, Perceived Desirability, Social Entrepreneurial Intention

2.3.1 Regulatory Institutional Environment

The regulatory institutional environment is associated with the country's authorised and enforced structure of law (Urban, 2013). It refers to the policies, rules and laws towards social entrepreneurship (Urban & Kujinga, 2017). According to Kujinga (2016) and Seelos et al. (2011), it has the potential to either aid or restrict social entrepreneurial behaviour. For instance, Sahasranamam and Nandakumar (2020) argued for the importance of favourable laws and policies to even start a social enterprise venture. Likewise, the success of a social entrepreneurial venture depends on the strong rule of law (Estrin et al., 2013; Urban & Kujinga, 2017). Thus, the regulatory institutional environment has the power to control over social entrepreneurial processes and outcomes (Seelos et al., 2011; Urban & Kujinga, 2017). Recall Section 1.6.1, policies on microfinance, non-governmental organisations (NGOs), small and medium-sized enterprises (SMEs), private sector developments do favourably affects the development of social enterprises in Bangladesh. Also, the Ministry of Planning and Ministry of Social Welfare plans and implements policies to support the creation of both social and economic value for the social enterprises. Perhaps, these favorable initiatives and policies enhances the intention to become a social entrepreneur as argued by Kujinga (2016) and Wannamakok and Chang (2020).

In social entrepreneurial intention (SEI) research, Kujinga (2016) and Wannamakok and Chang (2020) advocated that regulatory institutions have a positive influence on SEI. Similarly, Urban and Kujinga (2017) suggested that the positive relationship between the regulatory environment and SEI were mediated by both perceived feasibility and perceived desirability. Accordingly, the following sub-hypothesis is proposed:

H1a: The regulatory institutional environment is positively related to social entrepreneurial intention.

Table 2.5 summarises the review of the research studies discussed in this section. The table demonstrates the important role of regulatory institutional environment on social entrepreneurial intention.

Table 2.5 Regulatory Institutional Environment for Social Entrepreneurial Intention

No	Authors	Year	Result
1	Kujinga	2016	Regulatory Institutional Environment (REG) → SEI
2	Urban and Kujinga	2017	REG→ Feasibility, Desirability → SEI
3	Wannamakok and Chang	2020	REG → SEI

2.3.2 Normative Institutional Environment

Normative institutional environment associates with the informal code and social obligations of the country in demonstrating the understanding of social entrepreneurship (Urban, 2013). For instance, a country's social structure can shape the perceived expectation and appropriateness of the behaviour towards social entrepreneurship (Seelos et al., 2011). It interacts with social norms and values reflecting on the morally governed acceptable behaviour for social entrepreneurship (Urban & Kujinga, 2017). The normative institutional environment, therefore, refers to the socially acceptable behaviour in relation to the concept of social entrepreneurship (Ferri & Urbano, 2017; Kujinga, 2016; Urban, 2013). Although the normative institutional environment had no significant direct influence on social entrepreneurial intention (SEI) (Kujinga, 2016; Wannamakok & Chang, 2020), it had an indirect positive relationship when mediated by perceived feasibility (Urban & Kujinga, 2017; Wannamakok & Chang, 2020). Despite these three studies, the unequivocal findings suggest further research is required in the context of social entrepreneurial intention to validate further the impact of the normative institutional environment. Recall section 1.6, Bangladesh is the home of BRAC and Grameen Bank two largest social enterprises in the world. These organizations has created a name locally and internationally on being innovative and impactful social enterprises. Also, the steady developments of the youth social entrepreneurs in the country were listed in "Forbes Asia 30 under 30" and received "Queen's Young Leaders Award". All these enhances the socially acceptable behaviour on social entrepreneurship among the citizens of Bangladesh (Section 1.6.2). Perhaps normative institutional environment can positively influence the SEI in Bangladesh. Therefore, the following sub-hypothesis is proposed:

H1b: The normative institutional environment is positively related to social entrepreneurial intention.

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Table 2.6 summarises the review of the research studies discussed in this section. The table demonstrates the role of normative institutional environment on social entrepreneurial intention.

Table 2.6 Normative Institutional Environment for Social Entrepreneurial Intention

No	Authors	Year	Result
1	Kujinga	2016	NORM→ SEI (Non-significant)
2	Urban and Kujinga	2017	NORM → Desirability →SEI (Non-significant) NORM → Feasibility → SEI (Significant)
3	Wannamakok and Chang	2020	NORM→ SEI (Non-significant)

2.3.3 Cognitive Institutional Environment

The cognitive institutional environment associates with the expected behaviour of social entrepreneurship in a country as a result of the application of cognitive knowledge, expertise and understanding (Urban, 2013). Therefore, it refers to the shared skills and logic of actions associated with operating a social venture in the country (Urban, 2013; Urban & Kujinga, 2017). Kujinga (2016) and Wannamakok and Chang (2020) suggested that the cognitive institutional environment has a positive influence on social entrepreneurial intention (SEI). Furthermore, the authors advocated the indirect effects that the cognitive institutional environment has on SEI when mediated by perceived feasibility (Kujinga, 2016; Wannamakok & Chang, 2020). However, Urban and Kujinga (2017) indicated that the cognitive environment has no significant relationship with SEI when mediated by perceived feasibility and desirability. Insufficient research has been conducted on the effect of the cognitive environment in the context of social entrepreneurial intention to validate this outcome thereby warranting further investigation. Recall section 1.6.2, Bangladeshi government initiated support programs, such as incubators and accelerators, to offer cognitive knowledge, understanding and expertise on social enterprises. Prominent incubators and accelerator such as Yunus Centre, YYGoshti, Toru and TekShoi are working relentlessly to enhance social entrepreneurial activities in Bangladesh. Also, education providers offer cognitive knowledge by hosting the social business case competition, social business youth convention and Bangladesh Start-up cup social. Based on this, probably cognitive institutional environment can positively influence the SEI in Bangladesh. Therefore, the following sub-hypothesis is proposed:

H1c: The cognitive institutional environment is positively related to social entrepreneurial intention.

Table 2.7 summarises the review of the research studies discussed in this section. The table demonstrates the role of cognitive institutional environment on social entrepreneurial intention.

Table 2.7 Cognitive Institutional Environment for Social Entrepreneurial Intention

No	Authors	Year	Result
1	Kujinga	2016	COG→ SEI (Non-significant relationship)
2	Urban and Kujinga	2017	COG → Feasibility, Desirability →SEI (Non-significant relationship)
3	Wannamakok and Chang	2020	COG → SEI

Based on the above discussion, it can be argued that the constructs of the three pillars of institutions has the potential to impact social entrepreneurial intention (SEI). Moreover, insufficient research has been conducted on this framework and in the context of Bangladesh for measuring SEI. Thus, it is important to explore the direct association of these constructs impacting on social entrepreneurial intention. Based on the sub-hypotheses, the following main hypothesis is proposed:

Hypothesis 1: Regulatory, normative and cognitive institutional environments are positively related to social entrepreneurial intention.

2.4 THEORETICAL CONSIDERATION – MAIR NOBOA MODEL

In the context of social entrepreneurship, Mair and Noboa were the first to investigate intention formation (Ernst, 2011; Hockerts, 2017; Mair, 2006). This model was specifically developed for predicting social entrepreneurial intention (Kruse et al., 2020). Mair and Noboa developed this model in 2006 while concentrating on specific variables to demonstrate potential differences between commercial and social entrepreneurship (Ernst, 2011). In 2006, Mair and Noboa proposed the Mair Noboa model (MNM) based on the theory of planned behaviour (TPB) (Ajzen, 1991) and Shapero's entrepreneurial event (SEE) (Shapero & Sokol, 1982) to predict social entrepreneurial intention (SEI) (Ernst, 2011; Kruse et al., 2020; Mair & Noboa, 2006). The following sections discuss the step-by-step theoretical development starting from the theory of planned behaviour (TPB), Shapero's entrepreneurial event (SEE), followed by the Mair Noboa model (MNM). At the end, a thorough discussion on the

related research associated with MNM constructs and SEI is provided with the proposed hypotheses.

2.4.1 Development of Theory of Planned Behaviour (TPB)

Theory of Planned Behaviour (TPB) was proposed by Icek Ajzen as an extension of theory of reasoned action (TRA) (Ajzen, 1991). The theory of reasoned action (TRA) was developed by Martin Fishbein and Icek Ajzen to establish intention as a human attitude to start an action in the field of social psychology (Fishbein & Ajzen, 1975). In the TRA, Fishbein and Ajzen (1975) emphasised the behavioural and normative belief antecedents for intention (see figure 2.1). Attitude represents the certain way that an individual behaves, whereas social norms signify the perceived social pressure to perform a certain behaviour (Ajzen, 1991). This theory highlights that attitude and social norms influence behavioural intention. However, TPB extends the TRA with the antecedent perceived behavioural control (see figure 2.2). Madden et al. (1992) argued that TPB has better explanatory and predictive power compared to TRA. Furthermore, TPB has a better solution due to perceived behavioural control significantly enhancing the prediction of intention and the behaviour when compared to TRA (Madden et al., 1992).
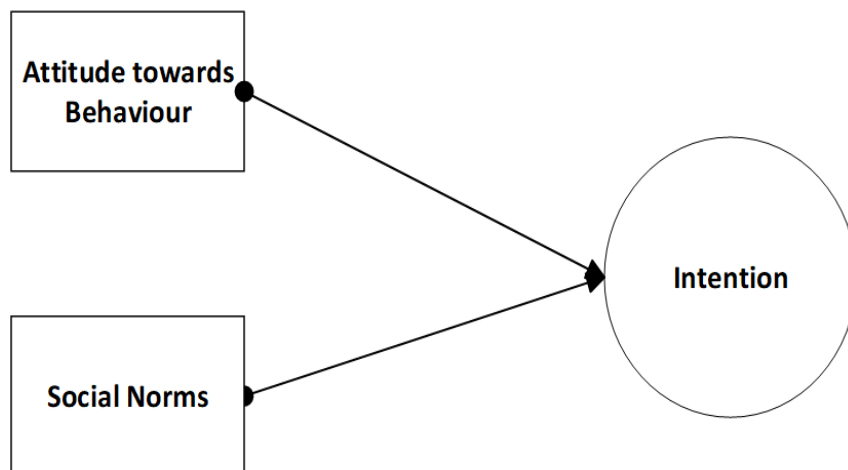
Figure 2.1 Theory of Reasoned Action by Fishbein and Ajzen (1975)

The TPB emphasises the behavioural, normative and control beliefs in determining the intention to perform a certain activity (Ajzen, 1991). In TPB, attitude towards behaviour is the proxy for behavioural beliefs, social norms act as the proxy for normative beliefs and perceived behavioural control acts as a proxy for control beliefs when influencing behavioural intention (Ajzen, 1991, 2001). The perceived behavioural control associates with an individual's perceived ease and difficulty to

perform certain behaviours; it has the potential to directly and indirectly influence the behaviour through intention (Ajzen, 1991, 2001; Mair & Noboa, 2006; Politis et al., 2016; Tiwari et al., 2017a, 2017b). To date, the TPB is one of the most cited models for predicting social and commercial entrepreneurial intention (Ahuja et al., 2019; Politis et al., 2016; Tiwari et al., 2017a, 2017b; Zaremohzzabieh et al., 2019).
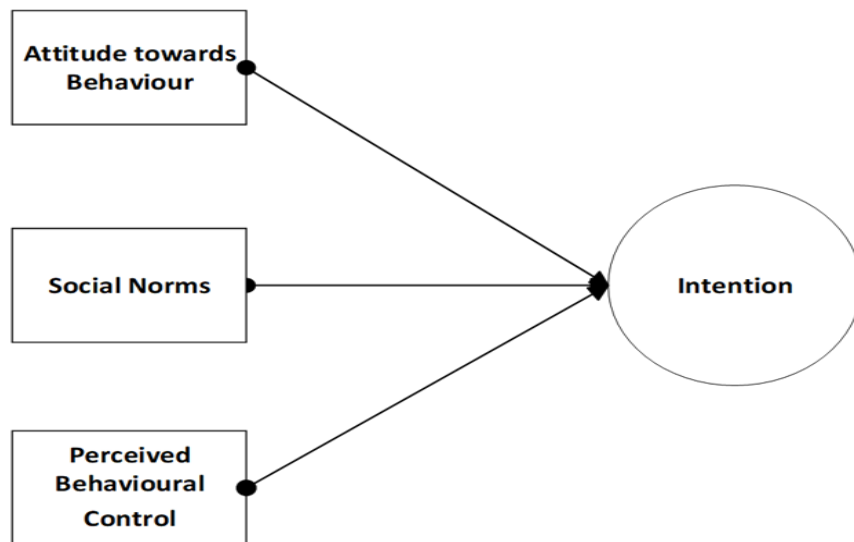
Figure 2.2 Theory of Planned Behaviour Model by Ajzen (1991)

2.4.2 Theory of Planned Behaviour and Social Entrepreneurial Intention

Over the years, the Theory Planned Behaviour (TPB) has been a landmark theory to determine social entrepreneurial intention (SEI) (Ahuja et al., 2019; Tiwari et al., 2017a, 2017b; Zaremohzzabieh et al., 2019). To understand the background of SEI research, this section will review the most relevant quantitative studies that applied TPB. Ajzen (1991) suggested extending TPB for bringing out additional insights for intention. As a result, most of the literature has either built upon TPB or acts as an extension to TPB for measuring SEI. The following section will review the relevant quantitative studies retrieved from the systematic search that has either applied TPB or further built on it.

In social entrepreneurship research, Ernst (2011) was one of the early investigators to apply TPB to determine social entrepreneurial intention (SEI) in Germany. The author extended TPB by introducing antecedents such as social entrepreneurship personality, social entrepreneurship human capital and social entrepreneurship social capital to determine SEI. The findings of this study indicated that attitude towards behaviour and perceived behavioural control directly influence SEI. Additionally, attitude towards behaviour positively mediates the relationship between social entrepreneurship

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personality, social entrepreneurship human capital, social entrepreneurship social capital and SEI. Furthermore, perceived behavioural control mediates the positive relationship between social entrepreneurship human capital and SEI (Ernst, 2011).

In the USA, Bosch (2013) determined social entrepreneurial intention (SEI) by extending TPB with personal values. The personal values consisted of self-transcendence, conservation, self-enhancement, and openness to change. The findings of this study indicated that self-transcendence, attitude towards behaviour, social norms and perceived behavioural control directly influence SEI. Yang et al. (2015) applied TPB by looking at the moderating effect of culture in the USA and China on SEI. The findings reveal that social norms have the strongest impact on SEI for Chinese culture, whereas attitude towards behaviour has the strongest impact on SEI for the US culture (Yang et al., 2015).

Moreover, Politis et al. (2016) applied TPB, personality trait theory and the theory of contextual influence to determine social entrepreneurial intention (SEI) in Greece. The findings indicated that attitude towards behaviour and perceived behavioural control have significant impacts on SEI whereas social norms did not. Tiwari et al. (2017a) applied TPB antecedents as mediators in identifying the relationship of self-efficacy and cognitive style upon SEI in India. The findings of this study indicated all the three antecedents of TPB had positive significant impacts on SEI. Additionally, all the TPB antecedents mediated the relationship between self-efficacy and cognitive style upon SEI (Tiwari et al., 2017a).

Similarly, Tiwari et al. (2017b) again applied TPB antecedents as mediators in identifying the impact of emotional intelligence, creativity, moral obligation upon social entrepreneurial intention (SEI). The result indicated all the three antecedents of TPB had positive significant impacts on SEI. Also, all three TPB antecedents mediate the relationship between creativity and moral obligation upon SEI, whereas the relationship between emotional intelligence and SEI is mediated only by attitude towards behaviour and perceived behavioural control (Tiwari et al., 2017b).

Kazmi et al. (2019) applied antecedents such as attitude towards behaviour, social norm, and self-efficacy as mediators to determine social entrepreneurial intention (SEI). This study identified whether emotional intelligence and moral obligation have a mediated relationship with SEI in Pakistan and China. The findings of this study

indicated that the relationship between moral obligation and SEI is mediated by attitude towards behaviour, social norms, and self-efficacy. Conversely, the relationship between emotional intelligence and SEI is mediated only by attitude towards behaviour and social norms (Kazmi et al., 2019). However, Chipeta (2019) integrated the antecedents of TPB and Shapero's entrepreneurial event model alongside proactive personality, financial risk and altruism to determine SEI in South Africa. This study's findings indicated that attitude towards entrepreneurship, perceived behavioural control, social entrepreneurial perceived feasibility and perceived desirability are the strongest indicators for pursuing SEI for university students in South Africa (Chipeta, 2019). Recently, Kruse (2020) applied the TPB antecedents only to determine SEI in Germany. The findings suggested that a favourable attitude towards social entrepreneurship and higher levels of perceived behavioural control have significant positive effect on SEI (Kruse, 2020).

Table 2.8 summarises the review of the research studies discussed in this section. The table indicates the TPB factors examined in the different studies and the measure for social entrepreneurial intention. The key take-away from this analysis is the important roles of attitude towards behaviour, social norms and perceived behavioural control on social entrepreneurial intention.

Table 2.8 Studies Applying TPB for Social Entrepreneurial Intention

	Authors	Year	Context	Factors
1	Ernst	2011	Germany	Attitude towards becoming a social entrepreneur, social norms on becoming a social entrepreneur, perceived behavioural control on becoming a social entrepreneur, social entrepreneurial human capital, social entrepreneurial social capital, social entrepreneurial personality
2	Bosch	2013	USA	Attitudes towards behaviour, perceived behavioural control, social norms, personal values (self-transcendence, conservation), personal values (self-enhancement, openness to change)
3	Yang, Meyskens, Zheng, and Hu	2015	USA and China	Behavioural attitude, perceived behavioural control, social norms, culture

4	Politis, Ketikidis, Diamantidis, and Lazuras	2016	Greece	Personal attitude, creativity and problem solving, perceived behavioural control, propensity to risk, social norm, leadership and communication skills (locus of control)—type of thinking, need for achievement, preference for autonomy and independence, feelings of benevolence
5	Tiwari, Bhat, and Tikoria	2017a	India	Attitude towards becoming a social entrepreneur, perceived behavioural control, social norm, cognitive style, self-efficacy
6	Tiwari, Bhat, and Tikoria	2017b	India	Attitude towards becoming a social entrepreneur, perceived behavioural control, social norms, emotional intelligence, creativity, moral obligation
7	Chipeta	2019	South Africa	Attitude towards entrepreneurship, Social norms, Perceived behavioural control, Social entrepreneurial perceived feasibility, Social entrepreneurial perceived desirability, Proactive personality, Financial risk, Altruism
8	Kazmi, Hammad, Ahmed and Zuliqar	2019	Pakistan and China	Entrepreneurial Attitude, Entrepreneurial Social Norm, Moral obligation, Self-efficacy, Emotional intelligence
9	Kruse	2020	Germany	Behavioural attitude, perceived behavioural control, social norms

2.4.3 Development of Shapero's Entrepreneurial Event

In the context of entrepreneurship, Shapero and Sokol developed the entrepreneurial event model for measuring intention (Krueger, 2017; Shapero & Sokol, 1982). This model, widely known as Shapero's entrepreneurial event (SEE), advocates that perceived desirability, propensity to act and perceived feasibility directly impact entrepreneurial intention (Shapero & Sokol, 1982). The authors referred to perceived desirability as the attractiveness of performing an entrepreneurial event, whereas perceived feasibility as the individual's belief in his/her capability in performing the entrepreneurial event and the tendency to act on performing the event referred as propensity to act (Shapero & Sokol, 1982) (see figure 2.3). The feasibility and desirability differ based on individual perceptions (Mair & Noboa, 2006). Therefore, the social and cultural environments shape the perception of feasibility and desirability that determines the actions to be taken to start an enterprise (Shapero & Sokol, 1982).

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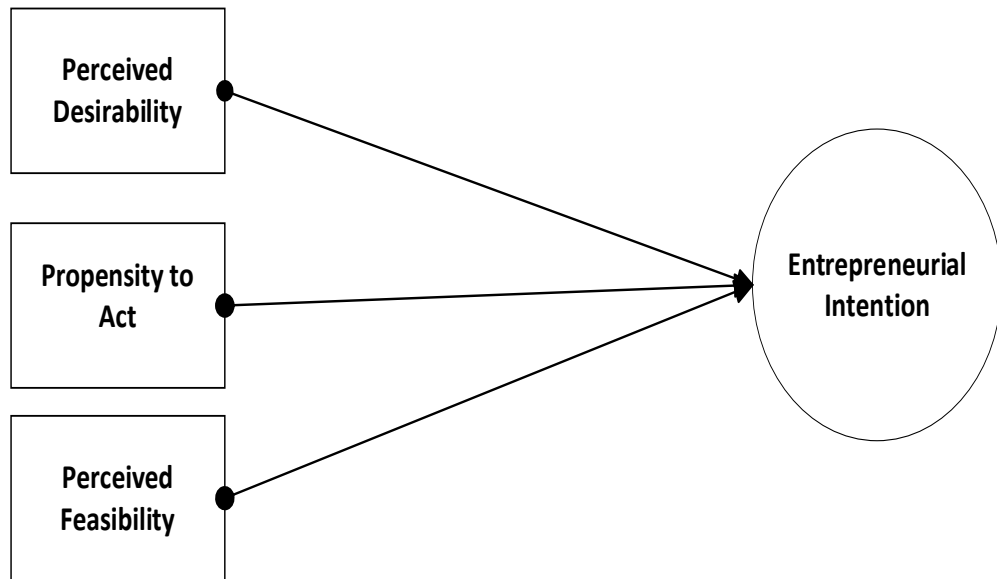
Figure 2.3 Shapero's Entrepreneurial Event Model based on Shapero and Sokol (1982)

2.4.4 Shapero's Entrepreneurial Event and Social Entrepreneurial Intention

Shapero's entrepreneurial event (SEE) has been adapted by researchers to examine social entrepreneurial intention (SEI). This section will review the relevant quantitative studies retrieved from the systematic search related to SEE for understanding the background of SEI research. Forster and Grichnik (2013) applied SEE antecedents to investigate SEI on corporate volunteers in Switzerland. The authors applied the SEE antecedents as mediators to determine the impact of empathy and self-efficacy at the individual level and perceived social norms and perceived collective efficacy at the environmental level. The findings of this study indicated that perceived feasibility and perceived desirability positively influence SEI. Also, perceived desirability mediates the relationship between empathy and perceived social norms upon SEI. In addition, self-efficacy and perceived collective efficacy positively influence SEI when mediated by perceived feasibility (Forster & Grichnik, 2013).

Likewise, Ayob et al. (2013) examined the social entrepreneurial intention (SEI) of Malaysian undergraduate students by applying SEE. The SEE antecedents acted as mediators to determine the impact of empathy and exposure to social entrepreneurship upon SEI. In this study, perceived desirability significantly influences SEI, unlike perceived feasibility. Hence, perceived desirability mediates the relationship between exposure to social entrepreneurship and SEI (Ayob et al., 2013). Similarly, Wilton (2016) applied SEE constructs as mediators to identify the impact of empathy and exposure to social entrepreneurship on SEI for South Africa. The study's findings

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highlight that perceived desirability and perceived feasibility significantly influence SEI unlike Ayob et al. (2013). Also, perceived feasibility mediates the relationship between empathy and exposure upon SEI (Wilton, 2016). As previously mentioned, Chipeta (2019) integrated the antecedents of SEE and the theory of planned behaviour alongside proactive personality, financial risk and altruism to determine SEI. This study found that perceived feasibility, perceived desirability, attitude towards entrepreneurship and perceived behavioural control are the strongest indicators for pursuing SEI among university students in South Africa (Chipeta, 2019).

D'Orazio et al. (2013) applied SEE in Italy to identify the impact of bridging social capital, bonding social capital and human capital on social entrepreneurial intention (SEI). The results suggest that both perceived feasibility and perceived desirability influence SEI. Also, perceived feasibility mediates the relationship between SEI and bonding social capital (D'Orazio et al., 2013). On a different note, Baierl et al. (2014) applied SEE constructs to determine SEI while examining the moderating effects of general social appraisal. The findings indicated that general social appraisal strengthens the relationship between perceived desirability and SEI in Germany. Moreover, perceived feasibility, perceived desirability and general social appraisal are strong direct predictors of SEI (Baierl et al., 2014). Later, Moorthy and Annamalah (2014) extended the SEE with perceived self-efficacy and perceived social norms to investigate SEI. The findings illustrate that perceived desirability and perceived feasibility positively impact SEI in Malaysia. Perceived desirability is also associated with perceived social norms, whereas perceived feasibility is associated with perceived self-efficacy (Moorthy & Annamalah, 2014).

While developing the Social Entrepreneurial Antecedents Scale (SEAS), Hockerts (2015) associated empathy, moral obligation, social entrepreneurial self-efficacy and perceived social support with the SEE constructs in Denmark. The findings suggested that empathy and moral obligation are positively associated with perceived desirability, whereas social entrepreneurial self-efficacy and perceived social support are positively associated with perceived feasibility (Hockerts, 2015). As previously discussed, Urban and Kujinga (2017) and Wannamakok and Chang (2020) integrated SEE constructs with the three pillars of institutions framework. In Urban and Kujinga (2017), the findings indicated that perceived feasibility and perceived desirability

positively impact SEI in South Africa. In Wannamakok and Chang (2020), the results suggested that perceived feasibility positively impacts SEI in Thailand.

Table 2.9 summarises the review of the research studies discussed in this section. The table indicates the SEE factors examined in the different studies. The key take-away from this analysis is the important roles of perceived feasibility and perceived desirability on social entrepreneurial intention.

Table 2.9 Studies Applying SEE for Social Entrepreneurial Intention

	Authors	Year	Context	Factors
1	Forster and Grichnik	2013	Switzerland	Perceived Feasibility, Perceived Desirability, Empathy, Perceived Social Norm, Perceived Collective Efficacy, Self-efficacy
2	Ayob, Yap, Sapuan, and Rashid	2013	Malaysia	Empathy, Exposure, Perceived Feasibility, Perceived Desirability
3	D'Orazio, Tonelli and Monaco	2013	Italy	Bonding social capital, bringing social capital, perceived desirability, perceived feasibility, Human capital
4	Baierl, Grichnik, Sporrle and Welpe	2014	Germany	Perceived desirability, Perceived feasibility, Individual's general social appraisal
5	Moorthy and Annalamalah	2014	Malaysia	Perceived self-efficacy, Perceived desirability, Perceived feasibility, Propensity to act, Perceived social norms
6	Hockerts	2015	Denmark	Empathy, Moral Obligation, Self-Efficacy, Perceived Social Support, Perceived feasibility, Perceived desirability
7	Wilton	2016	South Africa	Empathy, Exposure, Self-Efficacy, Perceived Feasibility, Perceived Desirability
8	Urban and Kujinga	2017	South Africa	Perceived Feasibility, Perceived Desirability, Regulatory institution, Normative institution, Cognitive institution
9	Chipeta	2019	South Africa	Attitude towards entrepreneurship, Social norms, Perceived behavioural control, Social entrepreneurial perceived feasibility, Social entrepreneurial perceived desirability, Proactive personality, Financial risk, Altruism
10	Wannamakok and Chang	2020	Thailand	Perceived Feasibility, Perceived Desirability, Regulatory institution, Normative institution, Cognitive institution

2.4.5 Development of Mair Noboa Model

Mair and Noboa were the first to propose a conceptual model that fully concentrated on the specific constructs that advocate the intention formation for social entrepreneurship (Ernst, 2011; Hockerts, 2017; Kruse et al., 2020). The Mair Noboa

model (MNM) incorporated most relevant constructs for social entrepreneurs such as empathy, moral judgement, perceived social support and social entrepreneurial self-efficacy (Mair & Noboa, 2006). This model has the potential to provide clearer perspectives, logic and vision to social entrepreneurial intention (Ernst, 2011).

As mentioned earlier, the MNM was developed based on the theory of planned behaviour (TPB) and Shapero's entrepreneurial event (SEE). Mair and Noboa (2006) proposed empathy as the proxy for attitude towards behaviour, moral judgement as the proxy for social norms, whereas perceived social support and social entrepreneurial self-efficacy were the proxies for perceived behavioural control considering the Theory of Planned Behaviour (Hockerts, 2017). Additionally, Mair and Noboa (2006) proposed perceived social venture desirability and perceived social venture feasibility considering Shapero's entrepreneurial event (SEE). In the MNM, perceived social venture desirability is facilitated by empathy and moral judgement, whereas perceived social venture feasibility is enabled by perceived social support and social entrepreneurial self-efficacy. Finally, perceived social venture desirability and perceived social venture feasibility influence social entrepreneurial intention as shown in figure 2.4 below.
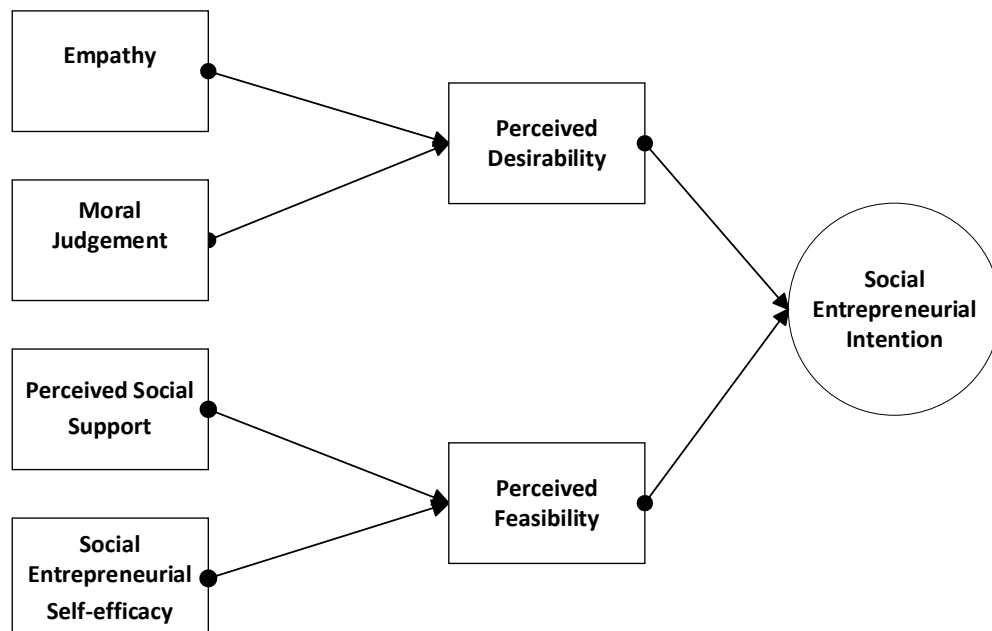
Figure 2.4 Initial Mair Noboa Model by Mair and Noboa (2006)

Based on this model, Kai Hockerts developed, tested and validated the Social Entrepreneurial Antecedents Scale (SEAS) in 2015 (Hockerts, 2015). In SEAS,

Hockerts (2015) refined the construct moral judgement for improved appropriation as moral obligation. According to Haines et al. (2008), moral judgement is an antecedent to moral obligation. Therefore, Hockerts (2014, 2015) advocated that moral obligation can define social entrepreneurial intention better as it is positioned between an act of moral judgement and establishment of moral intention. Hockerts (2017) established direct relationships between MNM antecedents and social entrepreneurial intention (SEI). In Hockerts (2017), both perceived feasibility and perceived desirability constructs loaded as one in the exploratory factor analysis. Later, Hockerts (2017) rejected both perceived feasibility and perceived desirability constructs to achieve validity. The author further developed the MNM by establishing direct connections. In Hockerts (2017), empathy, moral obligation, perceived social support, and social entrepreneurial self-efficacy are directly related to SEI, as shown in figure 2.5 below. The revised MNM is applied in this doctoral research.
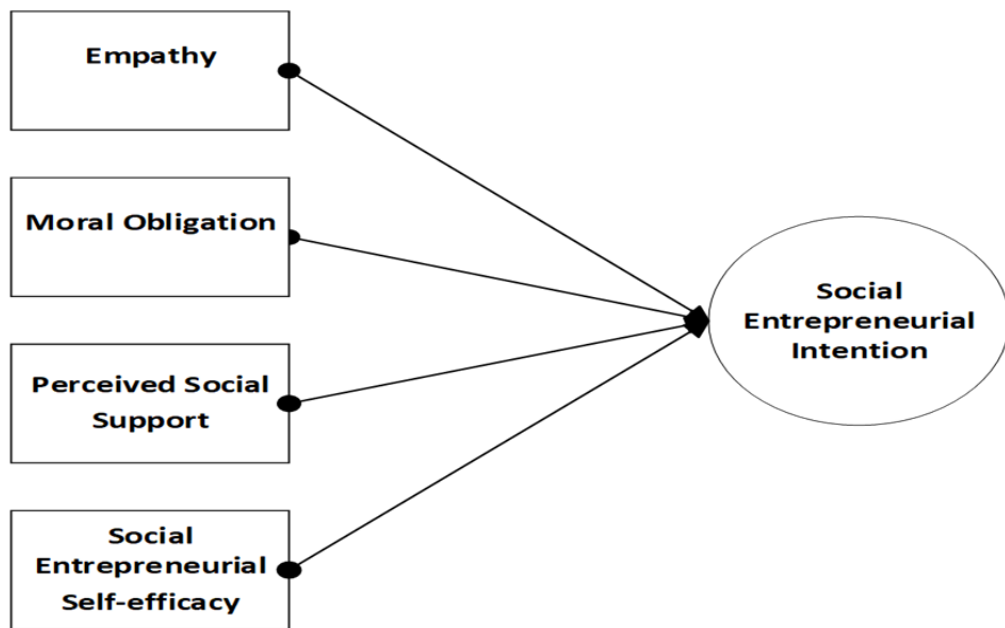
Figure 2.5 Mair Noboa Model based on Hockerts (2017)

2.5 MAIR NOBOA MODEL AND SOCIAL ENTREPRENEURIAL INTENTION

The Mair Noboa model (MNM) was exclusively developed for assessing social entrepreneurial intention (SEI). As previously mentioned, the current research focuses on the revised MNM where the constructs such as empathy, moral obligation, perceived social support and social entrepreneurial self-efficacy directly affect SEI. It will help understand the significance of these constructs affecting nascent social

entrepreneurs. From this point onwards, the revised MNM will be referred as MNM. Hence, the following section will review the relevant quantitative studies retrieved from the systematic search that has either applied MNM or further built on this model.

To begin, Urban and Teise (2015) has built on MNM by extending clear vision, innovativeness, desire for independence and need for achievements as antecedents. Unlike MNM, Urban and Teise (2015) proposed moral judgement and empathy as a single factor. The outcome of this study indicated that achievement, self-efficacy, moral judgement and empathy all had positive relationships on SEI in South Africa (Urban & Teise, 2015).

Hockerts (2017) then applied MNM antecedents as mediators affecting the relationship between prior experience and social entrepreneurial intention (SEI). This study collected data from three samples of university students across Denmark, the USA and massive online open courses (MOOC). For all three samples, the findings indicated that perceived social support and social entrepreneurial self-efficacy have the strongest positive influence on SEI. The findings of the Danish student sample indicated that the relationship between prior experience and SEI can be fully mediated by empathy, self-efficacy and perceived social support. The findings of the US student sample indicated that the relationship between prior experience and SEI can be partially mediated by self-efficacy and perceived social support. For both these samples, moral obligation had no significance on SEI. The findings for the MOOC sample indicated that the relationship between prior experience and SEI can be fully mediated by empathy, self-efficacy and perceived social support. However, moral obligation had a negative significance on SEI for the MOOC sample. A key finding of this study is that empathy acted as a significant positive mediator for the Danish and MOOC samples, whereas, for the US sample, the effect is negative and statistically not significant (Hockerts, 2017).

Ip et al. (2017) added prior experience as an antecedent to the existing MNM antecedents to measure SEI among the university students in Hong Kong. The findings of this study indicated that empathy, perceived social support and prior experience positively influenced SEI, whereas moral obligation had a negative influence. However, social entrepreneurial self-efficacy had no significant effect on SEI (Ip et al., 2017). Similarly, Fatoki (2018) applied MNM and prior experience constructs on measuring SEI among university students in South Africa. Apart from prior

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experience, all the four antecedents of MNM had significant relationships with SEI (Fatoki, 2018).

Later, Ip et al. (2018) investigated a comparative study between Taiwan and Hong Kong by applying MNM in determining SEI through conviction and preparation. The authors' proposed multi-step mediations, where the constructs of MNM alongside entrepreneurial creativity (originality and usefulness) performed as mediators affecting the relationship between prior experience and SEI. In the proposed framework, prior experience can be mediated by constructs of MNM, originality and usefulness, whereas the MNM constructs can also be mediated by originality and usefulness when determining social entrepreneurial conviction and preparation.

Overall, the findings of this study suggested that prior experience, perceived social support and originality are the strongest predictors of social entrepreneurial intention (SEI). For the Taiwanese sample, prior experience positively impacts SEI through the mediation of empathy, moral obligation, and self-efficacy, perceived social support, originality, and usefulness. As hypothesised, moral obligation had a negative effect on entrepreneurial creativity for Taiwanese students. For the sample of Hong Kong, prior experience positively impacts SEI through the mediation of self-efficacy, perceived social support and originality. An important finding is that empathy had a significant positive relationship with entrepreneurial creativity for the Taiwanese sample, whereas a significant negative relationship was found for the Hong Kong sample (Ip et al., 2018).

Aure (2018) applied MNM constructs as mediators to identify the impacts of the constructs associated with personality trait theory, 'grit' and prior experience in the Philippines. The findings of this study suggested that empathy, social entrepreneurial self-efficacy and perceived social support positively affect social entrepreneurial intention (SEI). Moreover, empathy, social entrepreneurial self-efficacy, and perceived social support mediate the relationship between agreeableness and prior experience upon SEI. Also, social entrepreneurial self-efficacy and perceived social support mediate the relationship between 'grit' and SEI.

Furthermore, Lacap et al. (2018) applied MNM constructs as mediators to prior experience on identifying SEI among the university students in Philippines and Indonesia. This study found that perceived social support and social entrepreneurial

self-efficacy strongly impact SEI, whereas moral obligation had a weak significant effect and empathy had a negative non-significant effect on SEI. Also, the relationship between prior experience and SEI were mediated by perceived social support and social entrepreneurial self-efficacy (Lacap et al., 2018).

Similarly, Peng et al. (2019) applied MNM constructs as mediators of the relationship between prior experience and SEI in Chinese university students. Empathy, moral obligation, and social entrepreneurial self-efficacy showed positive relationships with SEI. In Zimbabwe, Rambe and Ndofirepi (2019) applied MNM constructs to determine SEI among the college students. They found that empathy and social entrepreneurial self-efficacy positively relates to SEI.

Additionally, Kruse (2020) applied the MNM to determine SEI among German students. The findings indicated that empathy and social entrepreneurial self-efficacy had a positive significant relationship with SEI. Both moral obligation and perceived social support indicated negative non-significant effects on social entrepreneurial intention (SEI).

In the context of Bangladesh, Ashraf (2020) applied MNM antecedents to investigate the Islamic social entrepreneurial intention (*nyyah*) among university students. The author proposed to examine the direct and indirect relationship between the MNM antecedents and the *nyyah* while having prior experience act as the mediator. The findings of this study indicated that prior experience, perceived social support and social entrepreneurial self-efficacy positively influenced *nyyah*, whereas moral obligation negatively influenced *nyyah* and prior experience.

In Brazil, Sousa-Filho et al. (2020) applied MNM constructs to determine social entrepreneurial intention (SEI). This study also differentiates the findings with higher and lower income samples. The findings for the higher income sample indicated that empathy, perceived social support, prior experience and social entrepreneurial self-efficacy are positively related to SEI. Conversely, only social entrepreneurial self-efficacy is positively related to SEI for the lower income sample (Sousa-Filho et al., 2020).

Table 2.10 summarises the review of the research studies discussed in this section. The table indicates the MNM antecedents examined in the different studies and the measure for social entrepreneurial intention. Important outcomes from this analysis

are the roles of empathy, moral obligation, perceived social support and social entrepreneurial self-efficacy on social entrepreneurial intention.

Table 2.10 Studies Applying MNM for Social Entrepreneurial Intention

	Authors	Year	Context	Factors
1	Urban and Teise	2015	South Africa	Moral Judgement and Empathy, Self-Efficacy, Social Support, Vision Innovativeness, Independence, Achievements
2	Hockerts	2017	Denmark, USA, MOOC	Empathy, Moral Obligation, Self-Efficacy, Perceived Social Support, Prior experience
3	Ip, Wu, Liu, and Liang	2017	Hong Kong	Empathy, Moral Obligation, Self-Efficacy, Perceived Social Support, Prior experience
4	Ip, Liang, Wu, Law and Liu	2018	Taiwan and Hong Kong	Prior experience, Empathy, Moral Obligation, Self-Efficacy, Perceived Social Support, Originality, Usefulness
5	Aure	2018	Philippines	Empathy, Moral Obligation, Self-Efficacy, Perceived Social Support, Prior experience, prior exposure, Grit, openness, conscientiousness, extraversion, agreeableness, neuroticism
6	Fatoki	2018	South Africa	Empathy, Moral Obligation, Self-Efficacy, Perceived Social Support, Prior experience
7	Lacap, Mulyaningsih, and Ramadani	2018	Philippines and Indonesia	Empathy, Moral Obligation, Self-Efficacy, Perceived Social Support, Prior experience
8	Peng, Hassan, Akhtar, Sarwar, Khan, and Khan	2019	China	Empathy, Moral Obligation, Self-Efficacy, Perceived Social Support, Prior experience
9	Rambe and Ndofirepi	2019	Zimbabwe	Empathy, Moral Obligation, Self-Efficacy, Perceived Social Support
10	Kruse	2020	Germany	Empathy, Moral Obligation, Self-Efficacy, Perceived Social Support, Prior experience
11	Ashraf	2020	Bangladesh	Empathy, Moral Obligation, Self-Efficacy, Perceived Social Support, Prior experience
12	Sousa-Filho, Matos, Trajano and Lessa	2020	Brazil	Empathy, Moral Obligation, Self-Efficacy, Perceived Social Support, Prior experience

2.5.1 Empathy

Empathy is the essence for compassion that triggers prosocial behaviour (Batson & Powell, 2003; Hoffman, 2001; Oswald, 1996). It referred as an emotional reaction of compassion, sympathy and concern for the underprivileged groups (Oswald, 1996). Thus, empathy associates with an attitude that initiates in helping anyone in need (Barnett et al., 1981; Batson & Powell, 2003). Social entrepreneurs tend to strongly affiliate with empathy as identified in the past studies by Dees (2012), Groch et al. (2012), London (2010), Sullivan Mort et al. (2003) and Wood (2012). Based on past

studies, Mair and Noboa (2003, 2006) proposed empathy as an essential antecedent of social entrepreneurial intention (SEI). In the context of SEI, empathy referred as the ability to logically identify and share the emotional feelings for the needy (Mair & Noboa, 2006). Likewise, Hockerts (2015) defined empathy as the emotional feelings that an individual have for the underprivileged groups. For this research, empathy associates with care, compassion, and emotion that an individual feels for the socially disadvantaged groups.

In the context of social entrepreneurship research, empathy has been identified as a positive indicator impacting on SEI (Aure, 2018; Fatoki, 2018; Ip et al., 2017; Kruse, 2020; Peng et al., 2019; Rambe & Ndofirepi, 2019). Empathy also positively influences perceived desirability which affects SEI (Forster & Grichnik, 2013; Hockerts, 2015). Similarly, it positively influences perceived feasibility that also affects SEI (Ayob et al., 2013; Wilton, 2016).

However, empathy acted as a significant positive mediator as well as negative mediator for the two different sample in Hockerts (2017). It also indicated positive relationship with entrepreneurial creativity for the Taiwanese sample and negative relationship with entrepreneurial creativity for the Hong Kong sample in Ip et al. (2018). For the higher income group in Brazil Sousa-Filho et al. (2020) indicated that empathy positively relates with SEI, whereas empathy indicated insignificant relationship with SEI for the lower income group of Brazil. In few studies conducted by Ashraf (2020), Lacap et al. (2018) and Rashid et al. (2018) findings indicates that empathy has no significant relationship with social entrepreneurial intention (SEI). Meanwhile, Bacq and Alt (2018) and Younis et al. (2020) suggested that empathy only indirectly affect SEI. Based on these findings, it can be argued that empathy has the potential to affect SEI. Further investigation is needed on the effect that empathy has on SEI. Accordingly, the following sub-hypothesis is proposed:

H2a: Empathy is positively related to social entrepreneurial intention.

Table 2.11 summarises the review of the research studies discussed in this section. The table demonstrates the role of empathy on social entrepreneurial intention.

Table 2.11 Empathy for Social Entrepreneurial Intention

No	Authors	Year	Findings
1	Forster and Grichnik	2013	Empathy→Perceived Desirability→ SEI (+)

2	Ayob et al.	2013	Empathy → Feasibility→SEI(+)
3	Hockerts	2015	Empathy → Perceived Desirability→SEI(+)
4	Wilton	2016	Empathy→Feasibility→SEI(+)
5	Hockerts	2017	Empathy → SEI (+),Empathy → SEI (-)
6	Ip et al.	2017	Empathy →SEI (+)
7	Ip et al.	2018	Empathy → Entrepreneurial Creativity (+),Empathy → Entrepreneurial Creativity (-)
8	Aure	2018	Empathy→SEI(+)
9	Lacap et al.	2018	Empathy has no significant relationship with SEI
10	Bacq and Alt	2018	Empathy→Self-efficacy → SEI
11	Fatoki	2018	Empathy→SEI(+)
12	Rashid et al.	2018	Empathy has no significant relationship with SEI
13	Rambe and Ndofirepi	2019	Empathy→SEI(+)
14	Peng et al.	2019	Empathy→SEI(+)
15	Kruse	2020	Empathy→SEI(+)
16	Sousa-Filho et al.	2020	Empathy → SEI (+), Empathy → SEI (no significant relationship)
17	Ashraf	2020	Empathy has no significant relationship with Islamic SEI
18	Younis et al. (2020)	2020	Empathy→Self-efficacy → SEI

2.5.2 Moral Obligation

In the conceptual model, Mair and Noboa (2003, 2006) proposed moral judgement as an antecedent of social entrepreneurial intention (SEI). This antecedent was based on the stages of moral judgement by Kohlberg (1981). In Kohlberg (1981), moral judgement was defined as the self-interest on the social norms, followed by initiatives concerning the social contracts and perception towards the universal ethics principles. Hockerts (2015) later refined the moral judgement antecedent as moral obligation while developing the social entrepreneurial antecedent's scale. According to Haines et al. (2008), moral judgement refers to the individual feelings on moral obligation and considered as an antecedents to moral obligation. Gorsuch and Ortberg (1983) defined moral obligation as the extent to which an individual feels a sense of responsibility to act according to the social norms while confronted with an ethical impediment. Hence, Hockerts (2015) argued that moral obligation tends to be more appropriate in the context of SEI due to its feature of measuring the socially approved behaviour for the margins of the society. In short, moral obligation is the individual feelings towards the society's obligation in addressing the problems associated with the marginalised group of the society (Hockerts, 2015). For this research, moral obligation associates with individual's feelings on the society addressing the underprivileged groups. According

to Kazmi et al. (2019), this essential antecedent also develops positive social behaviour and action towards benefitting the society (Kazmi et al., 2019).

Past studies shown moral obligation positively relates to SEI (Fatoki, 2018; Lacap et al., 2018; Peng et al., 2019). However, Ashraf (2020), Hockerts (2017) and Ip et al. (2017, 2018) study findings indicated that moral obligation had negative significant influence on SEI. On a different note, Kazmi et al. (2019) and Tiwari et al. (2017b) emphasised the significant indirect impact of moral obligation on SEI. However, some studies suggested that moral obligation has no significant relationship with SEI (Aure, 2018; Hockerts, 2017; Ip et al., 2018; Kruse, 2020; Rambe & Ndofirepi, 2019; Sousa-Filho et al., 2020). Based on these findings, it can be argued that moral obligation has the potential to affect SEI. Therefore, it is important to further investigate the effect that moral obligation has on SEI. Accordingly, the following sub-hypothesis is proposed:

H2b: Moral obligation is positively related to social entrepreneurial intention.

Table 2.12 summarises the review of the research studies discussed in this section. The table demonstrates the important role of moral obligation on social entrepreneurial intention (SEI).

Table 2.12 Moral Obligation for Social Entrepreneurial Intention

No	Authors	Year	Findings
1	Hockerts	2015	Moral Obligation → Perceived Desirability→SEI (+)
2	Tiwari et al.	2017b	Moral Obligation → ATB, SN, PBC→SEI (+)
3	Hockerts	2017	Moral Obligation →SEI(-) and no significant relationship with SEI
4	Ip et al.	2017	Moral Obligation →SEI (-)
5	Ip et al.	2018	Moral Obligation →SEI (-) and no significant relationship with SEI
6	Aure	2018	Moral Obligation has no significant relationship with SEI
7	Lacap et al.	2018	Moral Obligation →SEI (+)
8	Fatoki	2018	Moral Obligation →SEI (+)
9	Kazmi et al.	2019	Moral Obligation → Self-efficacy→SEI(+)
10	Peng et al.	2019	Moral Obligation →SEI(+)
11	Kruse	2019	Moral Obligation has no significant relationship with SEI
12	Rambe and Ndofirepi	2019	Moral Obligation has no significant relationship with SEI
13	Ashraf	2020	Moral Obligation → Islamic SEI (-)
14	Sousa-Filho et al.	2020	Moral Obligation has no significant relationship with SEI

2.5.3 Perceived Social Support

Perceived social support refers to the trust and cooperation gained from the social network to facilitate the intention to become a social entrepreneur (Mair & Noboa, 2006). Likewise, Hockerts (2015) defined perceived social support as the emotional and financial support an individual attain from family, friends and the people from the network to help start a social enterprise. It is associated with the individual perception on receiving support from his/her support system and personal networks (Hockerts, 2017; Meyskens et al., 2010).

In the social entrepreneurial intention (SEI) research, perceived social support tends to act as one of the strongest antecedents. In the past studies, the findings suggested that perceived social support positively related to SEI (Akhter et al., 2020; Ashraf, 2020; Aure, 2018; Fatoki, 2018; Hockerts, 2017; Ip et al., 2017, 2018; Lacap et al., 2018; Urban & Teise, 2015). Additionally, Hockerts (2015) shown that perceived social support positively influence perceived feasibility which influences SEI.

However, Peng et al. (2019) and Rambe and Ndofirepi (2019) findings suggested that perceived social support has negative significant relationship with social entrepreneurial intention (SEI). Conversely, Kruse's (2020) study findings indicated that perceived social support has no significant influence on SEI. Additionally, Sousa-Filho et al. (2020), in Brazil, showed that perceived social support was positively related to SEI for the higher income group, whereas it was not significant with SEI for the lower income group. Based on these findings, it can be argued that perceived social support has the potential to affect SEI. Hence, further investigation is needed on the effect that social support has on SEI. Accordingly, the following sub-hypothesis is proposed:

H2c: Perceived social support is positively related to social entrepreneurial intention.

Table 2.13 summarises the review of the research studies discussed in this section. The table demonstrates the important role of perceived social support on social entrepreneurial intention.

Table 2.13 Perceived Social Support for Social Entrepreneurial Intention

No	Authors	Year	Findings
1	Hockerts	2015	Perceived Social Support→ Perceived Feasibility→ SEI(+)
2	Urban and Teise	2015	Perceived Social Support →SEI(+)

3	Hockerts	2017	Perceived Social Support →SEI(+)
4	Ip et al.	2017	Perceived Social Support →SEI(+)
5	Ip et al.	2018	Perceived Social Support →SEI(+)
6	Aure	2018	Perceived Social Support →SEI(+)
7	Lacap et al.	2018	Perceived Social Support →SEI(+)
8	Fatoki	2018	Perceived Social Support →SEI(+)
9	Peng et al.	2019	Perceived Social Support →SEI (-)
10	Rambe and Ndofirepi	2019	Perceived Social Support →SEI (-)
11	Kruse	2019	Perceived Social Support has no significant relationship with SEI
12	Ashraf	2020	Perceived Social Support →SEI(+)
13	Sousa-Filho et al.	2020	Perceived Social Support→ SEI (+), Perceived Social Support → SEI (no significant relationship)
14	Akhter et al.	2020	Perceived Social Support →SEI(+)

2.5.4 Social Entrepreneurial Self-Efficacy

Initially, Bandura (1977) referred self-efficacy as an individual's perception towards his/her ability to accomplish the intended action. Likewise, Schwarzer and Jerusalem (1995) defined self-efficacy as an optimistic self-belief to perform the designated task. In social entrepreneurial research, self-efficacy has been recognised as a very powerful predictor of behaviour (DuCharme & Brawley, 1995; Schulte, 2007). Social entrepreneurial self-efficacy associates with the individual belief towards developing a feasible social enterprise to help the poor (Hockerts, 2015; Mair & Noboa, 2006). For this research, social entrepreneurial self-efficacy can be defined as the individual confidence on the competence and the ability to develop an enterprise to help the needy (Bacq & Alt, 2018).

Numerous studies suggested that social entrepreneurial self-efficacy has positive significant influence on determining social entrepreneurial intention (Akhter et al., 2020; Ashraf, 2020; Aure, 2018; Aure et al., 2019; Bacq & Alt, 2018; Fatoki, 2018; Hassan, 2020; Hockerts, 2017; Kazmi et al., 2019; Kruse, 2020; Lacap et al., 2018; Lim & Omar, 2019; Peng et al., 2019; Rambe & Ndofirepi, 2019; Rashid et al., 2018; Younis et al., 2020).

Additionally, the findings of Forster and Grichnik (2013) and Hockerts (2015) indicated that social entrepreneurial self-efficacy indirectly affect social entrepreneurial intention (SEI) by positively affecting perceived feasibility. Similarly, Tiwari et al. (2017a) indicated that social entrepreneurial self-efficacy indirectly affect SEI when mediated by attitude towards behaviour, social norms and perceived

behavioural control. Likewise, it indirectly affect SEI when mediated by originality and usefulness (Ip et al., 2018). However, social entrepreneurial self-efficacy had no significant relationship with SEI in Ip et al. (2017). Based on these findings of these studies, it can be argued that social entrepreneurial self-efficacy has the potential to affect SEI. Moreover, Urban (2013) argued that social entrepreneurial self-efficacy is the closest action to social entrepreneurial behaviour and can act as the strongest predictor of SEI. To further investigate this construct, the following sub-hypothesis is proposed:

H2d: Social entrepreneurial self-efficacy is positively related to social entrepreneurial intention.

Table 2.14 summarises the review of the research studies discussed in this section. The table demonstrates the important role of social entrepreneurial self-efficacy on social entrepreneurial intention.

Table 2.14 Social Entrepreneurial Self-Efficacy for Social Entrepreneurial Intention

No	Authors	Year	Result
1	Forster and Grichnik	2013	SE Self-Efficacy→Perceived Feasibility→SEI (+)
2	Hockerts	2015	SE Self-Efficacy→ Perceived Feasibility→SEI(+)
3	Urban and Teise	2015	SE Self-Efficacy →SEI(+)
4	Tiwari et al.	2017a	SE Self-Efficacy → ATB, SN, PBC→SEI(+)
5	Hockerts	2017	SE Self-Efficacy →SEI(+)
6	Ip et al.	2017	SE Self-Efficacy no significant relationship with SEI
7	Ip et al.	2018	SE Self-Efficacy→ Originality, Usefulness →SEI(+)
8	Aure	2018	SE Self-Efficacy →SEI(+)
9	Lacap et al.	2018	SE Self-Efficacy →SEI(+)
10	Bacq and Alt	2018	SE Self-Efficacy →SEI(+)
11	Fatoki	2018	SE Self-Efficacy →SEI(+)
12	Rashid et al.	2018	SE Self-Efficacy →SEI(+)
13	Lim and Omar	2019	SE Self-Efficacy →SEI(+)
14	Kazmi et al.	2019	SE Self-Efficacy →SEI(+)
15	Aure et al.	2019	SE Self-Efficacy →SEI(+)
16	Peng et al.	2019	SE Self-Efficacy →SEI(+)
17	Rambe and Ndofirepi	2019	SE Self-Efficacy →SEI(+)
18	Kruse	2020	SE Self-Efficacy →SEI(+)
19	Ashraf	2020	SE Self-Efficacy →SEI(+)
20	Younis et al.	2020	SE Self-Efficacy →SEI(+)
21	Akhter et al.	2020	SE Self-Efficacy →SEI(+)
22	Hassan	2020	SE Self-Efficacy →SEI(+)
23	Sousa-Filho et al.	2020	SE Self-Efficacy →SEI(+)

Based on the thorough review on the constructs of the Mair Noboa model, it can be argued that this model has the potential to impact on social entrepreneurial intention. Also, insufficient studies on this model have been conducted in the context of Bangladesh. Thus, it is important to explore the direct association of these constructs impacting on social entrepreneurial intention. Based on the sub-hypotheses, the following main hypothesis is proposed:

Hypothesis 2: Empathy, moral obligation, perceived social support and social entrepreneurial self-efficacy are positively related to social entrepreneurial intention.

2.6 INTERRELATIONSHIPS BETWEEN MNM ANTECEDENTS

This research intends to address the gap in the literature by exploring the interrelationships between the constructs associated with the Mair Noboa model (MNM). The concept of exploring the interrelationship between factors for determining entrepreneurial intention was developed by Heuer and Liñán (2013). These authors revised the theory of planned behaviour based on interrelationship and termed it the 'modified theory of planned behaviour' (Heuer & Liñán, 2013). Very few studies in the literature to date have applied this concept in the context of social entrepreneurial intention. In this section, the discussion focuses on the development and application of the modified theory of planned behaviour, followed by applying this concept to the constructs of the Mair Noboa model and proposing the hypotheses.

2.6.1 Modified Theory of Planned Behaviour

Heuer and Liñán (2013) proposed the modified theory of planned behaviour (TPB) to answer the widespread call on whether social norms play a feasible role as part of the TPB constructs. Heuer and Liñán (2013) developed this concept based on Liñán and Chen's (2009) argument that the weaker direct effect can be the potential reason for a stronger indirect effect. Therefore, Liñán and Chen (2009) suggested considering the indirect effect of social norms as an influence on intention. In the modified TPB, Heuer and Liñán (2013) proposed that social norms can have both direct and indirect influence on intention through attitude towards behaviour and perceived behavioural control. The findings of their study indicated that social norms have a positive direct effect on intention, attitude towards behaviour and perceived behavioural control across 10 countries. Thus, social norms demonstrated a direct and indirect influence on intention (Heuer & Liñán, 2013).
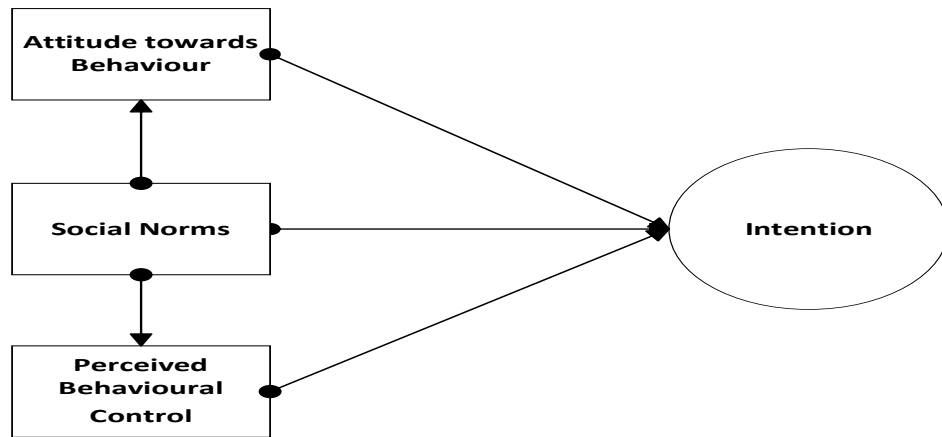
Figure 2.6 Modified Theory of Planned Behaviour by Heuer and Liñán (2013)

In the context of social entrepreneurial intention (SEI), Ernst (2011) applied the same concept. The study findings indicated that social norms indirectly influence SEI through the attitude towards behaviour. Likewise, perceived behavioural control direct and indirectly influence SEI through the attitude towards behaviour (Ernst, 2011). Similarly, Kruse (2020) applied modified TPB to determine SEI in Germany. The study finding suggested that social norms have an indirect impact on SEI through the favourable attitude towards social entrepreneurship and high level of perceived behavioural control (Kruse, 2020). In addition, Kruse et al. (2019) extended modified TPB with basic human value theory to define SEI. The findings of this study in Germany reflect that attitude towards behaviour and perceived behavioural control mediate the relationship between social norms and SEI (Kruse et al., 2019).

2.6.2 Application of Modified TPB to MNM antecedents

The concept of modified TPB can be applicable on the constructs associated with the Mair Noboa model (MNM). As discussed in the earlier section on the development of MNM, empathy acted as the proxy for attitude towards behaviour, moral obligation acted as a proxy for social norms, whereas perceived social support and social entrepreneurial self-efficacy acted as proxies for perceived behavioural control (Hockerts, 2015, 2017; Mair & Noboa, 2006). Considering Heuer and Liñán's (2013) modified TPB, moral obligation can be proposed to have a positive effect on empathy, perceived social support and social entrepreneurial self-efficacy.

Similarly, empathy can have positive effect on perceived social support and social entrepreneurial self-efficacy. In the context of social entrepreneurship, very few studies in the literature have highlighted on the relationship between these antecedents.

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Studies such as Aure et al. (2019), Bacq and Alt (2018), Kazmi et al. (2019), Urban and Teise (2015), Urban and Galawe (2019) and Younis et al. (2020) highlighted on the merit of exploring some of these antecedents relationships. Additionally, Sousa-Filho et al. (2020) suggest on exploring inter-variable relationship among the MNM constructs due to the varied role of the constructs based on income group. This research will elaborate on the possible interrelationships among the constructs of MNM and propose relevant hypotheses.

2.6.3 Interrelationships of Moral Obligation

Moral obligation might offer a stronger indirect impact on social entrepreneurial intention (SEI) as argued by Heuer and Liñán (2013) and Liñán and Chen (2009). It indicated no significant direct effect on SEI in studies such as the works of Aure (2018), Hockerts (2017), Ip et al. (2018), Kruse (2020), Rambe and Ndofirepi (2019) and Sousa-Filho et al. (2020). It is possible that moral obligation might have a stronger indirect effect on SEI.

Urban and Teise (2015) suggested that moral obligation and empathy are inseparable and will work best when put together. The study findings indicated that moral obligation and empathy positively influenced SEI, only when combined as one factor (Urban & Teise, 2015). Also, moral obligation is measured at the societal level unlike empathy at the individual level as per the Social Entrepreneurial Antecedents Scale (SEAS) (Hockerts, 2015). Moreover, Tiwari et al. (2017b) findings indicated that moral obligation positively affects the attitude towards becoming a social entrepreneur. As discussed earlier, Mair and Noboa (2006) proposed empathy as a proxy for attitude towards becoming a social entrepreneur (Hockerts, 2017). Therefore, it can be argued that moral obligation might positively affect empathy. Also, this is an opportunity to explore the indirect effect of moral obligation on SEI when mediated by empathy. Accordingly, the following hypothesis is proposed:

H3a: Moral obligation positively affects social entrepreneurial intention through the mediation of empathy.

Also, individuals with higher moral obligation feel that helping underprivileged groups are socially acceptable behaviour. The concept of moral obligation revolves around the society sharing obligatory feelings on supporting the needy. It is highly possible that the individual will expect support from society to build a social enterprise.

Likewise, a morally obligated individual will tend to anticipate emotional and financial support from family, friends and extended networks to help the needy. Hence, perceived social support might trigger the morally obliged individual's intention to become a social entrepreneur. Based on this discussion, the following hypothesis is proposed:

H3b: Moral obligation positively affects social entrepreneurial intention through the mediation of perceived social support.

Morally obligated individuals share the feeling of helping the underprivileged as a socially acceptable behaviour that might trigger strong belief to build a social enterprise. Moreover, Kazmi et al. (2019) study findings indicated that moral obligation has positive affect on social entrepreneurial self-efficacy. Also, the relationship between moral obligation and SEI was mediated by social entrepreneurial self-efficacy for the Chinese and Pakistani sample. The authors argued that higher moral obligation of an individual tends to develop confidence in building a social enterprise (Kazmi et al., 2019). Similarly, Urban and Galawe (2019) findings indicated that moral obligation has positive affect on social entrepreneurial self-efficacy. It is possible that social entrepreneurial self-efficacy might mediate the relationship between moral obligation and social entrepreneurial intention. Accordingly, the following hypothesis is proposed:

H3c: Moral obligation positively affects social entrepreneurial intention through the mediation of social entrepreneurial self-efficacy.

Moral obligation has the potential for possible interrelationships with MNM constructs such as empathy, perceived social support and social entrepreneurial self-efficacy. Based on the sub-hypotheses, the following main hypothesis is proposed:

Hypothesis 3: Moral obligation positively affects social entrepreneurial intention through the mediation of empathy, perceived social support and social entrepreneurial self-efficacy.

2.6.4 Interrelationships of Empathy

In several past studies, empathy indicated no significant direct effect on social entrepreneurial intention (SEI) (Ashraf, 2020; Ernst, 2011; Lacap et al., 2018; Rashid et al., 2018; Sousa-Filho et al., 2020). Instead, empathy might have potential stronger

indirect effect on SEI based on the argument presented by Heuer and Liñán (2013) and Liñán and Chen (2009). Considering that empathy might possibly have indirect effect on SEI when mediated by perceived social support and social entrepreneurial self-efficacy. An empathic individual can share emotions and feelings for others who are in need and possibly expect their personal networks, such as their family, friends and extended network, to feel in a similar way to support this social cause. Therefore, it might be possible for an empathic individual to expect support from family and friends to develop a social enterprise. Therefore, receiving emotional and financial support from an individual's personal network might trigger the empathic individual's intention to become a social entrepreneur. Accordingly, the following hypothesis is proposed:

H4a: Empathy positively affects social entrepreneurial intention through the mediation of perceived social support.

Moreover, an empathic individual is driven to help the needy that might trigger the confidence to build a social enterprise as well. A few studies in the literature in the SE context have explored the indirect effect of empathy on SEI when mediated by social entrepreneurial self-efficacy. For example, the findings of studies by Bacq and Alt (2018) and Younis et al. (2020) indicated that empathy had positive indirect effect on SEI only when mediated by social entrepreneurial self-efficacy. Therefore, a higher level of social entrepreneurial self-efficacy might trigger the empathic individual's intention to become a social entrepreneur. Accordingly, the following hypothesis is proposed:

H4b: Empathy positively affects social entrepreneurial intention through the mediation of social entrepreneurial self-efficacy.

Empathy has the potential for possible interrelationships with perceived social support and social entrepreneurial self-efficacy when impacting upon social entrepreneurial intention. Based on the sub-hypotheses, the following main hypothesis is proposed:

Hypothesis 4: Empathy positively affects social entrepreneurial intention through the mediation of perceived social support and social entrepreneurial self-efficacy.

2.6.5 Interrelationships of Perceived Social Support

Although perceived social support acted as one of the strongest indicators of social entrepreneurial intention (SEI), it indicated no significant direct relationship with SEI in Kruse (2020) and Sousa-Filho et al. (2020). This gives an opportunity to explore indirect perspective of this construct as per the arguments of Heuer and Liñán (2013) and Liñán and Chen (2009). Considering that perceived social support might possibly have indirect effect on SEI when mediated by social entrepreneurial self-efficacy. Individuals with strong perceived support from family, friends and personal networks tend to build stronger confidence in developing a social enterprise. Therefore, a higher level of social entrepreneurial self-efficacy might trigger a positive relationship between perceived social support and SEI. Tran and Von Korflesch (2016) also proposed a conceptual model where perceived social support affects only through social entrepreneurial self-efficacy.

Aure et al.'s (2019) study findings later indicated that perceived social support has both direct and indirect relationships with SEI when mediated by social entrepreneurial self-efficacy in the Philippines. Additionally, Younis et al. (2020) study findings indicated that perceived social support positively moderates the relationship between social entrepreneurial self-efficacy and SEI. Based on this discussion, a strong potential relationship exists between perceived social support and social entrepreneurial self-efficacy. Hence, the following hypothesis is proposed:

Hypothesis 5: Perceived social support positively affects social entrepreneurial intention through the mediation of social entrepreneurial self-efficacy.

2.7 INTEGRATION OF THREE PILLARS OF INSTITUTIONS AND MNM

This research intends to address the knowledge gap by integrating the three pillars of institutions and the Mair Noboa model (MNM). The concept of integrating theories is based on the concept developed by Mayer and Sparrowe (2013). The discussion in this section focuses on the argument of integrating theories by Mayer and Sparrowe (2013), followed by applying a similar concept to integration between constructs of the three pillars of institutions and the MNM alongside proposing the hypotheses.

2.7.1 Integrating Theories

In the management context, Mayer and Sparrowe (2013) proposed four approaches to effectively integrate theories. Integrating theories successfully can maximise the chances of developing novel insight in a study. In the first approach, the authors proposed integrating different theoretical perspectives to a single phenomenon (Mayer & Sparrowe, 2013). The success of this first approach depends on sharing a common dependent variable, even if the theories reflect different perspectives. In the second approach, the authors proposed integrating two contrasting streams of research to a similar phenomenon. For the first two approaches, Mayer and Sparrowe (2013) emphasised sharing a common dependent variable despite the differences in theories. The third approach proposed on integrating one theory to the domain of another to generate new understanding. In this approach, the phenomenon does not have to be same or similar. In the fourth approach, the authors suggested to integrate theories based on sharing similar independent variables. In this approach, the theories are integrated based on having common independent variables to generate new perspective. While proposing the approach, Mayer and Sparrowe (2013) stressed on the importance of integrating theories in addressing the knowledge gap that neither theory could independently fill.

For this research, effective integration is mandatory to address both the institutional-level and individual-level influences on social entrepreneurial intention. Integrating theories can be applicable on the constructs associated with the three pillars of institutions and the Mair Noboa model (MNM). Based on the concepts developed by Mayer and Sparrowe (2013), the first approach of integrating theories can be applicable in this research as both of the theories share a common dependent variable, namely, social entrepreneurial intention (SEI). Also, the theories possess different perspectives. For instance, the three pillars of institutions framework is associated with institutional-level factors, whereas the MNM is associated with individual-level factors. As previously mentioned, studies in the literature have applied both these theories to confirm the potential SEI association. Thus, it is possible to successfully integrate these theories to maximise the chances of retrieving novel insights on SEI.

2.7.2 Integrating Regulatory Institutional Environment

The regulatory institutional environment (REG) associates with the laws, policies, rules and regulations on social entrepreneurship of the country (Urban & Kujinga, 2017). By imposing favourable rule and regulations on social entrepreneurship, REG can facilitate social entrepreneurial behaviour which, in this case, is social entrepreneurial intention (SEI) (Kujinga, 2016; Seelos et al., 2011). Accordingly, REG can be possibly integrated with moral obligation, empathy, perceived social support and social entrepreneurial self-efficacy antecedents for sharing SEI as common phenomenon (Mayer & Sparrowe, 2013).

To begin with, morally obliged individuals tend to strongly feel that helping the underprivileged reflects as a socially acceptable behaviour (Hockerts, 2015). Therefore, favourable REG can positively impact on building a higher level of moral obligation. According to Littlewood and Holt (2018), rules and regulations on favouring SE can trigger individual moral obligation. It is possible that REG can positively activate the moral obligation in an individual to become a social entrepreneur in the future. It is important to explore the mediating role of moral obligation impacting the relationship between REG and social entrepreneurial intention. Accordingly, the following hypothesis is proposed:

H6a: The regulatory institutional environment positively affects social entrepreneurial intention through the mediation of moral obligation.

Empathic individual tends to share emotional feeling for the socially disadvantaged groups (Hockerts, 2015; Mair & Noboa, 2006). Mair and Marti (2009) also argued that institutional voids such as inadequate and absence of rules and regulation on the marginalised groups tends to activate empathy in an individual. However, it is possible that imposing favourable policies on social enterprises can positively trigger empathy in an individual to become a social entrepreneur. Therefore, it is important to explore the mediating role of empathy as it impacts on the relationship between REG and social entrepreneurial intention. Accordingly, the following hypothesis is proposed:

H6b: The regulatory institutional environment positively affects social entrepreneurial intention through the mediation of empathy.

Individual with perceived social support tends to expect to receive support from the family, friends and extended network to start a social entrepreneurial venture

(Hockerts, 2015, 2017). It is possible that people from the individual's personal network will be more supportive if the country exercises favourable social entrepreneurship rules and regulations. Therefore, complementary laws on social entrepreneurship can motivate families and friends to provide the necessary support to become a social entrepreneur. It is important to explore the mediating role of perceived social support as it impacts on the relationship between REG and social entrepreneurial intention (SEI). Accordingly, the following hypothesis is proposed:

H6c: The regulatory institutional environment positively affects social entrepreneurial intention through the mediation of perceived social support.

Individual with social entrepreneurial self-efficacy tends to be confident on their competence and ability to develop a social enterprise (Bacq & Alt, 2018; Hockerts, 2015; Mair & Noboa, 2006). It is possible that favourable policies can increase the social entrepreneurial self-efficacy in an individual to pursue social entrepreneurship. Findings in studies by, for instance, Urban (2013) and Vyas et al. (2014) suggested that REG positively impacts on social entrepreneurial self-efficacy. Therefore, it is necessary to explore the mediating role of social entrepreneurial self-efficacy as it impacts on the relationship between REG and social entrepreneurial intention. Accordingly, the following hypothesis is proposed:

H6d: The regulatory institutional environment positively affects social entrepreneurial intention through the mediation of social entrepreneurial self-efficacy.

Based on Mayer and Sparrowe (2013), REG can be integrated with moral obligation, empathy, perceived social support and social entrepreneurial self-efficacy due to sharing a common dependent construct, namely, social entrepreneurial intention. Based on the sub-hypotheses, the following main hypothesis is proposed:

Hypothesis 6: The regulatory institutional environment positively affects social entrepreneurial intention through the mediation of moral obligation, empathy, perceived social support and social entrepreneurial self-efficacy.

2.7.3 Integrating Normative Institutional Environment

The normative institutional environment (NORM) is associated with the norms and values around the concept of social entrepreneurship in a country (Ferri & Urbano, 2011; Kujinga, 2016; Urban, 2013; Urban & Kujinga, 2017). It is possible that social

acceptance of the concept of social entrepreneurship can affect the adoption of the social entrepreneurial behaviour among residents of that country. Also, NORM can be possibly integrated with moral obligation, empathy, perceived social support and social entrepreneurial self-efficacy antecedents for sharing SEI as a common phenomenon (Mayer & Sparrowe, 2013).

Morally obligated individual tends to feel strongly for the society's responsibility for the needy (Hockerts, 2015). NORM directly impacts on socially acceptable behaviour around social enterprises, whereas moral obligation tends to associate the feeling of helping the needy as socially acceptable behaviour (Hockerts, 2017; Sousa-Filho et al., 2020). Accordingly, NORM can positively impact on building higher level of moral obligation. Therefore, it is possible that NORM can positively activate the moral obligation in an individual to become a social entrepreneur in the future. It is necessary to explore the mediating role of moral obligation as it impacts on the relationship between NORM and social entrepreneurial intention. Accordingly, the following hypothesis is proposed:

H7a: The normative institutional environment positively affects social entrepreneurial intention through the mediation of moral obligation.

The NORM construct is associated with the country's social norms and values around social entrepreneurship, whereas the country's social norms and values strongly shape individual empathy (Mair & Noboa, 2006). It is possible that socially acceptable behaviour on social enterprises to help the needy can activate empathy in an individual. It will be interesting to further test the mediating effect of empathy as it impacts on the relationship between NORM and social entrepreneurial intention. Accordingly, the following hypothesis is proposed:

H7b: The normative institutional environment positively affects social entrepreneurial intention through the mediation of empathy.

Similarly, favourable socially acceptable behaviour on social enterprises can increase the chance to receive more support from family, friends, and extended personal networks on building social ventures. If a country's values and social norms appreciate the social enterprise's efforts, then this can motivate these support systems to provide more support in building a social enterprise. Accordingly, NORM can increase the possibility of receiving more support from family and friends which will ultimately

help in becoming a social entrepreneur. It is necessary to explore the mediating role of perceived social support as it impacts on the relationship between NORM and social entrepreneurial intention. Based on this understanding, the following hypothesis is proposed:

H7c: The normative institutional environment positively affects social entrepreneurial intention through the mediation of perceived social support.

Also, favourable socially acceptable behaviour on social enterprises can boost the confidence in an individual to pursue social entrepreneurship. It is possible that NORM can positively impact social entrepreneurial self-efficacy. Likewise, studies such as Urban (2013) and Vyas et al. (2014) findings suggested that NORM positively impacts on social entrepreneurial self-efficacy. It is important to explore the mediating role of social entrepreneurial self-efficacy as it impacts on the relationship between NORM and social entrepreneurial intention. Accordingly, the following hypothesis is proposed:

H7d: The normative institutional environment positively affects social entrepreneurial intention through the mediation of social entrepreneurial self-efficacy.

Based on Mayer and Sparrowe's (2013) arguments on integrating theories, NORM can be integrated with moral obligation, empathy, perceived social support and social entrepreneurial self-efficacy antecedents for sharing SEI as common dependent variable. Based on the sub-hypotheses, the following main hypothesis is proposed:

Hypothesis 7: The normative institutional environment positively affects social entrepreneurial intention through the mediation of moral obligation, empathy, perceived social support and social entrepreneurial self-efficacy.

2.7.4 Integrating Cognitive Institutional Environment

The cognitive institutional environment (COG) is associated with the shared logic of action and expertise towards social enterprises in a country (Urban, 2013; Urban & Kujinga, 2017). This environment can relate to the perception of protecting, dealing with and managing the risks associated with starting a social enterprise in a country (Urban, 2013). Also, COG can be possibly integrated with moral obligation, empathy, perceived social support and social entrepreneurial self-efficacy antecedents for sharing SEI as a common phenomenon (Mayer & Sparrowe, 2013).

Cognitive knowledge on building and operating social enterprises can help the society in better dealing with the underprivileged groups. Accordingly, COG can impact morally obliged individuals with better knowledge, expertise, and guidance on building a social enterprise to support the margins of the society. It is possible that COG can positively activate the moral obligation in an individual to become a social entrepreneur in the future. Furthermore, exploring the role of moral obligation as it impacts on the relationship between COG and SEI can give better insight. Accordingly, the following hypothesis is proposed:

H8a: The cognitive institutional environment positively affects social entrepreneurial intention through the mediation of moral obligation.

A cognitive institutional environment (COG) can offer better logic and guidelines to build and operate a social venture to help the underprivileged. The empathic individual tends to share emotion and compassion for the needy (Mair & Noboa, 2006). Accordingly, any favourable step towards helping disadvantaged people has the potential to trigger empathy. Due to offering expertise and guidance on developing social enterprises, COG can as well impact empathy in an individual which can enhance the intention to become a social entrepreneur. It can be helpful to examine the mediating role of empathy as it impacts on the relationship between COG and social entrepreneurial intention. Based on this, the following hypothesis is proposed:

H8b: The cognitive institutional environment positively affects social entrepreneurial intention through the mediation of empathy.

The cognitive institutional environment (COG) provides clear guidance on managing the social enterprises which might motivate the residents of the country. In doing so, COG can increase the possibility of receiving more support from family and friends. Therefore, COG can positively impact on perceived social support. Higher cognitive knowledge on operating social enterprise can motivate the family and friends to offer more support to the individual to pursue social entrepreneurship. It is necessary to examine the mediating role of perceived social support as it impacts on the relationship between COG and social entrepreneurial intention. Based on this understanding, the following hypothesis is proposed:

H8c: The cognitive institutional environment positively affects social entrepreneurial intention through the mediation of perceived social support.

Proper guidance and knowledge on social enterprises can help the social enterprises perform better which can boost individual confidence to build a social enterprise. Accordingly, COG can enhance social entrepreneurial self-efficacy. Likewise, Vyas et al. (2014) study findings indicated that favourable COG has positive significant influence on higher social entrepreneurial self-efficacy in India. Therefore, COG can increase the social entrepreneurial self-efficacy which might trigger the social entrepreneurial intention. Although Urban (2013) study findings indicated no significant relationship between COG and social entrepreneurial self-efficacy in South Africa, it is important to explore the mediating role of social entrepreneurial self-efficacy as it impacts on the relationship between COG and social entrepreneurial intention. Accordingly, the following hypothesis is proposed:

H8d: The cognitive institutional environment positively affects social entrepreneurial intention through the mediation of social entrepreneurial self-efficacy.

In summary, COG can be integrated with moral obligation, empathy, perceived social support and social entrepreneurial self-efficacy antecedents to share SEI as a common dependent variable (Mayer & Sparrowe, 2013). Based on the sub-hypotheses, the following main hypothesis is proposed:

Hypothesis 8: The cognitive institutional environment positively affects social entrepreneurial intention through the mediation of moral obligation, empathy, perceived social support and social entrepreneurial self-efficacy.

2.8 MODERATING VARIABLES

Prior experience and age have been applied as variables in the social entrepreneurship literature. In this research, both will be applied as moderators that affect the relationship between Mair Noboa model (MNM) constructs and social entrepreneurial intention (SEI). This will address the gap in the literature identified by Saebi et al. (2019). According to Saebi et al. (2019), little SEI research has been conducted on assessing the moderating effect of the individual-level factors. Very few, if any, studies have explored the moderating effects on the MNM–SEI relationship. This following section focuses on the relevant literature associated with prior experience and age influencing the constructs of MNM alongside proposing the hypotheses.

2.8.1 Prior Experience

Prior experience can be defined as the knowledge and experience gathered while working in a social enterprise or working towards reducing social problems (Ashraf, 2020; Hockerts, 2017; Ip et al., 2017; Kruse, 2020; Rashid et al., 2018). Hockerts (2017) extended the Mair Noboa model (MNM) by including prior experience as the predictor variable of social entrepreneurial intention (SEI). In past studies, prior experience positively relates to SEI (Ashraf, 2020; Aure, 2018; Hockerts, 2017; Ip et al., 2017, 2018; Kruse, 2020; Lacap et al., 2018; Rashid et al., 2018; Sousa-Filho et al., 2020).

In the context of Bangladesh, Ashraf's (2020) findings indicated that prior experience significantly influences Islamic social entrepreneurial intention. On the other hand, Akhter et al. (2020) found there was no significant relationship between prior experience and SEI in Bangladesh which was similar to Fatoki's (2018) findings. These studies also incorporated MNM antecedents as mediators to measure the relationship between prior experience and SEI.

Prior experience was also found to influence significantly moral obligation in studies such as Hockerts (2017), Ip et al. (2018), Kruse (2020), Peng et al. (2019) and Sousa-Filho et al. (2020). It indicates that prior experiences on social issues trigger the individual's feelings on supporting the needy as socially acceptable behaviour. However, prior experience indicated no significant relationship with moral obligation in a few studies (Aure, 2018; Lacap et al., 2018). On a different note, Ashraf (2020) found moral obligation indicated negative significant impact on prior experience. Based on these mixed results, it is important to assess the moderating effect of prior experience on the relationship between moral obligation and SEI to gain some new perspectives. Accordingly, the following hypothesis is proposed:

H9a: Prior experience moderates the positive relationship between moral obligation and social entrepreneurial intention.

Prior experience on social issues also activates empathy in an individual to care more for the margins of the society. In past studies, prior experience positively influenced empathy (Aure, 2018; Hockerts, 2017; Ip et al., 2018; Peng et al., 2019; Sousa-Filho et al., 2020), whereas Kruse (2020) and Lacap et al. (2018) found that prior experience had no significant impact on empathy. On a different note, empathy significantly

influenced prior experience for a study conducted in Bangladesh (Ashraf, 2020). Therefore, it is important to further test the moderating effect of prior experience on the relationship between empathy and social entrepreneurial intention. Accordingly, the following hypothesis is proposed:

H9b: Prior experience moderates the positive relationship between empathy and social entrepreneurial intention.

Individuals with prior experience related to social enterprise can motivate his/her family and friends to support such a cause. Past studies' findings also indicate that prior experience positively influences perceived social support (Aure, 2018; Hockerts, 2017; Ip et al., 2018; Kruse, 2020; Lacap et al., 2018; Peng et al., 2019; Sousa-Filho et al., 2020). Conversely, perceived social support has no significant impact on prior experience in Ashraf (2020). Thus, exploring the moderating effect of prior experience on the relationship between perceived social support and SEI can shed new light on findings in the existing literature. Accordingly, the following hypothesis is proposed:

H9c: Prior experience moderates the positive relationship between perceived social support and social entrepreneurial intention.

Prior experience related to social enterprise can boost individual confidence to build a social enterprise. In past studies, prior experience significantly influenced social entrepreneurial self-efficacy (Hockerts, 2017; Ip et al., 2018; Kruse, 2020; Lacap et al., 2018; Peng et al., 2019; Sousa-Filho et al., 2020). Alternatively, Aure (2018) found that prior experience had no significant relationship with social entrepreneurial self-efficacy. Also, social entrepreneurial self-efficacy indicated a significant impact on prior experience (Ashraf, 2020). Hence, an opportunity exists to assess the moderating effect of prior experience on the relationship between social entrepreneurial self-efficacy and social entrepreneurial intention. Accordingly, the following hypothesis is proposed:

H9d: Prior experience moderates the positive relationship between social entrepreneurial self-efficacy and social entrepreneurial intention.

Based on these sub-hypotheses in regard to prior experience and MNM constructs, the following main hypothesis is proposed:

Hypothesis 9: Prior experience moderates the positive relationship between moral obligation, empathy, perceived social support and social entrepreneurial self-efficacy

upon social entrepreneurial intention. The positive relationship will be stronger (weaker) when prior experience is higher (lower).

2.8.2 Age

Age has been extensively applied as a control variable in the social entrepreneurship research. Young adults aged 18 to 24 tend to pursue social entrepreneurship in developed economies, unlike the developing economies (Terjesen et al., 2016). Recently, Solórzano-García et al. (2020) suggested that any individual aged below 40 years tends to be more interested in pursuing social enterprises. However, in studies such as Estrin et al. (2013), Lacap (2018) and Politis et al. (2016) it was identified that the likelihood of becoming a social entrepreneur is not affected by age. For determining the age influence on social entrepreneurial intention (SEI), Chipeta et al. (2016) applied the constructs of Theory of Planned Behaviour. The findings from this study indicated that mature adults ranging from the age of 27 to 30 had a higher attitude towards becoming a social entrepreneur compared to younger adults ranging from 18 to 24. However, age indicated no significant influence on social entrepreneurial intention (Chipeta et al., 2016).

Interestingly, Lacap (2018) investigated demographic factors, such as nationality, age, year level and gender, that potentially influence SEI in university students in the Philippines. The author investigated these demographic factors and how they influenced empathy, moral obligation, perceived social support and social entrepreneurial self-efficacy. The study found that age had no influence on any of these factors whereas the year level of the student did (Lacap, 2018). For example, the final year senior students had stronger intentions to become social entrepreneurs compared to the freshmen and juniors. It is possible that the senior students are older than the junior students and freshmen. For the age cluster, Lacap (2018) only included two clusters below 18 and above 18. Therefore, age could possibly influence SEI if more clusters were included. It is possible various age groups have the potential to strengthen or weaken the possible relationship between MNM constructs and social entrepreneurial intention. Accordingly, including clusters around younger adults and mature adults might shed new light on the existing literature. Accordingly, the following sub-hypotheses and main hypothesis are proposed:

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H10a: Age moderates the positive relationship between moral obligation and social entrepreneurial intention.

H10b: Age moderates the positive relationship between empathy and social entrepreneurial intention.

H10c: Age moderates the positive relationship between perceived social support and social entrepreneurial intention.

H10d: Age moderates the positive relationship between social entrepreneurial self-efficacy and social entrepreneurial intention.

Hypothesis 10: Age moderates the positive relationship between moral obligation, empathy, perceived social support and social entrepreneurial self-efficacy upon social entrepreneurial intention. The positive relationship will be stronger (weaker) when age is higher (lower).

2.9 CONCEPTUAL MODEL

The following conceptual model can be proposed based on the detailed literature review above. This conceptual framework (Figure 2.7) has been developed to answer the research questions and objectives. In this proposed conceptual model, the green path intends to assess the direct relationships between the three pillars of institutions constructs and social entrepreneurial intention (SEI). This will answer the research question on the antecedents of the three pillars of institutions influencing SEI. The darker blue paths are supposed to test the direct relationships between the Mair Noboa model (MNM) constructs and SEI by answering the question on the impact of MNM antecedents on SEI. The purple paths identify the interrelationships between MNM constructs by answering RQ 2. The black paths propose investigating the influence of the three pillars of institutions constructs on MNM antecedents. This will be able to answer RQ1. Finally, this proposed model will be able to answer the main research purpose on the extent to which the constructs of MNM mediate the relationship between the antecedents of the three pillars of institutions and SEI.
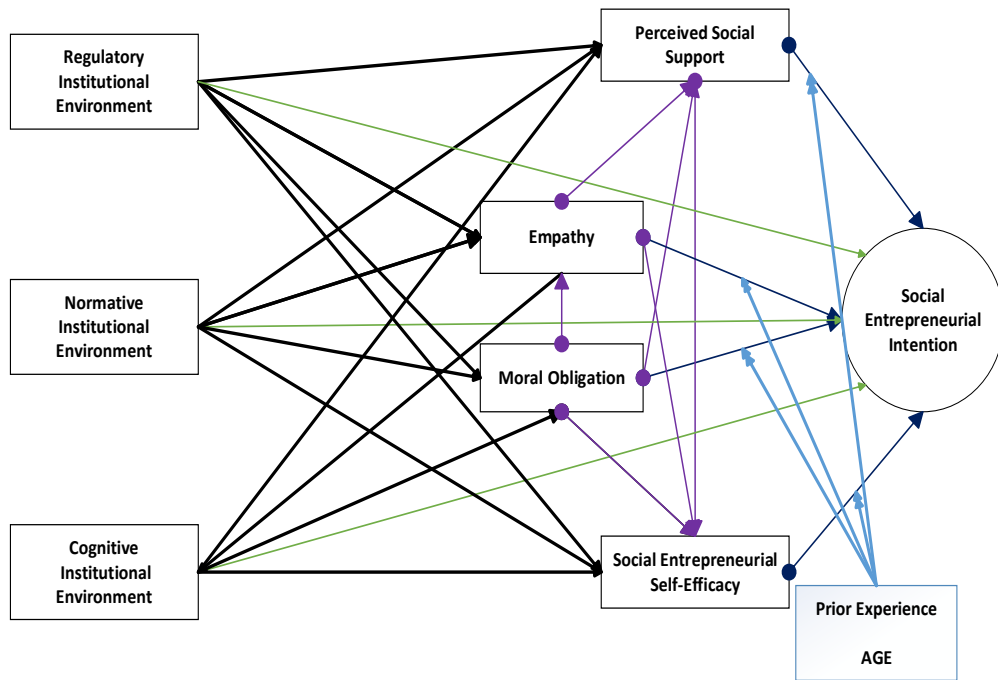
Figure 2.7 Proposed Conceptual Model

Notes: **REG**=Regulatory Institutional Environment; **NORM**=Normative Institutional Environment; **COG**=Cognitive Institutional Environment; **EMP**=Empathy; **MO**=Moral Obligation; **PSS**=Perceived Social Support; **SESE**=Social Entrepreneurial Self-efficacy; **SEI**=Social Entrepreneurial Intention; **PriorExp**=Prior Experience

2.10 CONCLUSION

This chapter reviewed the existing literature on social entrepreneurial intention. A thorough theoretical development of the three pillars of institutions and the Mair Noboa model (MNM) were provided before proposing the hypotheses. Based on the modified theory of planned behaviour, the interrelationship hypotheses were built and proposed. The theoretical integration was done based on the work of Mayer and Sparrowe (2013) and hypotheses were proposed. This chapter proposed two direct, six mediating, and two moderating hypotheses, and the proposed conceptual model, as shown in Figure 2.7. The following chapter presents the summary of the hypotheses, based on the study's themes and objectives, alongside the hypothesised conceptual model.

3. HYPOTHESES

3.1 INTRODUCTION

This chapter summarises the proposed hypotheses based on related themes and objectives. The previous chapter elaborated on the literature and logic to propose the hypotheses; therefore, this chapter intends to provide a snapshot of the hypotheses linked with the research objectives for a clearer and better understanding of the study's direction. The following section will review each hypothesis based on the themes and provide a summary table and hypothesised conceptual model. The relationships in the hypotheses can provide clear identification on the dependent and independent variables which helps in determining appropriate research methodology as discussed in the next chapter.

3.2 SUMMARY OF HYPOTHESES

This research integrates the three pillars of institutions and the Mair Noboa model (MNM) to develop a holistic multi-level model to gain more explanatory power and knowledge into social entrepreneurial intention. Similarly, this research also aims to investigate the inter-variable relationships between MNM antecedents. The previous chapters identified the gap in the literature and proposed relevant hypotheses. The hypotheses are divided into four themes to clarify the role of each construct for the complex conceptual model. The complex conceptual model contains independent, mediating, and dependent variables. The role of these variables varied depending on the perspective proposed in the hypotheses (Collis & Hussey, 2014; Geneste, 2010; Hair et al., 2018). The summary of the hypotheses is presented in Table 3.1 and the hypothesised model is shown in Figure 3.1.

3.2.1 Hypotheses Relating to Three Pillars of Institutions (TPI)

The starting point are the constructs associated with the three pillars of institutions determining the institutional-level perspectives. Regulatory institutional environment, normative institutional environment and cognitive institutional environment constructs will be used to measure social entrepreneurial intention, as was done in prior studies, such as the works of Kujinga (2016) and Wannamakok and Chang (2020) as part of Objective 1. Hypothesis 1 is developed based on the sub-hypotheses H1a, H1b and H1c, as shown in the hypothesised model. These measure the direct relationships,

meaning that the constructs of the three pillars of institutions are independent variables and social entrepreneurial intention is the dependent variable.

Hypothesis 1

Regulatory, normative and cognitive institutional environments are positively related to social entrepreneurial intention.

H1a: The regulatory institutional environment is positively related to social entrepreneurial intention.

H1b: The normative institutional environment is positively related to social entrepreneurial intention.

H1c: The cognitive institutional environment is positively related to social entrepreneurial intention.

3.2.2 Hypotheses Relating to Mair Noboa Model (MNM)

The Mair Noboa model (MNM) determines the individual-level perspectives for this research. The MNM are hypothesised to act as mediating as well as independent constructs impacting on social entrepreneurial intention as per Objectives 1 and 2. The constructs empathy, moral obligation, perceive social support and social entrepreneurial self-efficacy will be used to examine social entrepreneurial intention as well as the interrelationship effects. Hypothesis 2 is developed based on H2a, H2b, H2c and H2d to examine the direct relationship between MNM constructs and social entrepreneurial intention, as was done in the works of Ashraf (2020), Fatoki (2018), Hockerts (2017), Ip et al. (2017, 2018), Kruse (2020), Lacap (2018), Lacap et al. (2018), Peng et al. (2019), Rambe and Ndofirepi (2019) and Sousa-Filho et al. (2020). These proposed hypotheses were developed based on Objective 2.

Hypothesis 2

Empathy, moral obligation, perceived social support and social entrepreneurial self-efficacy are positively related to social entrepreneurial intention.

H2a: Empathy is positively related to social entrepreneurial intention.

H2b: Moral obligation is positively related to social entrepreneurial intention.

H2c: Perceived social support is positively related to social entrepreneurial intention.

H2d: Social entrepreneurial self-efficacy is positively related to social entrepreneurial intention.

Meanwhile, few studies advocated the merit of testing inter-variable relationships among few of MNM construct. For instance, Aure et al. (2019), Bacq and Alt (2018), Kazmi et al. (2019), Urban and Galawe (2019) and Younis et al. (2020) focused into few of the MNM constructs interrelationships. Based on the concept of the modified theory of planned behaviour, Hypotheses 3, 4 and 5 are developed. Hypotheses 3 and 4 are developed accordingly, based on H3a, H3b, H3c, H4a, and H4b. All these proposed hypotheses are developed based on Objective 2 and RQ2.

Hypothesis 3

Moral obligation positively affects social entrepreneurial intention through the mediation of empathy, perceived social support and social entrepreneurial self-efficacy.

H3a: Moral obligation positively affects social entrepreneurial intention through the mediation of empathy.

H3b: Moral obligation positively affects social entrepreneurial intention through the mediation of perceived social support.

H3c: Moral obligation positively affects social entrepreneurial intention through the mediation of social entrepreneurial self-efficacy.

Hypothesis 4

Empathy positively affects social entrepreneurial intention through the mediation of perceived social support and social entrepreneurial self-efficacy.

H4a: Empathy positively affects social entrepreneurial intention through the mediation of perceived social support.

H4b: Empathy positively affects social entrepreneurial intention through the mediation of social entrepreneurial self-efficacy.

Hypothesis 5

Perceived social support positively affects social entrepreneurial intention through the mediation of social entrepreneurial self-efficacy.

3.2.3 Hypotheses Relating to Integration of TPI and MNM

Based on RQ1 and Objective 1, the constructs of the Mair Noboa model (MNM) are hypothesised to act as a mediator between the constructs of the three pillars of institutions and social entrepreneurial intention. To date, only two studies, that is, Urban (2013) and Vyas et al. (2014), applied the constructs of the three pillars of institutions to determine social entrepreneurial self-efficacy, an individual-level MNM factors. For this research, the theories were integrated based on Mayer and Sparrowe's (2013) arguments on integrating theories if sharing a common dependent variable. The common dependent variable for both the theories is social entrepreneurial intention (SEI); thus, Hypotheses 6, 7 and 8 are proposed. These hypotheses were built on the sub-hypotheses, namely, H6a, H6b, H6c, H6d, H7a, H7b, H7c, H7d, H8a, H8b, H8c and H8d.

Hypothesis 6

The regulatory institutional environment positively affects social entrepreneurial intention through the mediation of moral obligation, empathy, perceived social support and social entrepreneurial self-efficacy.

H6a: The regulatory institutional environment positively affects social entrepreneurial intention through the mediation of moral obligation.

H6b: The regulatory institutional environment positively affects social entrepreneurial intention through the mediation of empathy.

H6c: The regulatory institutional environment positively affects social entrepreneurial intention through the mediation of perceived social support.

H6d: The regulatory institutional environment positively affects social entrepreneurial intention through the mediation of social entrepreneurial self-efficacy.

Hypothesis 7

The normative institutional environment positively affects social entrepreneurial intention through the mediation of moral obligation, empathy, perceived social support and social entrepreneurial self-efficacy.

H7a: The normative institutional environment positively affects social entrepreneurial intention through the mediation of moral obligation.

H7b: The normative institutional environment positively affects social entrepreneurial intention through the mediation of empathy.

H7c: The normative institutional environment positively affects social entrepreneurial intention through the mediation of perceived social support.

H7d: The normative institutional environment positively affects social entrepreneurial intention through the mediation of social entrepreneurial self-efficacy.

Hypothesis 8

The cognitive institutional environment positively affects social entrepreneurial intention through the mediation of moral obligation, empathy, perceived social support and social entrepreneurial self-efficacy.

H8a: The cognitive institutional environment positively affects social entrepreneurial intention through the mediation of moral obligation.

H8b: The cognitive institutional environment positively affects social entrepreneurial intention through the mediation of empathy.

H8c: The cognitive institutional environment positively affects social entrepreneurial intention through the mediation of perceived social support.

H8d: The cognitive institutional environment positively affects social entrepreneurial intention through the mediation of social entrepreneurial self-efficacy.

3.2.4 Hypotheses Relating to Moderators

Relevant moderators were identified to affect the relationship between the Mair Noboa model (MNM) antecedents and social entrepreneurial intention. Prior experience has been identified as a direct and indirect predictor of social entrepreneurial intention in past studies (Hockerts, 2017; Ip et al., 2017, 2018; Kruse, 2020; Lacap, 2018; Lacap et al., 2018; Peng et al., 2019; Rashid et al., 2018; Sousa-Filho et al., 2020). In these studies, most of the MNM antecedents indicated significant relationship with prior experience. However, prior experience was not tested as a moderator to determine the positive relationship between MNM constructs and social entrepreneurial intention as per the researcher's knowledge.

Considering Objective 3, Hypothesis 9 was developed based on the sub-hypotheses H9a, H9b, H9c and H9d. This is an attempt to identify the moderating effect of prior

experience on the positive relationships between MNM constructs and social entrepreneurial intention. The positive relationships will be stronger when the prior experience is higher and vice versa.

Hypothesis 9

Prior experience moderates the positive relationships between moral obligation, empathy, perceived social support and social entrepreneurial self-efficacy upon social entrepreneurial intention. The positive relationship will be stronger (weaker) when prior experience is higher (lower).

H9a: Prior experience moderates the positive relationship between moral obligation and social entrepreneurial intention.

H9b: Prior experience moderates the positive relationship between empathy and social entrepreneurial intention.

H9c: Prior experience moderates the positive relationship between perceived social support and social entrepreneurial intention.

H9d: Prior experience moderates the positive relationship between social entrepreneurial self-efficacy and social entrepreneurial intention.

Age has been extensively applied as a control variable in social entrepreneurship research. Solórzano-García et al. (2020) and Terjesen et al. (2016) suggested that age might be an indicator to determine individual interest on becoming a social entrepreneur. However, Chipeta et al. (2016), Estrin et al. (2013) and Politis et al. (2016) study finding indicated that age had no impact on the likelihood of becoming a social entrepreneur. Also, Lacap (2018) study findings indicated that age had no influence on the MNM constructs. Although age did not indicate a significant impact on MNM or social entrepreneurial intention, an opportunity exists to further test age as a moderator to determine the positive relationship between MNM constructs and social entrepreneurial intention. As part of Objective 3, Hypothesis 10 was developed based on the sub-hypotheses H10a, H10b, H10c and H10d. This is an attempt to identify the moderating effect of age on the positive relationships between MNM constructs and social entrepreneurial intention. The positive relationships will be stronger when age is higher and vice versa.

Hypothesis 10

Age moderates the positive relationships between moral obligation, empathy, perceived social support and social entrepreneurial self-efficacy upon social entrepreneurial intention. The positive relationship will be stronger (weaker) when age is higher (lower).

H10a: Age moderates the positive relationship between moral obligation and social entrepreneurial intention.

H10b: Age moderates the positive relationship between empathy and social entrepreneurial intention.

H10c: Age moderates the positive relationship between perceived social support and social entrepreneurial intention.

H10d: Age moderates the positive relationship between social entrepreneurial self-efficacy and social entrepreneurial intention.

Table 3.1 summarises the all the hypotheses based on the themes and objectives.

Table 3.1 Hypotheses Based on Themes and Objectives

Themes and Objectives	Hypotheses
Three Pillars of Institutions To examine the influence of the constructs of the three pillars of institutions on social entrepreneurial intention	**Hypothesis 1** Regulatory, normative and cognitive institutional environments are positively related to social entrepreneurial intention. **H1a:** The regulatory institutional environment is positively related to social entrepreneurial intention. **H1b:** The normative institutional environment is positively related to social entrepreneurial intention. **H1c:** The cognitive institutional environment is positively related to social entrepreneurial intention.
Mair Noboa Model To examine the influence of the constructs of the Mair Noboa model on social entrepreneurial intention	**Hypothesis 2** Empathy, moral obligation, perceived social support and social entrepreneurial self-efficacy are positively related to social entrepreneurial intention. **H2a:** Empathy is positively related to social entrepreneurial intention. **H2b:** Moral obligation is positively related to social entrepreneurial intention. **H2c:** Perceived social support is positively related to social entrepreneurial intention. **H2d:** Social entrepreneurial self-efficacy is positively related to social entrepreneurial intention. **Hypothesis 3** Moral obligation positively affects social entrepreneurial intention through the mediation of empathy, perceived social support and social entrepreneurial self-efficacy.

To investigate the interrelationship between the constructs of the Mair Noboa model as they impact on social entrepreneurial intention	**H3a**: Moral obligation positively affects social entrepreneurial intention through the mediation of empathy. **H3b**: Moral obligation positively affects social entrepreneurial intention through the mediation of perceived social support. **H3c**: Moral obligation positively affects social entrepreneurial intention through the mediation of social entrepreneurial self-efficacy. **Hypothesis 4** Empathy positively affects social entrepreneurial intention through the mediation of perceived social support and social entrepreneurial self-efficacy. **H4a:** Empathy positively affects social entrepreneurial intention through the mediation of perceived social support. **H4b:** Empathy positively affects social entrepreneurial intention through the mediation of social entrepreneurial self-efficacy. **Hypothesis 5** Perceived social support positively affects social entrepreneurial intention through the mediation of social entrepreneurial self-efficacy.
Integrating the three pillars of institutions and the Mair Noboa model To identify the possible mediating effects of the constructs of the Mair Noboa model as they impact on the relationships between the three pillars of institutions and social entrepreneurial intention	**Hypothesis 6** The regulatory institutional environment positively affects social entrepreneurial intention through the mediation of moral obligation, empathy, perceived social support and social entrepreneurial self-efficacy. **H6a:** The regulatory institutional environment positively affects social entrepreneurial intention through the mediation of moral obligation. **H6b:** The regulatory institutional environment positively affects social entrepreneurial intention through the mediation of empathy. **H6c:** The regulatory institutional environment positively affects social entrepreneurial intention through the mediation of perceived social support. **H6d:** The regulatory institutional environment positively affects social entrepreneurial intention through the mediation of social entrepreneurial self-efficacy. **Hypothesis 7** The normative institutional environment positively affects social entrepreneurial intention through the mediation of moral obligation, empathy, perceived social support and social entrepreneurial self-efficacy. **H7a:** The normative institutional environment positively affects social entrepreneurial intention through the mediation of moral obligation. **H7b:** The normative institutional environment positively affects social entrepreneurial intention through the mediation of empathy. **H7c:** The normative institutional environment positively affects social entrepreneurial intention through the mediation of perceived social support. **H7d:** The normative institutional environment positively affects social entrepreneurial intention through the mediation of social entrepreneurial self-efficacy.

	Hypothesis 8 The cognitive institutional environment positively affects social entrepreneurial intention through the mediation of moral obligation, empathy, perceived social support and social entrepreneurial self-efficacy. **H8a:** The cognitive institutional environment positively affects social entrepreneurial intention through the mediation of moral obligation. **H8b:** The cognitive institutional environment positively affects social entrepreneurial intention through the mediation of empathy. **H8c:** The cognitive institutional environment positively affects social entrepreneurial intention through the mediation of perceived social support. **H8d:** The cognitive institutional environment positively affects social entrepreneurial intention through the mediation of social entrepreneurial self-efficacy.
Prior Experience To identify the moderating impact of prior experience on the relationships between Mair Noboa model antecedents and social entrepreneurial intention	**Hypothesis 9** Prior experience moderates the positive relationships between moral obligation, empathy, perceived social support and social entrepreneurial self-efficacy upon social entrepreneurial intention. The positive relationship will be stronger (weaker) when prior experience is higher (lower). **H9a:** Prior experience moderates the positive relationship between moral obligation and social entrepreneurial intention. **H9b:** Prior experience moderates the positive relationship between empathy and social entrepreneurial intention. **H9c:** Prior experience moderates the positive relationship between perceived social support and social entrepreneurial intention. **H9d:** Prior experience moderates the positive relationship between social entrepreneurial self-efficacy and social entrepreneurial intention.
Age To identify the moderating impact of age on the relationships between Mair Noboa Model antecedents and social entrepreneurial intention	**Hypothesis 10** Age moderates the positive relationship between moral obligation, empathy, perceived social support and social entrepreneurial self-efficacy upon social entrepreneurial intention. The positive relationship will be stronger (weaker) when age is higher (lower). **H10a:** Age moderates the positive relationship between moral obligation and social entrepreneurial intention. **H10b:** Age moderates the positive relationship between empathy and social entrepreneurial intention. **H10c:** Age moderates the positive relationship between perceived social support and social entrepreneurial intention. **H10d:** Age moderates the positive relationship between social entrepreneurial self-efficacy and social entrepreneurial intention.

3.3 HYPOTHESISED MODEL

The hypothesised conceptual model included all the sub-hypotheses of the different constructs that affect social entrepreneurial intention, as shown in Figure 3.1.

Hypothesis 1 is related to the three pillars of institutions and social entrepreneurial intention. As per Hypothesis 1, the regulatory institutional environment (H1a), the normative institutional environment (H1b) and the cognitive institutional environment (H1c) positively influence social entrepreneurial intention (green arrows). Hypothesis 2 is related to the Mair Noboa model (MNM) and social entrepreneurial intention (SEI). In Hypothesis 2, empathy (H2a), moral obligation (H2b), perceived social support (H2c) and social entrepreneurial self-efficacy (H2d) positively influence social entrepreneurial intention (navy blue arrows).

Hypotheses 3, 4 and 5 are related to the interrelationships between the constructs of the Mair Noboa model (MNM) and social entrepreneurial intention (SEI). In Hypothesis 3 (purple arrows), moral obligation affects SEI through the mediation of empathy (H3a), perceived social support (H3b) and social entrepreneurial self-efficacy (H3c). In Hypothesis 4 (purple arrows), empathy affects SEI through the mediation of perceived social support (H4a) and social entrepreneurial self-efficacy (H4b). In Hypothesis 5 (purple arrows), social entrepreneurial self-efficacy mediates the relationship between perceived social support and SEI.

Hypotheses 6, 7 and 8 are related to the three pillars of institutions, the Mair Noboa model (MNM) and social entrepreneurial intention (SEI). In Hypothesis 6 (black arrows), the regulatory institutional environment positively affects SEI through the mediation of moral obligation (H6a), empathy (H6b), perceived social support (H6c) and social entrepreneurial self-efficacy (H6d). In Hypothesis 7 (black arrows), the normative institutional environment positively affects SEI through the mediation of moral obligation (H7a), empathy (H7b), perceived social support (H7c) and social entrepreneurial self-efficacy (H7d). In Hypothesis 8 (black arrows), the cognitive institutional environment positively affects SEI through the mediation of moral obligation (H8a), empathy (H8b), perceived social support (H8c) and social entrepreneurial self-efficacy (H8d).

Hypotheses 9 and 10 are related to the moderators. In Hypothesis 9 (blue arrows), prior experience moderates the positive relationships of moral obligation (H9a), empathy (H9b), perceived social support (H9c) and social entrepreneurial self-efficacy (H9d) on social entrepreneurial intention (SEI). In Hypothesis 10 (blue arrows), age moderates the positive relationships of moral obligation (H10a), empathy (H10b), perceived social support (H10c) and social entrepreneurial self-efficacy (10d) on SEI.

The outward pointing arrows demonstrate that these are reflective in nature and not formative (Geneste, 2010; Hair et al., 2018).
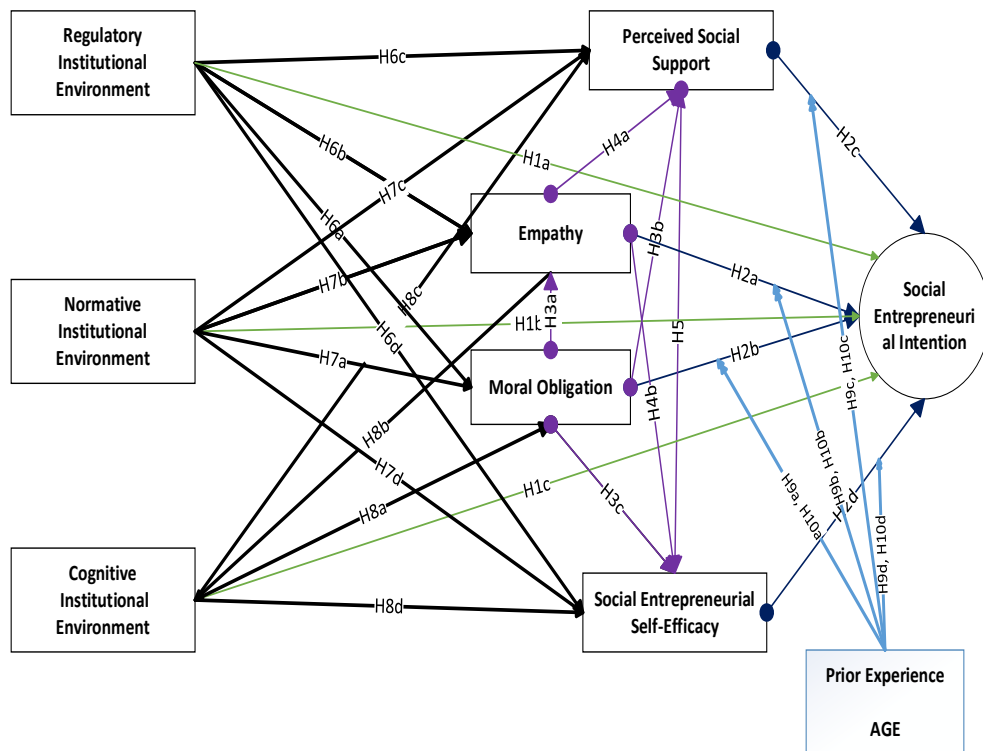
Figure 3.1 Hypothesised Model

Notes: **REG**=Regulatory Institutional Environment; **NORM**=Normative Institutional Environment; **COG**=Cognitive Institutional Environment; **EMP**=Empathy; **MO**=Moral Obligation; **PSS**=Perceived Social Support; **SESE**=Social Entrepreneurial Self-efficacy; **SEI**=Social Entrepreneurial Intention; **PriorExp**=Prior Experience

3.4 CONCLUSION

This chapter summarised the proposed hypotheses corresponding to the research objectives and themes. This chapter divided the themes related to the three pillars of institutions, the Mair Noboa model, integration and moderators. The developed table, based on the objectives and themes, gave a clear snapshot of the list of hypotheses of this research. The hypothesised conceptual model provided a detailed description on the sub-hypotheses helping identify the dependent, mediating, and independent constructs. The next chapter will elaborate on the research philosophy, design, approach, and method.

4. METHODOLOGY

4.1 INTRODUCTION

The fundamental purpose of this doctoral research is to integrate the three pillars of institutions and the Mair Noboa model (MNM) to gain more knowledge and explanatory power on social entrepreneurial intention. The previous chapter provided a comprehensive discussion on the related social entrepreneurial intention (SEI) literature and the proposed hypotheses. These proposed hypotheses offer clear identification on the independent and dependent variables to determine a suitable research methodology. The SEI stream is relatively new and still evolving (Tan et al., 2020); hence, notable SEI research investigation focused mostly on hypotheses testing at the individual level and very few at the institutional level. This chapter provides details on the research methodology to properly measure the study's hypotheses. The following section begins by reviewing research philosophy, research design, and methodology to address the research objectives. Thereafter, this chapter discusses on the sampling process, data collection, and analysis.

4.2 RESEARCH PHILOSOPHY

Research philosophy is fundamental in understanding the nature and reality of any study as it guides the entire process of selecting the design and methodology (Collis & Hussey, 2014). This research primarily aims to gain knowledge, understanding, and maximise the insight on social entrepreneurial intention (Saunders et al., 2009). To meet the research aim, some essential steps need to be met prior to conducting such research. These steps are collecting data based on systematic inquiry, analysing the data based on appropriate process, and interpreting the findings in a generalised manner (Mertens, 2010). Although systematic inquiry helps in measuring the human subjective reasoning (Cohen et al., 2007), the researcher needs to obtain a clear assumption on the nature and reality of the research prior such inquiry (Cohen et al., 2007). Addressing research philosophy can be challenging at times (Mertens, 2010) due to the researcher's assumption towards the world (Saunders et al., 2009). Thus, researcher's own viewpoint, values, and shared beliefs can reflect on selecting the research philosophy. Similarly, Easterby-Smith et al. (2012) stressed the importance of researchers' assumptions influencing the overall research process and outcome.

Therefore, selecting certain research philosophy can impact significantly on the research strategy and the overall research investigation (Johnson & Clark, 2006).

Research philosophy, assumption, paradigm or view refers as a methodological framework that shapes researcher's perspective on the overall research inquiry (Aliyu et al., 2015; Creswell, 2009; Guba & Lincoln, 1994). According to Guba and Lincoln (1994), research paradigm can be examined effortlessly through the lens of ontological, epistemological and axiological assumption (Aliyu et al., 2015). Ontology, epistemology, and axiology are the research assumptions that help in clarifying the approach and practical implications for the research inquiry. The following section will elaborate on each assumption.

Ontology relates to the researcher's understanding on the nature of reality or the way the world operates (Bryman, 2011; Saunders et al., 2009). According to Collis and Hussey (2014), ontological assumption determines the extent of social reality as an independent existence as per the researcher's view. Additionally, Crotty (1998) argued that ontological assumptions guides the researcher's perception on the nature of social reality and how it really works. Furthermore, the nature of social reality are based on the social actors/ researchers view on the extent from objective to subjective reality (Bryman & Bell, 2011; Geneste, 2010). Ontology has two aspects associated with the nature of reality: objectivism and subjectivism (Saunders et al., 2009). Objectivism refers the nature of realities or the way world operates as an independent entity from the consciousness and experience of the researcher (Crotty, 1998). On the other hand, subjectivism stresses on social actor's perception and actions shaping the social reality (Saunders et al., 2009). According to Bryman and Bell (2011), social phenomena and its meanings are dependent on the view of the researcher in subjectivism, whereas, in objectivism, social phenomena are independent from the view of the researcher.

Epistemology relates to the researcher's view on the valid or acceptable knowledge (Collis & Hussey, 2014; Saunders et al., 2009). According to Crotty (1998), epistemology is the researcher's view on the degree from known and unknown knowledge. The knowledge rooted in the theoretical perspective usually drives the researcher's acknowledgement (Crotty, 1998). However, researcher's acceptance can vary based on the institutional background. For example, natural science and social science institutions has very different perspective and understanding on shaping the knowledge on the acceptable level of a researcher (Bryman & Bell, 2011). The natural

and social science institutions administer different procedures to acknowledge the social world which impacts the epistemological view for a researcher (Bryman & Bell, 2011; Tuli, 2011). Therefore, the level of acceptable knowledge has two broad positioning positivism and interpretivism depending on the epistemological concern (Saunders et al., 2009). Generally, positivism is administered from the natural science stance and interpretivism from social science stance (Saunders et al., 2009; Tuli, 2011).

Positivism associates with the observable social reality that produces generalised law-like research (Remenyi et al., 1998). According to Collis and Hussey (2014), positivist suggests that the social reality is objective and independent from the researcher. This view acknowledge the observable phenomena to gain credible data and facts (Saunders et al., 2009). It also favours into applying statistical analysis to generalise the findings (Chipeta, 2019). In positivism, the research findings mostly depends on approving and disapproving the hypotheses (Schulze & Kamper, 2012), whereas interpretivism is associated with socially constructed reality, advocating for the co-dependence of the social actor and social reality (Saunders et al., 2009). The interpretivists suggested that the researcher and the social reality impacts each other, favouring multiple social reality (Collis & Hussey, 2014). Therefore, positivism associates with singular social reality as opposed to the multiple social reality of interpretivism (Collis & Hussey, 2014). Similar to objectivism, positivism acknowledges the social reality as objective, singular and external to the researcher (Geneste, 2010; Scotland, 2012). Likewise, subjectivism is connected to interpretivism as both assumes subjective and multiple social reality (Collis & Hussey, 2014; Scotland, 2012). Thus, it can be argued that objectivism and positivism are similarly positively connected to subjectivism and interpretivism.

Meanwhile, axiology relates to the researcher's judgement on the role of social values (Saunders et al., 2009). According to Heron (1996), social values strongly guide the action of the social actors. For the research inquiry, axiology determines the researcher's view on the extent between value-free and value bound (Saunders et al., 2009). For instance, finalising certain task over others reflects the researcher's judgement on prioritising that task as more important and valuable (Cohen et al., 2007). According to Saunders et al. (2009), value-free axiology reflects social reality as independent and objective which corresponds to the positivist view. Likewise, interpretivists tends to associate research as value-bound due to the research process

being connected with the researcher's view (Saunders et al., 2009). Based on the axiology, the researcher's explore either by interfering or without interfering the causality of a social phenomenon (Collis & Hussey, 2014; Geneste, 2010). It also affects the data collection techniques, value-free axiology associates with positivist assumption on favouring mostly quantitative research involving large sample size, measurement scales and highly structured procedures (Cohen et al., 2007; Saunders et al., 2009). In contrast, value-bound axiology associates with interpretivism preferring qualitative approach involving small sample size, in-depth investigations with flexible procedures (Cohen et al., 2007; Saunders et al., 2009). The table 4.1 below replicated from Saunders et al. (2009) provides a summary of basic philosophical assumptions and their practical implications.

Table 4.1 Philosophical Assumptions

Source: replicated from Saunders et al. (2009)

	Ontology (Nature of Reality)	*Epistemology (Acceptable Knowledge)*	*Axiology (Role of Value)*	*Data Collection Technique*
Positivism	Objective and independent of social actors	Generalise observable phenomena to generate credible data	Value-free	Highly structured, large sample size, measurement, quantitative
Interpretivism	Subjective and socially constructed	Specific observation on the situation to generate subjective meanings	Value-bound	Flexible, small sample size, in-depth investigation, qualitative

Moreover, Thomas (2003) argued that appropriate philosophical assumptions can be decided based on the research problem and question (Collis & Hussey, 2014). As mentioned in Chapter 1, a lack of research exists in the social entrepreneurial intention literature that has addressed and integrated both the three pillars of institutions framework and the Mair Noboa model. The literature on social entrepreneurial intention also tends to ignore inter-variable relationships within the same level. To achieve the full potential on determining social entrepreneurial intention, it is important to address these research problems. Based on this main concept, the following research questions were generated:

RQ1: To what extent, do the constructs of the Mair Noboa model mediate the relationships between the antecedents of the three pillars of institutions and social entrepreneurial intention?

RQ2: To what extent, do the interrelationships between the constructs of the Mair Noboa model influence social entrepreneurial intention?

This doctoral research identifies the most prominent institutional- and individual-level antecedents based on a comprehensive literature review conducted in a value-free manner. The model was developed considering facts and credible published studies associated with objectivism (Farivar, 2015; Saunders et al., 2009; Tuli, 2011). Hypotheses were also built to test and confirm in relation to positivism (Schulze & Kamper, 2012). To summarise, this research reflects objectivism as the ontological consideration as social entrepreneurial intention can be treated as an observable and singular social reality. The epistemological consideration favours positivism as the research hypotheses are developed based on credible data which will be tested to confirm the findings. Also, value-free axiology is associated as the purpose of this research is to generalise the findings.

4.3 RESEARCH DESIGN

Research design refers to the master plan for pinpointing the appropriate methods and procedures for collecting and analysing the required information (Creswell & Creswell, 2017; Mitchell & Jolley, 2012; Zikmund et al., 2013). It helps to identify relevant and practical conceptual problems based on philosophical assumptions (Chipeta, 2019; Ghauri & Grønhaug, 2010). Research design ensures the valid collection of evidence to correctly address the research questions (de Vaus, 2001). Research questions can also guide the selection of the research design (Saunders et al., 2009). Generally, the two major types of research design are exploratory and conclusive (Malhotra, 2006; Malhotra et al., 2013).

Exploratory research design is flexible, tends to discover ideas and insight to assist researcher in answering the unresolved research problem and unclear questions (Zikmund et al., 2013). In contrary, conclusive research design is planned and structured tends to collect statistically accurate data to enable the researcher to answer evident research problems and specific questions (Chipeta, 2019; Zikmund et al., 2013). This doctoral research has specific research problem and questions, so,

conclusive research design will be most acceptable in this case. Conclusive research design can be descriptive and causal in nature (Chipeta, 2019; Mitchell & Jolley, 2012). Descriptive research is suitable for testing hypotheses with regard to the related variables to explain the population of the study (Mitchell & Jolley, 2012), whereas causal research is suitable in evaluating a cause-and-effect situation (Mitchell & Jolley, 2012; Zikmund et al., 2013). This research is structured and aims to test hypotheses of the Bangladeshi population (Malhotra, 2006), in doing so, conclusive descriptive research design seems to be most suitable (Mitchell & Jolley, 2012). Additionally, this doctoral research aims to obtain better insights and explanatory power on social entrepreneurial intention in Bangladesh by integrating prominent institutional- and individual-level antecedents.

4.4 RESEARCH METHODOLOGY

The research methodology describes the principle, theories and values that support the overall research (Zikmund et al., 2013). It defines the process of conducting research by incorporating certain principles and analysis (Walter, 2009). The research method is part of the research methodology, referring to the techniques that are applied to conduct a study (Kothari, 2004). The research methods can be qualitative, quantitative, and mixed methods. Qualitative methods are applied to understand complex issues by involving small sample size, also, it tends to place more emphasis on building case studies or grounded theories (Berríos & Lucca, 2006). On the other hand, quantitative research methods emphasise testing theories and the proposed relationships among the variables by statistically analysing the collected data (Creswell & Creswell, 2017). It involves collecting large quantifiable research data by applying structured questionnaires (Cohen et al., 2007). In quantitative research, the findings tend to be generalised and treated as conclusive (Malhotra et al., 2013; Zikmund et al., 2013). In mixed-methods both qualitative and quantitative techniques are applied simultaneously to the same study (Creswell & Creswell, 2017).

Moreover, philosophical assumptions determine a suitable research methodology (Grove et al., 2013; Saunders et al., 2009; Walter, 2009). Thus, Bryman and Bell (2011) argued that quantitative research is aligned more with positivism, whereas qualitative research is aligned with interpretivism. Considering the previous section,

the current study is aligned with positivism; thus, the quantitative method can be considered the most suitable for application.

In addition, this research aims to investigate the extent of the individual-level antecedents and institutional-level antecedents influencing social entrepreneurial intention (SEI). Both the research questions involve the key word *extent* which relates to quantity (Geneste, 2010; Grove et al., 2013). According to Davidsson (2004), research questions of a quantifiable nature can be best answered by quantitative investigation. Also, Choy (2014), Grove et al. (2013) and Hair et al. (2019) argued that the quantitative method can be the most appropriate and sophisticated technique to determine direct and indirect relationships. Therefore, the quantitative method is considered the most suitable method for this research.

In the context of social entrepreneurial intention (SEI), much prominent research has focused on the employment of quantitative methods. In contrast to the research gap on the integration of institutional and individual levels, individual-level antecedents dominate in the quantitative research used for SEI prediction. Numerous studies have incorporated individual-level antecedents to measure SEI by applying the quantitative method (Akhter et al., 2020; Ashraf, 2020; Aure, 2018; Aure et al., 2019; Ayob et al., 2013; Bacq & Alt, 2018; Bosch, 2013; Ernst, 2011; Fatoki, 2018; Forster & Grichnik, 2013; Hassan, 2020; Hockerts, 2015, 2017; Ip et al., 2017, 2018; Kazmi et al., 2019; Kruse et al., 2019, 2020; Lacap, 2018; Lacap et al., 2018; Lim & Omar, 2019; Peng et al., 2019; Politis et al., 2016; Rambe & Ndofirepi, 2019; Rashid et al., 2018; Sousa-Filho et al., 2020; Tiwari et al., 2017a, 2017b; Urban & Teise, 2015; Wilton, 2016; Yang et al., 2015; Younis et al., 2020). Also, several studies have incorporated institutional-level antecedents to measure SEI by applying the quantitative method (Ferri & Urbano, 2011, 2017; Griffiths et al., 2013; Hoogendoorn, 2016; Pathak & Muralidharan, 2016; Stephan et al., 2015; Urbano et al., 2010; Urbano et al., 2014; Viviers et al., 2012; Vyas et al., 2014). However, very few studies, for instance, Estrin et al. (2013, 2016), Kujinga (2016), Sahasranamam and Nandakumar (2020), Urban and Kujinga (2017) and Wannamakok and Chang (2020) have incorporated both individual- and institutional-level antecedents to assess SEI by applying the quantitative method.

No studies in the literature have incorporated the antecedents of both the Mair Noboa model (MNM) and the three pillars of institutions to examine social entrepreneurial

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intention (SEI). Additionally, little quantitative research has been conducted in Bangladesh. For instance, the studies by Akter et al. (2020), Agrawal and Hockerts (2013), Faruk et al. (2017), Fujimoto and Uddin (2019), Hossain and Hossain (2012), Mair and Marti (2009) and Hackett (2010) conducted qualitative research on social entrepreneurship in Bangladesh. More recently, Akhter et al. (2020), Ashraf (2020) and Hassan (2020) conducted quantitative research on the social entrepreneurial intention in Bangladesh. Hence, an opportunity exists to contribute more quantitatively on this poorly represented country. The quantitative method also helps to retain data in a short span of time to reflect the "snapshot" time horizon referred as cross-sectional (Grove et al., 2013; Saunders et al., 2009). Due to restrictions on time duration of the doctoral study, cross-sectional seemed to be the most practical time horizon to determine SEI in Bangladesh. Table 4.2 summarises the doctoral research methodology discussed in this section.

Table 4.2 Summary of Doctoral Research Methodology

	Ontology	*Epistemology*	*Axiology*	*Research Design*	*Research Methodology*	*Data Collection Technique*
Doctoral Research	Objectivism	Positivism	Value-Free	Conclusive Descriptive Research	Quantitative	Survey

4.5 DATA COLLECTION METHOD

A quantitative study involves data collection through the available methods such as observation, experimentation, survey etc. Observation method has the merit to measure the actual behaviour instead of intention due to the direct monitoring for collecting data from the respondents (Grove et al., 2013; Saunders et al., 2009). Although this method can measure the actual behaviour, the collected data can be very challenging to interpret because of the underlying differences in an individual attitude, perception and understanding (Cohen et al., 2007). Conversely, the experimentation method is most suitable for causal research that requires a controlled environment for manipulating variables (Hair et al., 2019). For a quantitative study, survey method is often applied due to its versatile offerings. Survey method associates with structured data collection from a sizeable population (Grove et al., 2013; Saunders et al., 2009). It is often employed by cross-sectional studies (Easterby-Smith et al., 2012; Robson, 2002). Although survey is often considered as questionnaire, other techniques such as

structured observations and structured interviews are as well part of survey (Grove et al., 2013; Saunders et al., 2009).

Structured questionnaires under survey seems appropriate for this research as it can easily collect sizeable data and retrieve collected data by employing advance statistical analysis (Cohen et al., 2007; Zikmund et al., 2013). According to Cohen et al. (2007), Hair et al. (2019) and Saunders et al. (2009), survey method has the potential to increase generalisability of the findings by accommodating large sample size. Also, it is comparatively easier to administer and quicker to record and analyse (Hair et al., 2019; Saunders et al., 2009). Therefore, the survey method seems the most applicable for this research due to its unique features, such as: (i) convenience and accessibility as the data can be collected digitally through email or web-based self-administered survey tool (Zikmund et al., 2013); (ii) higher response rate can be generated due to simultaneous distribution (Sekeran & Bougie, 2016); and (iii) anonymity and confidentiality of the respondents can be maintained (Alsnih, 2006). However, the lack of control over the response rate and difficulty in determining respondents' truthfulness can be challenging in a structured questionnaire survey (Alsnih, 2006; Sekeran & Bougie, 2016). Even with these challenges, survey is still a popular and prominent mode of data collection in determining social entrepreneurial intention. All the quantitative research (as shown in section 4.4, p. 89, 90) applied survey to collect data.

4.6 SAMPLING PROCESS

Designing proper sampling process can ensure quality data collection. Thus, implementing the right sampling process can benefit the overall quality of the research (Cohen et al., 2007). The following section will discuss the steps such as target population, sample frame, sampling techniques and sampling size to implement proper sampling process.

4.6.1 Target Population

Defining target population is the first step of sampling process implementation. According to Grove et al. (2013) and Saunders et al. (2009), population refers to all the objects or individual that meets the criteria to be included in the specific research. Target population retain all the necessary knowledge and information in regard to the investigating objects of the research (Grove et al., 2013). Therefore, defining target

population distinctly can ensure proper source of data collection (Zikmund, 2013). At first, the geographical boundaries needs to specified followed by defining sampling frame, then the distinct sample can help exercise the sampling process better (Chipeta, 2019; Zikmund, 2013). This research aims to measure intention and in regard to measure intention Krueger Jr et al. (2000) and Krueger (1993, 2017) stressed focusing in the population that are in the process of making career-decision. In the context of social entrepreneurship, university students tends to be the potential social entrepreneurs due to their growing energy, talent and interest (Bosma & Levie, 2010). Similarly, past studies suggested that individuals with tertiary-level education seem to develop higher social entrepreneurial intention (Politis et al., 2016; Terjesen et al., 2016; Viviers et al., 2012). In Bangladeshi context, Akhter et al. (2020) and Hassan (2020) suggested that educational institutions and entrepreneurial education plays a vital role in developing social entrepreneurial intention among university students.

Numerous studies considered university students as the target population for measuring social entrepreneurial intention (Akhter et al., 2020; Ashraf, 2020; Aure, 2018; Ayob et al., 2013; Bacq & Alt, 2018; Fatoki, 2018; Hassan, 2020; Hockerts, 2015, 2017; Ip et al., 2017, 2018; Kazmi et al., 2019; Kruse, 2020; Lacap, 2018; Lacap et al., 2018; Lim & Omar, 2019; Peng et al., 2019; Politis et al., 2016; Sousa-Filho et al., 2020; Tiwari et al., 2017a, 2017b; Urban & Kujinga, 2017; Viviers et al., 2012; Wannamakok & Chang, 2020; Yang et al., 2015; Younis et al., 2020). These studies advocated that university students could be the most suitable target population as they are in the process of making career decisions. Also, Lacap (2018) and Politis et al. (2016) indicated that final year and postgraduate university students tend to have higher intention to pursue social entrepreneurship compared to the freshman.

For this research, university students are the target population for measuring social entrepreneurial intention. So far, Akhter et al. (2020), Ashraf (2020) and Hassan (2020) applied university students as the target population to measure social entrepreneurial intention in Bangladesh. The target population of this research comprised of all undergraduate and postgraduate university students studying in any fields in the academic year 2019. The ministry of education in Bangladesh has established University Grants Commission (UGC) to govern all the universities (University Grants Commission of Bangladesh [UGC], 2020). As per the UCG, the two main types of universities across the country are public (government-owned) and

private (privately-owned). According to University Grants Commission of Bangladesh (www.ugc-universities.gov.bd), in total, 151 universities are operating in Bangladesh which comprises 46 public universities and 105 private universities (University Grants Commission of Bangladesh, 2020).

4.6.2 Sample Frame

The sample frame consists of a subset of all the respondents from the target population (Saunders et al., 2009). It is determined from the target population and represents the respondents from the target population (Chipeta, 2019; Grove et al., 2013; Zikmund, 2013). The researcher needs to identify the sample frame that ideally represents the target population (Creswell & Creswell, 2017). In this research, the sampling frame is developed based on the list of students attending universities across the country. Bangladesh is divided across eight divisions: Barisal, Chittagong, Dhaka, Khulna, Mymensingh, Rajshahi, Rangpur, and Sylhet (as shown below in Figure 4.1). Universities are located across these eight divisions. Dhaka still holds the primary location for more than 70 universities attracting majority of the population. It is the capital of Bangladesh offering better lifestyle, job market, and infrastructural development for the citizens of the nation. After Dhaka, the education providers prefer Chittagong as it also provides similar facilities to attract migration and development holding more than 25 universities.

The lack of sufficient tertiary institutions across the other divisions motivates the potential students to change base to continue their tertiary-level education. According to UNESCO (2020), more than 15 million students (exactly 15,319,858) were enrolled in Bangladeshi universities in 2018. Bangladesh has an estimated population of 164 million (BBC, 2019; United Nations, 2019), of which Dhaka has the highest population at around 16,800,000 and Chittagong has the second highest population at around 2,582,000 as per the website of the Bangladesh government (http://www.bangladesh.gov.bd/). For this research, the sampling frame comprised 15 public and private universities in Bangladesh located in both Dhaka and the Chittagong division. The university names and approximate student enrolled numbers are given below in table 4.3.

Table 4.3 Sample Frame of Bangladeshi University Students

No	University Name	Year Established	Type	Total Number of Students ***	Division
1.	Dhaka University (DU)	1921	Public	37, 018+	Dhaka
2.	Chittagong University (CU)	1966		27,550+	Chittagong
3.	Jahangirnagar University (JU)	1970		16,781+	Dhaka
4.	Bangladesh University of Professional (BUP)	2008		6,050+	Dhaka
5.	Military Institute Science and Technology (MIST)	1998		10,000+	Dhaka
6.	North South University (NSU)	1992	Private	22,000+	Dhaka
7.	University of Liberal Arts Bangladesh (ULAB)	2004		8,500+	Dhaka
8.	BRAC University (BU)	2001		11,200+	Dhaka
9.	Northern University (NU)	2002		7,000+	Dhaka
10.	United International University (UIU)	2003		4665+	Dhaka
11.	University of South Asia (UNISA)	2003		3,000+	Dhaka
12.	East West University (EWU)	1996		10, 400+	Dhaka
13.	Daffodil International University (DIU)	2002		12,000+	Dhaka
14.	Comilla University (CoU)	2006		7,055+	Dhaka
15.	Southern University Bangladesh (SUB)	2003		5,500+	Chittagong
	Total			188,719+	

***The student enrolment numbers are approximate collected based on either university websites or university administration through personal network

Figure 4.1 shows the map of Bangladesh with eight distinct divisions.

Figure 4.1 Map of Bangladesh

Source: Google; website: https://d-maps.com/carte.php?num_car=47483&lang=en

4.6.3 Sampling Technique

Sampling technique ensures effective representation of the sampling frame and the target population (Zikmund, 2013). Generally, the sampling techniques involves two procedures: probability and non-probability sampling (Saunders et al., 2009). Probability sampling refers to the equal chance of being selected by each respondent from the sample frame, whereas non-probability sampling refers to respondents being selected purely based on a researcher's personal judgement where the equal chance is not relevant (Ghauri & Grønhaug, 2010; Malhotra et al., 2013).

For this research, both sampling techniques were applied to collect suitable sample. The purposive non-probability sampling were applied as the researcher selected the sample based on a purpose to meet some basic criteria (Saunders et al., 2009). According to Zikmund (2013), purposive non-probability sampling technique is relatively quick, easy and cheap to apply, therefore, the researcher needs to be cautious regarding the representation of the population. The researcher needs to set some strict criteria to implement purposive sampling successfully (Sekeran & Bougie, 2016). Due

to the limited number of research on Bangladeshi universities, the researcher focused into a wide range of universities. Few strict criteria's were decided by the researcher to finalize the universities. For example, the researcher only targeted universities with English mode of teaching. This ensured the students understanding on the survey questionnaire. Also, the researcher emphasized on targeting universities with good ranking. The researcher selected a combination of old and young established universities based on the years of operation, total number of students offered degrees and location. In doing so, the collected data represented a wide spectrum of university students. More than thirty universities met the criteria, the researcher selected total 15 universities based on her professional and personal connection to save some time on the data collection process. The researcher specified five public universities and 10 private universities based on non-probability sampling technique given above in table 4.3.

The selected universities met the strict criteria and offered suitable environment for data collection. For example, Dhaka University (DU) positioned at 134, North South University (NSU) ranked at 228 and BRAC University (BU) ranked in the range 271-280 in the Quacquarelli Symonds (QS) Asia Rankings 2021 (QS Asia, 2021). In the same QS ranking 2021, East West University (EWU) and Daffodil International University (DIU) positioned in the 401- 450 (QS Asia, 2021). Also, in QS 2020 subject ranking DU business school ranked among 351-400 and NSU business school ranked among 401-450 (QS, 2021).

Furthermore, Org-Quest Research Limited in association with Dhaka Tribune and Bangla Tribune conducted a private university ranking in 2019 where NSU ranked number one out of 100 other private universities in Bangladesh (Dhaka Tribune, 2019). In this private university ranking in Bangladesh, BU ranked number two, EWU as three, DIU as seven, United International University (UIU) as eight, University of Liberal Arts Bangladesh (ULAB) ranked number nine, Northern University (NU) as 16 (Dhaka Tribune, 2019). Additionally, Ranking Web of Universities (RWU) edition in 2018, NSU, BU, DU, Chittagong University (CU) and Jahangirnagar University (JU) were among the top ten universities across Bangladesh (The Daily Star, 2018). Based on Times Higher Education (THE) Impact Rankings 2020, BRAC University (BU) ranked in global top 50 for 'Sustainable Development Goals (SDGs) 1: No poverty' (THE, 2020).

Then probability sampling technique was implemented to select the student sample from the above mentioned universities. To be specific, simple random sampling was considered as the most suitable sampling technique for generalising the population of this research (Ghauri & Grønhaug, 2010). Within the university each students received an equal chance to be selected (Chipeta, 2019; Zikmund, 2013). This sampling is also a common choice for quantitative research (Farivar, 2015; Zikmund, 2013). In simple random sampling, the challenge is to ensure that all the students across the university were given an equal chance to participate (Ghauri & Grønhaug, 2010; Saunders et al., 2009). To implement this sampling technique, the researcher exercised official protocols; for example, official meetings were held with the dean and lecturers to circulate as many questionnaires as possible within and across the universities. Applying purposive non-probability sampling by exploring the researcher's professional and personal networks to finalise the universities helped in distributing questionnaires to all levels. Therefore, simple random sampling was executed properly in the process of data collection.

4.6.4 Sample Size

Sample size refers to the total number of usable cases or respondents that need to be included in a study (Kose & Demirtasli, 2012; Zikmund, 2013). Determining an adequate sample size will help in running the tests for ensuring research validity and reliability. Saunders et al. (2009) and Zikmund (2013) emphasise finalising the sample size based on the population. Sample size of 384 can be considered sufficient for the population ranging above 100,000 to 10,000,000 with 5% margin of error (Saunders et al., 2009). The population of this study can be estimated based on the student enrolled in the above table. Based on the approximate number of students, the acceptable sample size should be 384. Previously, Nunnally (1967) argued on ten observations per latent variable with multiple items for measuring adequate sample size. Bentler and Chou (1987) later suggested a rule of thumb for considering as low as five cases per item in a latent variable for an ideal sample size. For this research, the total items are 46, as per the rule of thumb 230 (46*5) will be the right sample size (Zikmund, 2013).

Additionally, Green (1991) provided a formula to determine sample size. The formula suggests on multiplying 8 with the total number of independent variables and adding

50 to that can generate applicable sample size (Green, 1991). In this research, seven independent variables are employed, comprising the mediator variables [Regulatory Institutional Environment (REG), Normative Institutional Environment (NORM), Cognitive Institutional Environment (COG), Empathy (EMP), Moral Obligation (MO), Perceived Social Support (PSS), Social Entrepreneurial Self-efficacy (SESE)]. Following Green (1991), the estimated sample size for this research would be a minimum of 106 university students.

Moreover, Byrne (2016) and Kline (2015) suggested minimum of 150-200 cases as sample size to conduct structural equation modelling (SEM) (Anderson & Gerbing, 1998; Tabachnick & Fidell, 2013). Additionally, Nga and Shamuganathan (2010) and Tiwari et al. (2017a) emphasised finalising the sample size based on the previous studies in the field. In the context of Bangladesh, Akhter et al. (2020), Ashraf (2020) and Hassan (2020) are the most recent relevant studies for this research. In Akhter et al. (2020), 231 university students were recruited, whereas Ashraf (2020) recruited 249 university students and Hassan (2020) recruited 380 university students to measure social entrepreneurial intention in Bangladesh. Based on these discussions, the proposed adequate sample size should be 384 to measure social entrepreneurial intention in Bangladesh. Table 4.4 summarises the sampling process for the doctoral research discussed in this section.

Table 4.4 Summary of Sampling Process

Target Population	University Students across Bangladesh
Sample Frame	15 Bangladeshi Public and Private Universities
Division	Dhaka and Chittagong
Sampling Technique	Purposive Sampling for selecting the university Random Sampling for selecting the students
Proposed Adequate Sample Size	384
Collection of Information	Survey

4.7 QUANTITATIVE DATA COLLECTION

In quantitative research, data collection is a fundamental systematic process to answer the research problem (Creswell & Creswell, 2017; Grove et al., 2013). As previously mentioned, a survey is considered the most suitable data collection technique for this research. This section will further elaborate on the entire process of data collection by discussing the survey instrument, survey design, measurement items, and administration.

4.7.1 Survey Instrument

Questionnaire-based survey is most appropriate for this research. The questionnaire-based survey can be interviewer- administered, online and postal (Saunders et al., 2009). The online questionnaire-based survey can be most cost effective as it has the potential to cover significantly large sample (Alsnih, 2006; Jamsen et al., 2007; Sekeran & Bougie, 2016). This research will apply online survey for collecting significant number of data by exploring almost zero geographical boundaries (Dillman, 2007; Gill & Johnson, 2010). In online survey, the respondents self-administer the predetermined set of structured questionnaire using internet (Alsnih, 2006; Bell, 2010; Saunders et al., 2009). It is a cost effective method which disperse the questionnaire readily without incurring any extra charge on distribution and data entry (Bell, 2010; Dillman, 2007; Sekeran & Bougie, 2016). Additionally, online survey tool displays completion data in real time ensuring less time to collect data from the geographically diverse respondents (Dillman, 2007). This can be also done as email-based survey (Alsnih, 2006) by distributing the recruitment email attached with the participant information sheet and the electronic survey link. In this research, the researcher applied email-based survey to distribute to the key personnel such as the deans and lecturer of the universities. This has allowed the researcher to be completely independent from the subjects of the research. The recruitment email and participant information sheet includes all the necessary information such as aim of the research, ethics approval number, survey time duration, survey link and possible risks to prepare the respondents before taking the survey.

Curtin University offers Qualtrics, a web-based survey tool to prepare and develop the online questionnaire-based survey. The user-friendly features, attractive outlook and multiple question formats are the major benefits of using Qualtrics or any kind of HTML forms (Berry, 2005; Jamsen et al., 2007). Also, the collected data from Qualtrics can be easily accessible for analysis on statistical software (Berry, 2005).

Despite the offered benefits, online surveys can face coverage bias and non-response bias impacting the accuracy of the findings (Dillman, 2007; Farivar, 2015). Coverage bias refers to the adverse impact on the response rate due to the respondents having no internet access (Dillman, 2007). This coverage bias was minimised as the finalised universities offer free internet access in the university premises which ensures comparatively better participation on completing the survey. This gives the university

students a chance to participate in the research even if he/she does not have proper access to the internet at home. Non-response bias associates with the dominance of certain demographic characteristics of the users accessing internet, for example only male or either female users or only users from certain location can impact the validity and generalisation of the findings (Alsnih, 2006). This bias can impact this research as the researcher was not directly involved in the distribution process. There might be certain clusters dominating within the overall sample though. Relevant tests was conducted while analysing the data to detect such bias. This is further discussed based on the findings in Chapters 5 and 6 (Sections 5.5 and 6.6).

4.7.2 Survey Design

Online surveys have the potential to reach large sample but quality survey design ensures the survey completion. Ghauri and Grønhaug (2010) and Krosnick and Presser (2010) stressed on the importance of designing the survey layout to influence higher response rate. This research survey was designed in three sections. In the first section, a brief concept of social entrepreneurship (as shown below) was given followed by the information on the research aim, duration, ethics approval number, contact information and participation consent. To raise interest and awareness among the respondents, a few examples of Bangladeshi social enterprises were given with the definition.

> *A Social Entrepreneur aims to help society and create social value in addition to economic value. Some examples of the social entrepreneurs practicing social entrepreneurship in Bangladesh includes micro-finance organisations (Grameen Bank), non-profits (JAAGO Foundation) helping a disadvantaged population (homeless, children) or a for-profit venture (Aarong) that donates profits to charity or helps society in some way.*

In the second section, all relevant measurement items are given as closed-ended questions (Dillman, 2007) or forced-choice questions (de Vaus, 2001) alongside several alternative options from which to choose. Respondents were asked to rate their level of likelihood, agreement or accuracy with the statements in the Likert-scale style (Corbetta, 2003; Thompson et al., 2003). For this research, five-point Likert-scale style questions were given to generate clear outcomes. These Likert scales were coded from 1 to 5 based on the "strongly disagree" to "strongly agree". The measurement items were placed in short batches to increase the interaction of the respondents. In the last section, a list of demographic questions on gender, age, enrolled university,

educational level, work experience, etc. was provided. These categorical variables were also coded. For example, education level was coded as 1 for "undergraduate" and 2 for "postgraduate". This survey flow was crafted in a manner that would minimise response errors (Krosnick & Presser, 2010).

This survey was designed with careful consideration to avoid common method bias and measurement errors. Common method bias associates with the response variances in the research finding due to the multiple construct measurement (Podsakoff et al., 2003, 2012). Also, it is considered as the main source of measurement error (Farivar, 2015; Geneste, 2010). This research is based only on quantitative method and can be in a risk of common method bias as per Podsakoff et al. (2003). To minimise such bias, the researcher has applied all possible recommendations starting from the pre-design to the analysis provided by Podsakoff et al. (2003, 2012). The respondents were assured of their anonymity in the survey which allowed them to response as honestly as possible by avoiding right or wrong or even desirable answer assumptions (Podsakoff et al., 2003, 2012).

The survey enclosed with both positively and negatively worded questions to prevent answering mechanically (Geneste, 2010; Podsakoff et al., 2012). Also, the predictor and criterion variables are separated to avoid connecting concepts that can trigger biases (Kortmann, 2015; Podsakoff et al., 2003). Additionally, Harman's single factor test was conducted to identify the bias threat in the data analysis (Podsakoff et al., 2003, 2012). This is further discussed based on the findings in Chapter 5 (Section 5.6). In the designing phase of the survey, the researcher applied measurement items from established scales only and kept it as original as possible. The researcher tried to not make any severe word changes to minimise the measurement errors (Thompson et al., 2003).

4.7.3 Measurement Items

This research aims on determining social entrepreneurial intention based on the three pillars of institutions and the Mair Noboa model (MNM). This research survey accommodated only established scale to ensure the validity and reliability of the questions (Saunders et al., 2009). Based on the three pillars of institutions, the Country Institutional Profile Scale (CIPS) was initially developed by Kostova (1997), later Busenitz et al. (2000) validated this scale for entrepreneurship. In the context of social

entrepreneurship, Urban (2013) was the first to apply CIPS. In this scale, regulatory institutional environment consists of five items, normative institutional environment and cognitive institutional environment consists of four items each. Later, Kujinga (2016), Urban and Kujinga (2017) and Wannamakok and Chang (2020) applied this scale to measure social entrepreneurial intention.

Based on the Mair Noboa model (MNM), the Social Entrepreneurial Antecedents Scale (SEAS) was developed and validated by Kai Hockerts (Hockerts, 2015). In the SEAS, Hockerts (2015) developed six items on empathy, four on moral obligation, four on perceived social and four on social entrepreneurial self-efficacy. Past studies such as Ashraf (2020), Aure (2018), Fatoki (2018), Hockerts (2015, 2017), Ip et al. (2017, 2018), Kazmi et al. (2019), Kruse (2020), Lacap et al. (2018), Lacap (2018), Peng et al. (2019), Rambe and Ndofirepi (2019), Rashid et al. (2018) and Sousa-Filho et al. (2020) applied SEAS to determine social entrepreneurial intention. Also, four more items were added in the social entrepreneurial self-efficacy construct based on Bacq and Alt (2018) in the survey.

The Social Entrepreneurial Intention Scale was originally adapted from Liñán and Chen's (2009) Entrepreneurial Intention Scale. This scale was later adapted in the context of social entrepreneurial intention by Ashraf (2020), Bacq and Alt (2018), Hockerts (2017), Sousa-Filho et al. (2020), Urban and Kujinga (2017), Wannamakok and Chang (2020), Yang et al. (2015), etc. Moreover, the three measurement items for prior experience are based on Hockerts (2017). This scale was applied by Ashraf (2020), Aure (2018), Fatoki (2018), Ip et al. (2017, 2018), Kruse (2020), Lacap et al. (2018), Peng et al. (2019), Rashid et al. (2018) and Sousa-Filho et al. (2020). Table 4.5 presents the measurement items.

Table 4.5 Measurement Items of this Doctoral Research

Construct	Items	Source
Regulatory Institutional Environment (REG)	1. Government organisations assist individuals in starting their own social ventures 2. Government sets aside government contracts for new and small social ventures 3. Local and national governments have support for individuals starting a social venture 4. Government sponsors organisations that help new social ventures develop 5. Even after failing, government assists social entrepreneurs starting again	**Country Institutional Profile Scale**
Normative Institutional	1. Turning new ideas into social ventures is admired in this country	

Environment (NORM)	2. In this country, innovative and creative thinking is viewed as a route to success 3. Social entrepreneurs are admired in this country 4. People in this country greatly admire those who start own social ventures	**Country Institutional Profile Scale**
Cognitive Institutional Environment (COG)	1.Individuals know how to protect a new social venture legally 2.Those who start new social ventures know how to deal with risk 3. Those who start new social ventures know how to manage risk 4. Most people know where to find info about markets for their services	**Country Institutional Profile Scale**
Empathy (EMP)	1. When thinking about socially disadvantaged people, I try to put myself in their shoes 2. I care how people feel who live on the margins of society 3. Seeing socially disadvantaged people triggers an emotional response in me 4. I experience much emotion when thinking about socially excluded people 5. I feel compassion for socially marginalised people 6. I find it easy to feel compassionate for people less fortunate than myself	**Social Entrepreneurial Antecedents Scale**
Moral Obligation (MO)	1. It is an ethical responsibility to help people less fortunate than ourselves 2.We are morally obliged to help socially disadvantaged people 3. Social justice requires that we help those who are less fortunate than ourselves 4. It is one of the principles of our society that we should help socially disadvantaged people	**Social Entrepreneurial Antecedents Scale**
Perceived Social Support (PSS)	1. It is possible to attract investors for an organisation that wants to solve social problems 2.People would support me if I wanted to start an organisation to help socially marginalised people 3. If I planned to address a significant societal problem, people would back me up 4. I expect that I would receive much support if I were to start a social enterprise	**Social Entrepreneurial Antecedents Scale**
Social Entrepreneurial Self-efficacy (SESE)	1. I am convinced that I personally can contribute to address societal challenges if I put my mind to it 2. I could figure out a way to help solve the problems that society 3. Solving societal problems is something each of us can contribute to 4. I believe it is possible for me to bring about significant social change 5. I am confident in creating new products or services to solve social problems 6. I can commit to help people 7. I can think creatively to benefit others 8. I can commercialise an idea for social enterprise	**Social Entrepreneurial Antecedents Scale (1-4)** **Bacq and Alt (2018) (5-8)**
Social Entrepreneurial Intention (SEI)	1. I expect that at some point in the future I will be involved in launching an organisation that aims to solve social problems	

	2. I have a preliminary idea for a social enterprise on which I plan to act in the future 3. I do not plan to start a social enterprise (Reverse) 4. My qualification has contributed positively towards my interest in starting a social venture 5. I had a strong intention to start my own social venture before I started studying 6. I am ready to do anything to be a social entrepreneur 7. My professional goal is to be a social entrepreneur 8. I have very seriously thought of starting a firm that helps society in some way	**Hockerts (2017)** **(1-3)** **Urban and Kujinga** **(2017)** **(4-8)**
Prior Experience **(Prior_Exp)**	1. I have volunteered or otherwise worked with social organisations 2. I have some experience working with social problems 3. I know a lot about social organisations	**Hockerts (2017)**

4.7.4 Survey Administration

After preparing the questionnaire, it was forwarded to the Human Research Ethics Office at Curtin University for reviewing. After receiving the ethics approval (HRE2018-0775), the process of data collection truly began. The researcher utilised her professional and personal networks to access the universities. Initially, the researcher travelled to Bangladesh to further build on the network and gain direct access to the authorities of the universities to ensure maximum survey distribution. The networking process began in January 2019, the researcher started contacting the universities to hold face to face meetings. In Bangladesh, face to face meetings have better impact on understanding the importance and urgency followed by emails or phone calls. In this regard, a series of face to face meetings were held with the Deans and lecturers of the respective universities. The respective authorities were notified on this research aiming to collect data twice as part of the pilot and main study. Upon the verbal consent from the respected authorities, the researcher next forwarded them with the recruitment email, participant information form and the survey link. The deans forwarded the email to the lecturers to distribute the survey link among the students. Then, the lecturers emailed/post the survey on the google classroom or Moodle platform for the students to access. This allowed the researcher to be completely independent from the subject of the research.

At the very beginning, the researcher requested a lecturer from personal network to distribute the survey link to some of the student to pre-test the questionnaire to avoid any technical error on completing the online survey. Pre-testing was done prior

conducting the pilot study, pilot study is a small scale study to minimise the problems associated with understanding of the questions (Saunders et al., 2009). The researcher planned to conduct a pilot study prior to the main study due to the limitation on the number of research done on the social entrepreneurial intention in Bangladesh. All three relevant literature on social entrepreneurial intention in Bangladesh (Akhter et al., 2020; Ashraf, 2020; Hassan, 2020) were published in 2020. When the researcher was preparing the proposal of this research in 2018, there were no study done on the social entrepreneurial intention, so, pilot study seemed as the most applicable step back then. Two descriptive questions were added in the pilot study to assess whether the university students have sufficient knowledge and understanding on social entrepreneurship or not. This descriptive questions in pilot study also helped on assessing the validity and reliability of the questions for collecting relevant data in the main study (Grove et al., 2013; Saunders et al., 2009).

The pilot study was conducted from mid-February to the beginning of May 2019 in Bangladesh. The details on the pilot study are discussed in Chapter 5. During this time, the researcher also tried covering as many universities as possible for building networks to collect data for the main study. After the pilot study, necessary modifications were made and the final version of the survey was designed with the main study to be conducted in September 2019. The detailed description of the main study is presented in Chapters 6 and 7. This entire process of survey administration allowed the researcher to collect quality data within an efficient time frame.

4.8 QUANTITATIVE DATA ANALYSIS

The main purpose of this research is to test and confirm hypotheses based on the constructs of the three pillars of institutions theory and the Mair Noboa model as they impact on social entrepreneurial intention in Bangladesh. Structural equation modelling (SEM) is the most appropriate statistical analysis technique to test and confirm hypotheses (Byrne, 2016; Kline, 2015). The main objective of this technique is to test whether the sample supports the theoretical model or not by drawing a complex set of models based on the hypotheses (Schumacker & Lomax, 2004). SEM enables a clearer conceptualisation of the proposed theories by offering a pictorial model representing a series of structural processing (Byrne, 2001, 2016). It can handle multivariate data, categorical variables and mixed models (Cheung, 2013; Hair et al.,

2018). SEM tends to be a standard approach for examining multiple mediator relationships between the independent and dependent variables simultaneously (Byrne, 2016; Kline, 2015; Preacher & Hayes, 2008). Moreover, this research proposed six mediating hypotheses which can be estimated best in SEM (Preacher & Hayes, 2008).

Covariance-based SEM (CB-SEM) is confirmatory in nature, seeking to confirm a study's hypotheses (Byrne, 2001, 2012; Rouse & Corbitt, 2008) which is the main purpose of the current research. Covariance-based SEM (CB-SEM) comprised all possible relationships between reflective constructs before testing and confirming the conceptual model. A reflective construct originates from strongly correlated measurement items; therefore, it is not affected when some items are added or removed (Diamantopoulos & Siguaw, 2006; Echambadi et al., 2006). Also, constructs retrieved from established scales are most suitable for conducting covariance-based SEM (CB-SEM) (Burns & Burns, 2008; Geneste, 2010). The constructs of this research are reflective in nature as the items are from established scales.

For conducting such SEM analysis, the analysis of a moment structures (AMOS) version 26 was applied for this research. The AMOS software is offered by Curtin University to higher degree by research (HDR) students for sophisticated data analysis. This software was applied to assess the latent constructs by conducting confirmatory factor analysis (CFA) and structural model analysis as discussed in Chapters 6 and 7. Also, AMOS can implement BC (bias-corrected) bootstrapping method to determine mediating effects (Kenny, 2021; Preacher, 2015; Preacher et al., 2007; Preacher & Hayes, 2008) discussed in Chapter 7. At first, the collected data was analysed to examine the missing data, outliers, normality, descriptive statistics, exploratory factor analysis and reliability test using IBM SPSS Statistics (previously Statistical Package for the Social Sciences [SPSS]) version 26 (Burns & Burns, 2008). The following chapter provides descriptions of these analyses.

4.9 CONCLUSION

This chapter discussed the step-by-step procedures on selecting the most applicable methodological decisions. Based on the research philosophy, this research aligns with objectivism as ontology, positivism as epistemology and value-free axiology. Also, conclusive descriptive as research design was outlined as most relevant. Moreover,

quantitative research method and survey were selected as the most suitable technique for data collection. The target population of this research are the university students of Bangladesh. The sampling frame was derived finalising 15 universities based purposive sampling. Meanwhile, random sampling technique was applied to recruit the university students as the sample. This chapter discussed on the survey instrument design, measurement items, and administration to share the steps taken for data collection. The following chapter will elaborate on the data analysis. The detailed description on the pilot study will be given in the next chapter, followed by discussion on the main study in Chapter 6.

5. RESULTS AND ANALYSIS: PILOT STUDY

5.1 INTRODUCTION

In this chapter and onwards discussion on the appropriate data analysis strategy will be elaborated alongside the result of the analysis. This research purposes to develop more knowledge into social entrepreneurial intention in Bangladesh by integrating antecedents of the three pillars of institutions and the Mair Noboa model. Due to the lack of social entrepreneurial intention research in Bangladesh, a pilot study was considered as a fundamental part of the research protocol prior to preparing for the main study (Hassan et al., 2006; Polit & Beck, 2014). In a pilot study, research instruments are tested on a small scale sample prior to the main study (Hassan et al., 2006; Saunders et al., 2009). Although a pilot study offers potential insights and understanding of the questionnaire among the recruited sample, it does not guarantee the success of the main study (Polit & Beck, 2014). This chapter highlights the pilot study and provides a discussion on the relevant strategy for data analysis. This chapter begins with detailing the data screening, normality, non-response bias test, and profile of the respondents in the pilot study. Also, a thorough discussion on the evaluation of the constructs consisting of the reliability and exploratory factor analysis are provided. Next, the pilot study was analysed to evaluate the measurement items in the constructs to affirm their applicability. The next chapter will review the main study and discuss the associated analysis.

5.2 DATA SCREENING

Data screening is a crucial part for retrieving valid and usable responses. The pilot study was initiated from mid-February 2019 to the first week of May 2019 to confirm the questionnaire for the main study. The survey links were distributed by university lecturers either by emailing or posting it on google classroom or in their Moodle platform elaborated in Chapter 4, Sections 4.6.2 and 4.7.4. Due to this, total number of survey distribution was not possible to estimate. As a result, a survey response rate was not generated. The researcher could only access the attempted survey completion through Qualtrics, and, in total, 455 responses were attempted.

In the pilot study, several attempts were made to conduct appropriate data screening. At the first attempt of data screening, the researcher only kept responses that completed

all the Likert and categorical questions associated with the proposed model. Based on the Qualtrics 100% progress tab, 399 respondents completed all the Likert and categorical questions out of the 455 who attempted the pilot study. Due to the paucity of available research on social entrepreneurial intention in Bangladesh, the researcher took steps to prepare the survey questionnaire to understand the awareness and knowledge of social entrepreneurship among the university students of Bangladesh. In doing so, the researcher initiated two descriptive questions in the pilot study to determine the student's basic understanding of social entrepreneurship to answer the survey questions. The first question related to the main reasons to start a social enterprise. The second question asked respondents to suggest some measures to the Bangladeshi government around how it could motivate individuals to become a social entrepreneur (See Appendix 3). The first question was placed in the middle of the questionnaire and the second question was placed at the end which allowed the researcher to check whether the respondents were conscious and serious enough to answer both attentively.

The researcher then further screened the data based on the answers to the filter questions. A total of 320 respondents attempted to answer the questions and many responses were one-word answers. These answers indicated the respondent's basic understanding of the concept of social entrepreneurship and their thoughts and attitude towards the government's role in it. The researcher kept answers that expressed the respondent's thoughts attentively and consciously. All kinds of positive and negative answers were kept to ensure data validity and minimise the biases. Based on this criteria, the researcher could retrieve 177 valid responses. Some of the answers for reasons to start a social enterprise ranged from helping the poor, to be a change maker or make a significant contribution to society, to feel satisfied, to make money, to support the society as well as to support themselves. There were also responses for not wanting to start a social enterprise with reasons associated with lack of confidence, no prior expertise or experience, the concept does not make sense, and no family support. For the second question, the answers ranged from increasing awareness, recognition, and acknowledgement of social entrepreneurship as well as increasing the financial incentives for young people such as low interest or no interest loan. These are recommendations to the government to motivate university students to become social entrepreneurs.

5.3 DATA NORMALITY

Data normality was tested using SPSS version 26. Both statistical tests and graphical plots were applied to determine data normality of this pilot study (Hair et al., 2018). Although the Shapiro-Wilk and Kolmogorov-Smirnov method is most commonly applied for testing the normal distribution of data, this test is limited to sample sizes of up to 100 (Ho, 2013). For sample sizes of 100 and above, testing skewness, kurtosis and the graphical plots of the data can be most appropriate to determine data normality (Coakes & Steed, 2007; Farivar, 2015; Field, 2013; Geneste, 2010; Hair et al., 2018). Byrne (2016) and Hair et al. (2018) suggest that skewness of +/- 2 and kurtosis of +/- 7 are appropriate in normal data distribution. However, Kline (2015) argued that any value below 3 for skewness and less than 10 for kurtosis can be considered as the absolute value for data normality. This pilot study data has skewness and kurtosis values below 2.2 and below 6 respectively (as shown in the table 5.1 below), hence, all the values are in between the normal distribution range.

Additionally, data normality can be confirmed by visually inspecting the Q-Q plots as well (Abdul-Aziz et al., 2020; Coakes & Steed, 2007; Geneste, 2010). In this study, the Q-Q Plot items showed an extremely low deviation of the points from the expected straight line (standard normal distribution), as a result, data normality can be confirmed. Additionally, the means ranged between 2.76 and 4.41. Standard Deviations (SD) ranged from 0.669 to 1.229. After careful consideration of these statistical tests and graphical plots, it can be stated that the pilot study has a normally distributed data set.

Table 5.1 Data Normality of Pilot Study

Code	Item	Mean	SD	Skewness	Kurtosis
EMP_1	When I think about the underprivileged people, I always try to put myself in their shoes	3.76	1.201	-1.103	.384
EMP_2	I often think about the people who live on the margins of society	2.90	1.096	.507	-1.169
EMP_3	I get emotional when I see socially disadvantaged people	3.92	1.142	-.803	-.628
EMP_4	I experience much emotion when thinking about socially excluded people	4.08	.950	-1.405	2.260
EMP_5	I often feel compassion for socially marginalised people	3.32	1.164	.037	-1.390
EMP_6	I feel sympathetic for the people who are less fortunate than I am	4.31	.846	-1.839	4.772
MO_1	I consider it as an ethical responsibility to help people who are less fortunate than I am	4.29	.936	-2.118	5.267
MO_2	I feel that I am morally obliged to help socially disadvantaged people	3.88	1.129	-.625	-1.008

MO_3	Policies of the country should seek to help those who are less fortunate than we are	4.27	.765	-1.044	1.512
MO_4	One of the principles of the society is to help socially disadvantaged people	4.29	.918	-1.853	4.030
PSS_1	It is possible to attract investors for an organisation that wants to solve social problems	3.41	.938	-.453	.205
PSS_2	My family, friends, and personal networks would support me if I want to start an organization to help socially marginalised people	4.13	.929	-1.079	.840
PSS_3	My family, friends, and personal networks would back me up if I planned to address a significant societal problem	3.75	1.086	-.771	.038
PSS_4	If I were to start a social enterprise, I would expect to receive plenty of support	3.98	1.044	-.954	.362
SESE_1	I am convinced that I personally can contribute to address societal challenges if I put my mind to it	3.55	1.229	-.283	-1.368
SESE_2	I could figure out a way to help solve social problems	3.33	1.219	-.035	-1.422
SESE_3	Each of us should contribute to solving societal problems	4.41	.669	-.922	.683
SESE_4	I believe it is possible for me to bring significant social change	4.07	.746	-.700	.637
REG_1	Government organisations should assist individuals in starting their own social ventures	4.41	.718	-1.066	.771
REG_2	Government sets aside government contracts for new and small social ventures	3.43	1.032	-.436	-.158
REG_3	Local and national governments have support for individuals starting a social venture	2.99	1.017	.056	-.532
REG_4	Government sponsors organisations that help new social ventures develop	3.14	.967	-.238	.102
REG_5	Even after failing, government should assist social entrepreneurs starting again	4.14	.875	-.834	.517
NORM_1	Turning new ideas into social ventures is admired in Bangladesh	3.80	1.006	-.881	.506
NORM_2	Innovative and creative thinking is observed as a route to success in Bangladesh	3.90	1.106	-1.107	.611
NORM_3	Social entrepreneurs are admired in Bangladesh	3.82	.999	-.922	.496
NORM_4	Those who start their own social ventures are greatly admired by the people of Bangladesh	3.88	1.042	-.844	.162
COG_1	Individuals in Bangladesh know how to protect a new social venture legally	2.76	.906	.269	.130
COG_2	Those who start a new social venture in Bangladesh know how to deal with risk	2.97	.845	.236	.774
COG_3	Those who start a new social venture in Bangladesh know how to manage risk	3.01	.872	.134	.369
COG_4	Most people know where to find information about markets for their services	2.80	.983	.371	.003
SEI_1	At some point in the future, I expect that I will be involved in launching an organisation that aims to solve social problems	4.16	.891	-1.245	1.807

SEI_2	I have a preliminary idea for a social enterprise on which I plan to act in the future	3.73	.882	-.896	.990
SEI_3R Recoded	I plan to start a social enterprise	3.44	1.112	-.198	-.942
SEI_4	My qualification has contributed positively towards my interest in starting a social venture	3.68	.813	-.963	1.264
SEI_5	I had a strong intention to start my own social venture before I started studying	3.15	1.058	-.193	-.883
SEI_6	I am ready to do anything to be a social entrepreneur	3.60	.931	-.741	.191
REG=Regulatory Institutional Environment; **NORM**=Normative Institutional Environment; **COG**=Cognitive Institutional Environment; **EMP**=Empathy; **PSS**=Perceived Social Support; **SESE**=Social Entrepreneurial Self-efficacy; **SEI**=Social Entrepreneurial Intention (Dependent Construct)					

5.4 SAMPLE PROFILE

In total six sets of demographic data were collected from the respondents of the pilot study to understand the sample profile (as shown in Table 5.2). The participants in the study answered questions regarding gender, age, division, enrolled degree, degree of year, and the universities that the students were enrolled in. In the pilot study, males dominated (59.9%) the sample compared to 40.1% females. The difference between males and females in participating in the survey was not very high and aligns with the 0.7:1 female to male ratio of 2017 Bangladeshi tertiary education (Statista, 2020a). The respondents were divided into three age group clusters. The university students aged between 21 and 25 were 89.8% highest representing this study compared to 8.5% in 26-30 and only 1.7% in 31-35 age group clusters.

Respondents from all the eight divisions of Bangladesh were represented in this study. Respondents from Dhaka represented the highest 63.3%, followed by Chittagong 24.3%, Rajshahi 5.6%, and Barisal 2.3%. However, Khulna and Rangpur represented around 2% each while Mymensingh and Sylhet represented less than 1% in the pilot study. This is relevant as in Bangladesh the tertiary education facilities and infrastructure are strongly dominated in Dhaka and Chittagong (discussed in Chapter 4, Section 4.6). Thus, students all over the country tend to travel to these cities for quality education and facilities offered. Both the undergraduate and postgraduate-level students are represented in the data. The students enrolled in undergraduate degrees were the highest proportion at 90.4% compared to 9.6% postgraduates.

Table 5.2 Sample Profile in Pilot Study

Sample Profile		Frequency	Percent (%)
Gender	Male	106	59.9
	Female	71	40.1
	Total	177	100.0
Age	21 - 25	159	89.8
	26 - 30	15	8.5
	31 - 35	3	1.7
	Total	177	100.0
Division	Barisal	4	2.3
	Chittagong	43	24.3
	Dhaka	112	63.3
	Khulna	3	1.7
	Mymensingh	1	.6
	Rajshahi	10	5.6
	Rangpur	3	1.7
	Sylhet	1	.6
	Total	177	100.0
Degree	Undergraduate	160	90.4
	Postgraduate	17	9.6
	Total	177	100.0

5.4.1 Degree Enrolled and Degree Year

The researcher further broke down the degree into enrolled year to have an insight and understanding on the sample (as demonstrated in Table 5.3). For the undergraduate level, the fourth or final year students participated the most (n=70), followed by the third year (n=57), second year (n=27) and first year (n=6). At postgraduate level, first-year students participated the most (n=17) compared to those in other years.

*Table 5.3 Degree * Year*

DEGREE	YEAR				Total
	First	Second	Third	Fourth	
Undergraduate	6	27	57	70	160
Postgraduate	11	2	2	2	17
Total	17	29	59	72	177

5.4.2 Universities

In the pilot study, students across eleven universities participated in the data set. The students of North South University (NSU) represented the highest 59.3%, followed by

students of University of Liberal Arts Bangladesh (ULAB) 14.7%, Southern University Bangladesh (SUB) 8.5%, BRAC University (BU) 5.6%, Dhaka University (DU) 5.1%, and Northern University (NU) 3.4%. The other six universities represented less than 1% each in the data as demonstrated in the table (5.4) below.

Table 5.4 Participants in Enrolled Universities

UNIVERSITY	Frequency	Percent
North South University (NSU)	105	59.3
Southern University Bangladesh (SUB)	15	8.5
Dhaka University (DU)	9	5.1
University of Liberal Arts Bangladesh (ULAB)	26	14.7
BRAC University (BU)	10	5.6
United International University (UIU)	1	.6
Northern University (NU)	6	3.4
Chittagong University (CU)	2	1.1
East West University (EWU)	1	.6
Military Institute of Science and Technology (MIST)	1	.6
University of South Asia (UNISA)	1	.6
Total	177	100.0

5.5 NON-RESPONSE BIAS

Non-response bias can impact the research findings' validity (Alsnih, 2006) as argued in Chapter 4 (Section 4.7.1). This bias can be assessed by comparing the early and late responses in the data set (Armstrong & Overton, 1977). Based on the valid responses of the pilot study, the first 50 respondents were considered as early, while the last 50 respondents were considered as late. After running paired samples test in SPSS version 26, the 2-tailed significance values (as shown in Table 5.5) for each variable were non-significant. This means that no significant differences are found in the responses between early and late respondents (Armstrong & Overton, 1977). Also, the mean indicates very low differences between early and late respondents. Therefore, non-response bias does not exist in this data set.

Table 5.5 Non-Response Bias Test

Variables		N	Mean	Std. Deviation	t-Statistics	Sig. (2-tailed)
Empathy (EMP)	Early	50	3.77	.698	.324	.747
	Late	50	3.73	.664		
Moral Obligation (MO)	Early	50	4.20	.484	.512	.611
	Late	50	4.14	.604		
Perceived Social Support (PSS)	Early	50	3.72	.660	-.113	.910
	Late	50	3.74	.734		
Social Entrepreneurial Self-efficacy (SESE)	Early	50	3.78	.631	-1.160	.252
	Late	50	3.93	.729		
Regulatory Institutional Environment (REG)	Early	50	3.53	.395	-1.450	.153
	Late	50	3.68	.631		
Normative Institutional Environment (NORM)	Early	50	3.77	.828	-.845	.402
	Late	50	3.91	.857		
Cognitive Institutional Environment (COG)	Early	50	2.84	.534	.257	.798
	Late	50	2.81	.728		
Social Entrepreneurial Intention (SEI)	Early	50	3.60	.444	-.027	.978
	Late	50	3.60	.734		

5.6 COMMON METHOD BIAS AND COLLINEARITY TEST

Prior to the evaluation of constructs, the common method bias needs to be checked in the data set. Even though strict measures were applied in designing the questionnaire (see 4.7.2), the risk of common method bias exists when collecting data on both dependent and independent constructs from the same respondents (Geneste, 2010; Podsakoff et al., 2003, 2012; Podsakoff & Organ, 1986). In such cases, Harman's single factor test is commonly used to determine the extent of this bias in a data set (Podsakoff et al., 2003, 2012; Podsakoff & Organ, 1986). This test examines whether a single component has the potential to account for the covariance in the relationship between all the constructs (Podsakoff et al., 2003, 2012; Podsakoff & Organ, 1986).

A single factor accounting for 50% or more of the variance indicates common method bias in the data set (Podsakoff et al., 2003, 2012). Recent studies such as Ashraf (2020), Hockerts (2017), and Urban and Kujinga (2017) applied Harman's single factor test to measure common method bias in the context of social entrepreneurial intention. To apply this test on the pilot study, all the 37 items of the variables in the data set underwent the factor analysis as single factor with un-rotated solution. The result of

the Harman's single factor indicated that 16.257% (as shown in Table 5.6) as the highest variance explained by the single factor. Therefore, this data set identified no evidence for common method bias as the single factor did not account for most of the variance.

Table 5.6 Harman's Single-Factor Test

			Total Variance Explained			
		Initial Eigenvalues			Extraction Sums of Squared Loadings	
Component	Total	% of Variance	Cumulative %	Total	% of Variance	Cumulative %
1	**6.015**	**16.257**	**16.257**	**6.015**	**16.257**	**16.257**
2	4.225	11.420	27.677			
3	2.779	7.511	35.188			
4	1.912	5.168	40.356			
5	1.881	5.085	45.441			
6	1.512	4.085	49.526			
7	1.448	3.912	53.439			
8	1.304	3.525	56.964			
9	1.203	3.252	60.216			
10	1.134	3.066	63.281			
11	1.002	2.709	65.990			
12	.924	2.497	68.488			
13	.859	2.322	70.810			
14	.821	2.219	73.029			
15	.771	2.083	75.112			
16	.722	1.951	77.063			
17	.676	1.827	78.890			
18	.662	1.788	80.678			
19	.629	1.699	82.377			
20	.563	1.523	83.900			
21	.554	1.496	85.396			
22	.515	1.392	86.787			
23	.489	1.323	88.110			
24	.473	1.279	89.389			
25	.432	1.167	90.556			
26	.412	1.113	91.669			
27	.406	1.097	92.766			
28	.377	1.020	93.786			
29	.355	.958	94.744			

30	.331	.895	95.639			
31	.301	.814	96.453			
32	.276	.747	97.200			
33	.245	.663	97.863			
34	.228	.618	98.480			
35	.198	.535	99.016			
36	.188	.509	99.525			
37	.176	.475	100.000			
Extraction Method: Principal Component Analysis.						

The collinearity test indicated that the independent constructs do not correlate with each other in this pilot study data set. As shown in Table 5.7, the variance inflation factor (VIF) values all the independent constructs were less than threshold limit of 3 (O'Brien, 2007), indicating no multi-collinearity issues.

Table 5.7 Collinearity Statistics

Model	VIF
Empathy	1.300
Perceived Social Support	1.334
Social Entrepreneurial Self-efficacy	1.365
Regulatory Institutional Environment	1.574
Normative Institutional Environment	1.284
Cognitive Institutional Environment	1.240

Dependent Variable: Social Entrepreneurial Intention
VIF=Variance Inflation Factor

5.7 EVALUATION OF CONSTRUCTS

Before applying the constructs in the proposed model to test the hypotheses, each construct needs to be evaluated for validity and reliability. The aim of this pilot study is to confirm the items loading and internal consistency on the construct as determined by the past research before proceeding on the main study. Factor analysis is applied to identify the structure of the constructs (Hair et al., 2018). It can be two types: i) exploratory and ii) confirmatory. The applicability of the factor analysis differs based on the nature of the constructs. Exploratory factor analysis (EFA) is most appropriate for new constructs or scale development validity, whereas confirmatory factor analysis (CFA) is most suitable for established constructs' validation (Hair et al., 2018). In summary, EFA is applied for exploring the constructs and CFA is for confirming the

constructs. For this research, identified constructs are developed from theory-driven established scale, hence, performing a CFA would be sufficient to validate the constructs (Hair et al., 2018; Tabachnick & Fidell, 2013). In theory-driven established scales, items are expected to load on pre-determined constructs (Geneste, 2010). Although the proposed constructs for this research were identified from established scales, these scales were not previously applied in Bangladesh. Therefore, Bangladesh is a new context for determining social entrepreneurial intention by applying the proposed scales. Also, the researcher had no previous assumptions on how the respondents would react to these scales so applying EFA on the pilot study data set aims to confirm appropriate items for the main study.

A few researchers have advocated applying EFA followed by CFA to the data set (Costello & Osborne, 2005; Gaskin, 2020b). According to Chin (1998), applying EFA first can filter the items in a data set and then a CFA can be performed to confirm the remaining items. However, Bentler and Chou (1987), DeCoster (1998), Hockerts (2017) and Hurley et al. (1997) emphasised conducting EFA and CFA on different data sets to avoid data snooping or fitting. It is even possible to conduct an EFA on the subset of the data set and conducting CFA on the remaining data set to ensure validity of the final results (Bentler & Chou, 1987). In the context of social entrepreneurial intention, researchers such as Ashraf (2020), Hockerts (2015, 2017), Urban and Kujinga (2017) and Yang et al. (2015) conducted both EFA and CFA on either subset of the data set or on a new data set. Therefore, conducting an EFA on the pilot study will be sufficient to get the exploratory work done on the new context. The next chapter will discuss the CFA conducted to achieve better relevance in the main study.

5.8 EXPLORATORY FACTOR ANALYSIS (EFA)

Exploratory factor analysis (EFA) is a technique that explores the interrelationship among the items of the constructs in a given data set (Costello & Osborne, 2005; Gaskin, 2020b). This technique is performed to assess the validity of the measurement scale where the proposed items load on the intended construct (Urban & Kujinga, 2017). The loadings and the inter-correlations of the items ensures construct validity by achieving both convergent and discriminant validity (Hair et al., 2018). Convergent validity refers to the highly correlated items within a single construct (Gaskin, 2020b). It occurs when the converged items load in the intended construct in comparison to the

other existing items (Hair et al., 2018; Straub et al., 2004). This validity can be demonstrated in the pattern matrix where item loadings are usually 0.50 and above depending on the sample size (Gaskin, 2020b). For example, item loadings should be 0.75 for a sample size of 50, whereas 0.40 item loadings can be sufficient for a sample size of 200 (Hair et al., 2018). Discriminant validity refers to the extent of correlation between the constructs (Gaskin, 2020b; Hair et al., 2018). It can be achieved by differing the underlying structure of the constructs (Straub et al., 2004). This validity can be demonstrated in the factor correlation matrix by having less than 0.7 correlation between the constructs (Gaskin, 2020b).

For conducting EFA, principal component analysis (PCA) is a commonly used extraction technique to verify the item loadings and inter-correlations of the constructs (Hair et al., 2018). PCA is considered as comparatively less complex and psychometrically sound procedure to generate solutions (Field, 2013). In performing EFA, promax oblique (PO) and varimax oblique (VO) are the most common rotational methods used. Hair et al. (2018) argued that generated EFA results are similar regardless of the type of rotational method applied. This research proposes interrelationships among the constructs and the PO rotation permits constructs to have certain levels of correlations, unlike VO (Hair et al., 2018). Similarly, Gaskin (2020b) suggests that PO rotation for extracting pattern matrix is appropriate if the proposed constructs have underlying relationships.

The appropriateness of the EFA is determined by the Kaiser–Meyer–Olkin (KMO) score indicating sampling adequacy and suitability of the data set (Coakes & Steed, 2007; Hair et al., 2018). A KMO score of 1 is an absolute value which indicates compact pattern of correlations between variables (Field, 2013; Geneste, 2010). Usually, any KMO score above 0.80 is referred to as excellent; above 0.70 indicates middling and above 0.60 indicates a mediocre pattern of correlations in unique factors (Hair et al., 2018; Kaiser, 1974; Kaiser & Rice, 1974). KMO score is sensitive to the sample size (Tabachnick & Fidell, 2013), and usually scores better with a large sample. A minimum sample of 50 is required to perform the EFA, with sample sizes of 50 considered as small and sample sizes of 300 considered as large (Hair et al., 2018; Tabachnick & Fidell, 2013). Additionally, Field (2013) argued the importance of factor solutions consisting of individual factor loadings and communalities. For this

study, the factor loadings and communalities were examined to ensure factor solutions. The following section discusses the pilot study findings on the EFA.

5.8.1 Exploratory Factor Analysis (EFA) of Pilot Study

In the pilot study, the exploratory factor analysis (EFA) was conducted on a sample of 177. Principal component analysis (PCA) extraction method was applied on a total of 37 items with promax oblique (PO) rotation. In the initial EFA findings, the Kaiser-Meyer-Olkin (KMO) value was 0.743 but some items cross-loaded on multiple constructs. The items were removed based on cross-loadings, individual KMO and having communalities below 0.5 (Field, 2013). Some items of empathy and moral obligation were loaded as one factor, whereas some other items of moral obligation and social entrepreneurial self-efficacy were loaded as another separate factor. Also, a few items of social entrepreneurial intention and social entrepreneurial self-efficacy were loaded together. At first, items that had less than 0.5 loadings were removed one by one. After carefully removing one item after another, the items of moral obligation could not be retrieved as all four were loaded on both social entrepreneurial self-efficacy and empathy. As a result, the entire construct of 'moral obligation' was removed in this process. Moreover, the negative worded item of social entrepreneurial intention construct was removed due to loading heavily on social entrepreneurial self-efficacy. Finally, 23 items were retrieved out of 37 with a slightly improved KMO value.

The final exploratory factor analysis (principal component analysis [PCA]) was conducted on the 23 items with oblique rotation (promax). The KMO (=0.765) measure verified the sampling adequacy for the analysis and all individual items were >0.523, which is above the acceptable limit. Bartlett's test of sphericity X (177)=1332.260, p<0.001, indicated that correlations between items were sufficiently large for the EFA. An initial analysis was run to obtain eigenvalues for each component in the data. In total, seven components had eigenvalues over the Kaiser Criterion of 1 and in combination explained 65.601% of the variance. Based on the scree plot, the researcher retained five to seven components. Given the sample size and the convergence of the scree plot, the Kaiser's criterion on seven components were retained in the final analysis. The items that load on the same components suggest that

component 1 (Cognitive Institutional Environment) represents 4.984 and explains 21.669% of the variance and so on as shown in Table 5.8 below:

Table 5.8 Total Variance Explained for Pilot Study

	Initial Eigenvalues			Extraction Sums of Squared Loadings			Rotation Sums of Squared Loadings
	Total	% of Variance	Cumulative %	Total	% of Variance	Cumulative %	Total
1 COG	4.984	21.669	21.669	4.984	21.669	21.669	2.639
2 NORM	2.521	10.961	32.630	2.521	10.961	32.630	2.321
3 SEI	2.061	8.963	41.593	2.061	8.963	41.593	2.247
4 REG	1.808	7.862	49.455	1.808	7.862	49.455	2.057
5 EMP	1.340	5.825	55.281	1.340	5.825	55.281	2.046
6 SESE	1.278	5.558	60.838	1.278	5.558	60.838	1.903
7 PSS	1.095	4.763	65.601	1.095	4.763	65.601	1.875
8	.864	3.756	69.357				
9	.786	3.418	72.775				
10	.737	3.205	75.981				
11	.643	2.796	78.777				
12	.603	2.623	81.400				
13	.563	2.447	83.847				
14	.542	2.357	86.205				
15	.489	2.124	88.329				
16	.428	1.861	90.190				
17	.410	1.782	91.972				
18	.381	1.657	93.629				
19	.351	1.527	95.156				
20	.323	1.404	96.560				
21	.291	1.265	97.825				
22	.253	1.101	98.926				
23	.247	1.074	100.000				

Extraction Method: Principal Component Analysis.
REG=Regulatory Institutional Environment; **NORM**=Normative Institutional Environment; **COG**=Cognitive Institutional Environment; **EMP**=Empathy; **PSS**=Perceived Social Support; **SESE**=Social Entrepreneurial Self-efficacy; **SEI**=Social Entrepreneurial Intention

5.8.2 Convergent Validity of Pilot Study

The requirement of convergent validity was met in the given data set of the pilot study. The retrieved seven constructs are highly correlated within their intended factors. Also, all the items loading are greater than 0.523 in the pattern matrix which is sufficient based on the sample size (Hair et al., 2018) as demonstrated in the table (5.9) below:

Table 5.9 Pattern Matrix and Loadings of Pilot Study

Pattern Matrix

	COG	NORM	SEI	REG	EMP	SESE	PSS
COG_2	.905						
COG_3	.863						
COG_1	.684						
COG_4	.614						
NORM_1		.891					
NORM_2		.859					
NORM_3		.789					
SEI_2			.718				
SEI_6			.711				
SEI_5			.575				
SEI_4			.564				
REG_4				.945			
REG_2				.711			
REG_3				.541			
EMP_6					.830		
EMP_1					.803		
EMP_4					.722		
SESE_2						.833	
SESE_1						.692	
SESE_4						.639	
PSS_2							.810
PSS_4							.712
PSS_1							.523

REG=Regulatory Institutional Environment; **NORM**=Normative Institutional Environment; **COG**=Cognitive Institutional Environment; **EMP**=Empathy; **PSS**=Perceived Social Support; **SESE**=Social Entrepreneurial Self-efficacy; **SEI**=Social Entrepreneurial Intention (Dependent Construct)

5.8.3 Discriminant Validity of Pilot Study

The data set of the pilot study met the requirement of discriminant validity by showing that each construct was different from one another. Based on the component correlation matrix, all the component correlations are below 0.422 which reflects

distinct differentiated constructs and less than the suggested 0.7 (Hair et al., 2018) as demonstrated in the table (5.10) below:

Table 5.10 Component Correlation Matrix of Pilot Study

Component Correlation Matrix

Component	COG	NORM	SEI	REG	EMP	SESE	PSS
COG	1.000	.245	.020	.384	-.093	.165	.278
NORM	.245	1.000	.048	.422	-.094	.140	.342
SEI	.020	.048	1.000	.075	.061	.100	.049
REG	.384	.422	.075	1.000	.028	.270	.343
EMP	-.093	-.094	.061	.028	1.000	.129	.008
SESE	.165	.140	.100	.270	.129	1.000	.184
PSS	.278	.342	.049	.343	.008	.184	1.000

REG=Regulatory Institutional Environment; **NORM**=Normative Institutional Environment; **COG**=Cognitive Institutional Environment; **EMP**=Empathy; **PSS**=Perceived Social Support; **SESE**=Social Entrepreneurial Self-efficacy; **SEI**=Social Entrepreneurial Intention (Dependent Construct)

5.9 RELIABILITY ANALYSIS

The reliability analysis measures the construct consistency as reflected in the assessed scale items (Nunnally & Bernstein, 1994). This test can estimate the reliability of constructs in the data set (Ursachi et al., 2015). Cronbach's alpha is most commonly used to measure the reliability of the constructs. It measures the unidimensional and internal consistency of the construct by examining items' consistency (Byrne, 2001; Hair et al., 2018). Therefore, higher degree of internal consistency demonstrates higher Cronbach's alpha value (Hinkin, 1995; Ursachi et al., 2015). Generally, Cronbach's alpha should be 0.7 and above to validate reliability of a certain construct (Hair et al., 2018; Hinkin, 1995; Ursachi et al., 2015). According to Hulin et al. (2001) and Ursachi et al. (2015), Cronbach's alpha scoring of 0.8 and above indicates an excellent level of reliability, with 0.7 and above considered as good level, whereas 0.6 and above is acceptable level of construct reliability. However, the nature of the research can affect the reliability of the construct, for example 0.6 can be a good Cronbach's alpha score for exploratory research (Hair et al., 2018; Straub et al., 2004). Cronbach's alpha values higher than 0.95 indicate data redundancy or scale problems, usually caused by the use of similar worded items that essentially asked the same thing over and over (Field, 2013; Hulin et al., 2001; Ursachi et al., 2015). Moreover, number of items in a construct positively impacts the Cronbach's alpha score (Gaskin, 2020b; Hair et al., 2018). Based on the final retrieved items of the exploratory factor analysis, this data

set demonstrates acceptable levels of reliability. The pilot study confirmed internal consistency and all constructs are above 0.62, as illustrated in Table 5.11 below.

Table 5.11 Reliability Analysis of Pilot Study

Construct	Items	Factor Loadings	Cronbach's α
Empathy	**EMP_1** When I think about the underprivileged people, I always try to put myself in their shoes	.803	.710
	EMP_4 I experience much emotion when thinking about socially excluded people	.722	
	EMP_6 I feel sympathetic for the people who are less fortunate than I am	.830	
Perceived Social Support	**PSS_1** It is possible to attract investors for an organisation that wants to solve social problems	.523	.622
	PSS_2 My family, friends, and personal networks would support me if I want to start an organisation to help socially marginalised people	.810	
	PSS_4 If I were to start a social enterprise, I would expect to receive plenty of support	.712	
Social Entrepreneurial Self-efficacy	**SESE_1** I am convinced that I personally can contribute to address societal challenges if I put my mind to it	.692	.663
	SESE_2 I could figure out a way to help solve social problems	.833	
	SESE_4 I believe it is possible for me to bring significant social change	.639	
Regulatory Institutional Environment	**REG_2** Government sets aside government contracts for new and small social ventures	.711	.761
	REG_3 Local and national governments have support for individuals starting a social venture	.541	
	REG_4 Government sponsors organisations that help new social ventures develop	.945	
Normative Institutional Environment	**NORM_1** Turning new ideas into social ventures is admired in Bangladesh	.891	.791
	NORM_2 Innovative and creative thinking is observed as a route to success in Bangladesh	.859	
	NORM_3 Social entrepreneurs are admired in Bangladesh	.789	
Cognitive Institutional Environment	**COG_1** Individuals in Bangladesh know how to protect a new social venture legally	.684	.793
	COG_2 Those who start a new social venture in Bangladesh know how to deal with risk	.905	
	COG_3 Those who start a new social venture in Bangladesh know how to manage risk	.863	
	COG_4 Most people know where to find information about markets for their services	.614	
Social Entrepreneurial Intention	**SEI_2** I have a preliminary idea for a social enterprise on which I plan to act in the future	.718	.686
	SEI_4 My qualification has contributed positively towards my interest in starting a social venture	.564	
	SEI_5 I had a strong intention to start my own social venture before I started studying	.575	
	SEI_6 I am ready to do anything to be a social entrepreneur	.711	

5.10 CONCLUSION

This chapter presented the detailed analyses of the pilot study data set and retrieved insightful knowledge on the recruited sample. This chapter also explained the evaluation of the constructs through exploratory factor analysis and reliability analysis. Also, the findings indicate no evidence for non-response bias and common method bias in the pilot study data set. Although the given data set achieved convergent and discriminant validity with acceptable levels of reliability, an entire construct 'Moral Obligation' was dropped affecting the overall analysis. The strong cross-loading of the 'Moral Obligation' impacted on the overall number of items in this analysis. This might be the reason for comparatively poor levels of reliability in the constructs. Hence, the findings offered the researcher guidance and understanding on the loopholes in the existing questionnaire and shed new insight on the understanding of Bangladeshi university students. This has given the researcher an opportunity to add some extra items to the existing questionnaire for the main study. The next chapter will review the new items and elaborate on the main study.

6. RESULTS AND ANALYSIS: MAIN STUDY

6.1 INTRODUCTION

The previous chapter highlighted the findings of the pilot study. Based on the findings of the pilot study, the researcher modified the questionnaire by adding several items on the constructs. It helped gather more insight and understanding on social entrepreneurial intention as well as indicate more knowledge on the integration between the three pillars of institutions and the Mair Noboa model. This chapter focuses on the findings of the main study based on the revised questionnaire. At the beginning of the chapter, a detailed rationale is provided on the new added items for the constructs. Next, discussions on the data collection and screening, data normality, and sample profile are provided. Later, the main study construct evaluation was performed. Also, this chapter illustrated the discussion on confirmatory factor analysis, goodness of fit measures and modification indices. For the main study data set, confirmatory factor analysis was performed to confirm the constructs for structural equation modelling. The next chapter will review the analysis for the structural equation modelling.

6.2 NEW ITEMS ON CONSTRUCTS

In the pilot study data set, the construct of moral obligation was heavily cross-loaded with empathy and social entrepreneurial self-efficacy. This strong overlapping of the moral obligation construct has adversely impacted the overall pilot study analysis by dropping significant items from empathy, social entrepreneurial self-efficacy, and social entrepreneurial intention. Very few sources in the literature have discussed this possible role of moral obligation. For example, Urban and Teise (2015) suggested that empathy and moral obligation are inseparable and work best when put together. The researchers put these two constructs as one factor and the research findings suggested a positive relationship with social entrepreneurial intention (Urban & Teise, 2015). Therefore, the possibility exists that the respondents considered these two constructs as similar. While developing the Social Entrepreneurial Antecedents Scale (SEAS), Hockerts (2015) argued on avoiding confusion between moral obligation and social entrepreneurial self-efficacy. The author specified moral obligation in understanding the role of the social level, whereas the individual-level role is through social entrepreneurial self-efficacy to help underprivileged groups (Hockerts, 2015, p.265).

In SEAS, moral obligation consists of a four-item measure of socially acceptable behaviour to help the needy (Hockerts, 2015).

The social entrepreneurial self-efficacy scale in SEAS consists of four items measuring the individual's efficacy to help the needy (Hockerts, 2015). It is possible that respondents confused these constructs as somewhat related to each other. Moreover, Sousa-Filho et al. (2020) argued on exploring the role of moral obligation further as it did not influence social entrepreneurial intention on any of the higher or lower income sample. Therefore, incorporating more items on these constructs might give the respondents some opportunity to differentiate between these constructs in the main study. Although the researcher did not find enough distinct existing items on empathy and moral obligation in the context of social entrepreneurship research, there were some items for social entrepreneurial self-efficacy and social entrepreneurial intention. Based on Bacq and Alt (2018), four distinct items (see Table 6.1) were included in the main study survey for the construct of social entrepreneurial self-efficacy. This would further differentiate moral obligation from social entrepreneurial self-efficacy. These items were originally adapted from Miller et al. (2012b) and Zhao et al. (2005) to determine social entrepreneurial intention in the study conducted by Bacq and Alt (2018).

Table 6.1 New Items for Social Entrepreneurial Self-Efficacy

Social Entrepreneurial Self-Efficacy	SESE_5	I am confident in creating new products or services to solve social problems
	SESE_6	I can commit to help people
	SESE_7	I can think creatively to benefit others
	SESE_8	I can commercialise an idea for social enterprise

Furthermore, two new items were added to the social entrepreneurial intention construct used for this study. In the pilot study data set, a few items of social entrepreneurial intention were overlapping with social entrepreneurial self-efficacy. Strong evidence is found in the literature on the positive relationship between social entrepreneurial intention and social entrepreneurial self-efficacy. In some studies though, social entrepreneurial self-efficacy was applied as a proxy to social entrepreneurial intention (Urban, 2013; Vyas et al., 2014). According to Urban (2013) and Vyas et al. (2014), social entrepreneurial self-efficacy is possibly the closest action to social entrepreneurial intention.

In the pilot study data set, negatively worded items of social entrepreneurial intention did not load on the intended construct. According to Chyung et al. (2018), negatively worded survey statements do not always reverse code appropriately, impacting the validity and reliability of the construct. Therefore, including new items in social entrepreneurial intention could improve the understanding and perception of the university students of Bangladesh. Previously, Hockerts (2017) applied three items, whereas Urban and Kujinga (2017) applied all eight items for social entrepreneurial intention from the Entrepreneurial Intention Scale developed by Liñán and Chen (2009). In the pilot study for the current research, six of the items from the Liñán and Chen's (2009) scale were applied. For the main study, the remaining two items (as shown below in Table 6.2) were also added to further differentiate social entrepreneurial intention from social entrepreneurial self-efficacy. Moreover, new age groups were added to define more effectively age clusters to test the moderating effects. After modifying the questionnaire, the researcher re-applied for ethics approval which was granted (HRE2018-0775-02) on 2 September 2019. All these initiatives were implemented to gather more knowledge and insight into the integration between the three pillars of institutions and the Mair Noboa model antecedents influence on social entrepreneurial intention.

Table 6.2 New Items for Social Entrepreneurial Intention

| **Social Entrepreneurial Intention** | SEI_7 | I have very seriously thought of starting an enterprise that helps society in some way. |
| | SEI_8 | My professional goal is to be a social entrepreneur |

6.3 DATA COLLECTION AND SCREENING

During the time frame of collecting data for the pilot study, the researcher developed personal and professional connections with key officials of 15 universities. These key officials such as deans and lecturers were aware of the two phases of data collection for the pilot and main study. The direct connections strengthened the access to students through these networks and saved time for the main study data collection. The researcher contacted these networks again and emailed them the updated online questionnaire link with the relevant information. The main study data collection took place from the first week of September 2019 to the first week of October 2019. As per the researcher's knowledge, the survey links were distributed to students by emailing

or posting it on google classroom or in the Moodle LMS platform as practiced by the universities. The students were asked to only fill out the questionnaire if they did not take part in the first round of the survey. Similar to the pilot study, survey response rates could not be generated as the researcher could only access the attempted survey completions through Qualtrics. For the main study, the total number of attempted responses was 617.

During data screening, the researcher only kept fully completed survey questionnaire responses that had no missing values. In the main study questionnaire, the researcher kept one descriptive question on government's role on motivating individuals to become a social entrepreneur to understand the respondent's thoughts and attitude on nurturing social enterprises (See Appendix 4). While data screening, the researcher kept answers that could express the respondent's thoughts attentively and consciously. The answers ranged from introducing student loans for start-up, increasing awareness, recognition, and financial incentives for young people to motivate them to become a social entrepreneur. At the end, 412 responses were claimed valid sample which is higher than the proposed sample size of 384.

6.4 DATA NORMALITY

Similar to the pilot study, both statistical tests and graphical plots were applied to test the data normality for the main study using SPSS version 26 (Hair et al., 2018). The main study data set consisted of 412 responses with 43 items to measure the proposed model. All these items met the ranges in between normal distribution by not exceeding more than (+/-) 2 for skewness and 4 for kurtosis (Byrne, 2016; Hair et al., 2018; Kline, 2015; Sposito et al., 1983). Besides, Tabachnick and Fidell (2013) argued there was a lack of significant impact on skewness and kurtosis deviation for sample sizes above 200. Moreover, the Q-Q Plots of the main study data set reflected an extremely low deviation of the points from the expected straight line confirming data normality (Abdul-Aziz et al., 2020; Coakes & Steed, 2007; Hair et al., 2018). Additionally, the means ranged between 2.91 and 4.35. Standard deviations (SDs) ranged from 0.801 to 1.315. After careful consideration of these statistical tests and graphical plots, it can be stated that the data are normally distributed. Table 6.3 below demonstrates the items' mean, standard deviation, skewness, and kurtosis for the main study:

Table 6.3 Data Normality of Main Study

Code	Item	Mean	SD	Skewness	Kurtosis
EMP_1	When thinking about socially disadvantaged people, I try to put myself in their shoes	3.61	1.092	-.750	.056
EMP_2	Seeing socially disadvantaged people triggers an emotional response in me	3.99	.925	-1.230	1.882
EMP_3	I feel compassion for socially marginalised people	3.98	.871	-1.174	2.145
EMP_4	I care how people feel who live on the margins of society	4.17	.801	-1.412	3.484
EMP_5	I experience much emotion when thinking about socially excluded people	4.02	.905	-1.121	1.695
EMP_6	I find it easy to feel compassionate for people less fortunate than myself	3.80	.916	-.902	1.045
MO_1	It is an ethical responsibility to help people less fortunate than ourselves	4.35	.896	-1.752	3.424
MO_2	We are morally obliged to help socially disadvantaged people	4.25	.946	-1.580	2.603
MO_3	Social justice requires that we help those who are less fortunate than ourselves	4.26	.952	-1.604	2.686
MO_4	It is one of the principles of our society that we should help socially disadvantaged people	4.30	1.009	-1.740	2.805
SESE_1	I am convinced that I personally can contribute to address societal challenges if I put my mind to it	3.62	1.080	-.548	-.286
SESE_2	I could figure out a way to help solve the problems of the society	3.65	1.140	-.563	-.442
SESE_3	Solving societal problems is something each of us can contribute to	3.89	1.053	-.767	-.011
SESE_4	I believe it is possible for me to bring about significant social change	3.65	1.144	-.629	-.324
SESE_5	I am confident in creating new products or services to solve social problems	3.53	1.185	-.421	-.686
SESE_6	I can commit to help people	3.74	1.062	-.600	-.224
SESE_7	I can think creatively to benefit others	3.67	1.057	-.521	-.349
SESE_8	I can commercialise an idea for social enterprise	3.43	1.177	-.295	-.768
PSS_1	It is possible to attract investors for an organisation that wants to solve social problems	3.65	1.100	-.745	-.045
PSS_2	People would support me if I wanted to start an organisation to help socially marginalised people	3.69	1.088	-.578	-.450
PSS_3	If I planned to address a significant societal problem, people would back me up	3.44	1.122	-.420	-.492
PSS_4	If I were to start a social enterprise, I would expect to receive plenty of support	3.75	1.213	-.793	-.381
SEI_1	I expect that at some point in the future I will be involved in launching an enterprise that aims to solve social problems	3.72	.991	-1.117	1.329
SEI_2	I have a preliminary idea for a social enterprise on which I plan to act in the future	3.52	1.002	-.716	.180
SEI_3	I plan to start a social enterprise	3.56	1.001	-.842	.544
SEI_4	My qualification has contributed positively towards my interest in starting a social enterprise	3.62	.991	-.816	.476
SEI_5	I had a strong intention to start my own social enterprise before I started studying	3.23	1.182	-.410	-.749
SEI_6	I am ready to do anything to be a social entrepreneur	3.43	1.113	-.508	-.377
SEI_7	I have very seriously thought of starting an enterprise that helps society in some way.	3.56	1.037	-.696	.067
SEI_8	My professional goal is to be a social entrepreneur	3.24	1.144	-.304	-.683
NORM_1	Turning new ideas into social ventures is admired in this country	3.45	1.188	-.492	-.648
NORM_2	In this country, innovative and creative thinking is viewed as a route to success	3.34	1.315	-.386	-.990

NORM_3	Social entrepreneurs are admired in Bangladesh	**3.43**	**1.199**	**-.402**	**-.749**
NORM_4	People in Bangladesh greatly admire those who start own social ventures	**3.35**	**1.176**	**-.413**	**-.678**
REG_1	Government organisations assist individuals in starting their own social ventures	**3.09**	**1.064**	**-.119**	**-.438**
REG_2	Government sponsors organisations that help new social ventures develop	**3.18**	**1.072**	**-.108**	**-.480**
REG_3	Local and national governments have support for individuals starting a social venture	**3.16**	**1.103**	**-.048**	**-.624**
REG_4	Government sets aside government contracts for new and small social ventures	**3.11**	**1.126**	**-.108**	**-.588**
REG_5	Even after failing, government should assist social entrepreneurs starting again	**2.91**	**1.249**	**.106**	**-1.003**
COG_1	Individuals in Bangladesh know how to protect a new social venture legally	**2.92**	**1.185**	**.133**	**-.817**
COG_2	Those who start new social ventures in Bangladesh know how to deal with risk	**3.16**	**1.086**	**-.145**	**-.505**
COG_3	Those who start new social ventures in Bangladesh know how to manage risk	**3.13**	**1.015**	**-.157**	**-.279**
COG_4	Most people know where to find info about markets for their services	**3.13**	**1.076**	**-.041**	**-.603**
REG=Regulatory Institutional Environment; **NORM**=Normative Institutional Environment; **COG**=Cognitive Institutional Environment; **EMP**=Empathy; **PSS**=Perceived Social Support; **SESE**=Social Entrepreneurial Self-efficacy; **SEI**=Social Entrepreneurial Intention (Dependent Construct)					

6.5 SAMPLE PROFILE

In total, six sets of demographic data were collected from the respondents to understand the sample profile of the main study. The participants answered six questions associated with gender, age, division, enrolled degree, degree of year and the universities in which the students were enrolled. The male university students participated the highest 59% compared to 41% female university students. This representation is quite similar to the pilot study data set. For age group, the respondents were divided into six clusters in the main study to have a better understanding of the age range unlike the three clusters measured in the pilot study. In the pilot study, the findings reflected higher respondent numbers from the 21-25 age cluster. This gave the researcher an opportunity to add more clusters in the main study to understand the age distinction better for testing the moderating effects. This study included the university students aged below 21 and also above 36 which was not considered in the pilot study. The main study's findings reflect that university students aged between 21 and 25 still had the strongest representation of 74.8% in the data set which is similar to the pilot study. The university students aged between 26-30 represented 18.2% compared to 1% in the age group of 31-35. Additionally, the findings reflect that the new age group of 16-20 had a participation rate of 5.1% and above 36 age group represented a total of 1% of the data set.

As with the pilot study, the main study represents participants from all the eight divisions of Bangladesh. The data were strongly represented by responses from Dhaka 64.1%, followed by Chittagong 19.7%, with this similar to the pilot study's representation, whereas Rajshahi, Khulna and Rangpur were each represented with a little less than 4% of the data set. University students from Barisal represented 3.2% of the data set and students from Mymensingh and Sylhet less than 1% of the data set. Both the undergraduate and postgraduate-level university students participated in the main study data set. Undergraduate students participated with the highest proportion at 76% compared to 24% at the postgraduate level. The table 6.4 below demonstrates the sample profile in a snapshot.

Table 6.4 Sample Profile in Main Study

Sample Profile		Frequency	Percent
Gender	Male	243	59.0
	Female	169	41.0
	Total	412	100.0
Age	16 - 20	21	5.1
	21 - 25	308	74.8
	26 - 30	75	18.2
	31 - 35	4	1.0
	35 - 40	2	.5
	41+	2	.5
	Total	412	100.0
Division	Barisal	13	3.2
	Chittagong	81	19.7
	Dhaka	264	64.1
	Khulna	16	3.9
	Mymensingh	3	.7
	Rajshahi	16	3.9
	Rangpur	16	3.9
	Sylhet	3	.7
	Total	412	100.0
Degree	Undergraduate	313	76.0
	Postgraduate	99	24.0
	Total	412	100.0

6.5.1 Degree Enrolled and Degree Year

For the undergraduate level, fourth- or final-year students participated the most (n=131), followed by the second year (n=99), third year (n=57) and first year (n=26). On the other hand, first-year postgraduate students participated the most (n=45) compared to postgraduate students in other years as shown in the table 6.5.

*Table 6.5 Degree * Year*

| | | YEAR | | | | |
		First	Second	Third	Fourth	Total
DEGREE	**Undergraduate**	26	99	57	131	313
	Postgraduate	45	31	2	21	99
	Total	71	130	59	152	412

6.5.2 Universities

In the main study, students across twelve universities participated in the data set. The students of North South University (NSU) participated the highest at 45.1%, followed by students of the University of Liberal Arts Bangladesh (ULAB) 31.6%, Southern University Bangladesh (SUB) 5.8%, and University of South Asia (UNISA) 5.3%. Also, students studying in Chittagong University (CU), Dhaka University (DU) and BRAC University (BU) represented each a little less than 3% of the data set, whereas the Bangladesh University of Professionals (BUP) and East West University (EWU) students represented less than 2% each and three other universities such as Daffodil International University (DIU), Comilla University (CoU) and Jahangirnagar University (JU) represented each less than 1% of the data set as demonstrated in the table 6.6 below.

Table 6.6 Participants in Enrolled Universities

UNIVERSITY	Frequency	Percent
North South University (NSU)	186	45.1
University of Liberal Arts Bangladesh (ULAB)	130	31.6
Dhaka University (DU)	10	2.4
BRAC University (BU)	9	2.2
Bangladesh University of Professionals (BUP)	8	1.9

University of South Asia (UNISA)	22	5.3
Southern University Bangladesh (SUB)	24	5.8
Chittagong University (CU)	11	2.7
East West University (EWU)	5	1.2
Daffodil International University (DIU)	3	.7
Comilla University (CoU)	2	.5
Jahangirnagar University (JU)	2	.5
Total	412	100.0

6.6 NON-RESPONSE BIAS

Based on the valid responses of the main study, first 100 respondents were considered as early, with the last 100 respondents considered as late. After running a paired samples test in SPSS version 26, the 2-tailed significance values (as shown in Table 6.7) for each of the study's variables were found to be non-significant. This means that no significant differences are found in the responses between the early and late respondents (Armstrong & Overton, 1977). Therefore, non-response bias does not appear to exist in this data set.

Table 6.7 Non-Response Bias Test

Variables		N	Mean	Std. Deviation	t-Statistics	Sig. (2-tailed)
Empathy (EMP)	Early	100	3.87	.709	-.889	.376
	Late	100	3.95	.612		
Moral Obligation (MO)	Early	100	4.25	.781	-.726	.470
	Late	100	4.33	.670		
Perceived Social Support (PSS)	Early	100	3.79	.895	.917	.361
	Late	100	3.68	.799		
Social Entrepreneurial Self-efficacy (SESE)	Early	100	3.64	.911	.061	.952
	Late	100	3.63	.834		
Regulatory Institutional Environment (REG)	Early	100	3.31	1.059	1.453	.149
	Late	100	3.12	.948		
Normative Institutional Environment (NORM)	Early	100	3.52	1.097	.825	.411
	Late	100	3.40	.959		
Cognitive Institutional Environment (COG)	Early	100	3.26	.993	.764	.446
	Late	100	3.15	.905		
Social Entrepreneurial Intention (SEI)	Early	100	3.57	.881	.991	.324
	Late	100	3.46	.691		

6.7 COMMON METHOD BIAS AND COLLINEARITY TEST

Similar to the pilot study, Harman's single factor test was applied to check the common method bias in the main study data set. All 43 items of the eight variables in the data set underwent the factor analysis as a single factor with un-rotated solution to run this test. The result of the Harman's single factor indicated that 29.755% is the highest variance explained by the single factor (see Table 6.8). This score is way less than the cut-off score of 50% (Podsakoff et al., 2003, 2012). Therefore, this data set identified no evidence for common method bias as the single factor did not account for most of the variance.

Table 6.8 Harman's Single-Factor Test

Total Variance Explained						
		Initial Eigenvalues		Extraction Sums of Squared Loadings		
Items	Total	% of Variance	Cumulative %	Total	% of Variance	Cumulative %
1	12.795	29.755	29.755	12.795	29.755	29.755
2	5.104	11.869	41.625			
3	2.633	6.123	47.747			
4	2.371	5.514	53.262			
5	1.725	4.011	57.272			
6	1.413	3.286	60.558			
7	1.341	3.118	63.675			
8	1.284	2.987	66.662			
9	.849	1.974	68.636			
10	.822	1.912	70.547			
11	.759	1.766	72.313			
12	.726	1.688	74.000			
13	.678	1.576	75.576			
14	.640	1.487	77.064			
15	.586	1.362	78.425			
16	.565	1.313	79.738			
17	.530	1.233	80.972			
18	.510	1.186	82.157			
19	.487	1.132	83.289			
20	.475	1.104	84.393			
21	.459	1.067	85.460			
22	.438	1.019	86.479			
23	.409	.951	87.429			
24	.401	.933	88.363			
25	.393	.914	89.277			

26	.391	.909	90.185			
27	.366	.851	91.036			
28	.347	.807	91.843			
29	.315	.732	92.576			
30	.309	.718	93.294			
31	.283	.659	93.952			
32	.273	.635	94.588			
33	.268	.623	95.211			
34	.258	.600	95.811			
35	.247	.574	96.385			
36	.238	.552	96.937			
37	.234	.545	97.482			
38	.212	.492	97.974			
39	.196	.456	98.430			
40	.184	.427	98.858			
41	.176	.409	99.267			
42	.169	.394	99.661			
43	.146	.339	100.000			

Extraction Method: Principal Component Analysis.

The collinearity test indicated that the independent constructs not correlating among each other in the data set. As shown in the table 6.9, all the independent constructs Variance Inflation Factor (VIF) value were less than threshold limit of three (O'Brien, 2007) indicating no multi-collinearity issues.

Table 6.9 Collinearity Test for Main Study

Model	VIF
Empathy	1.553
Moral Obligation	1.538
Perceived Social Support	1.581
Social Entrepreneurial Self-efficacy	1.409
Regulatory Institutional Environment	1.922
Normative Institutional Environment	1.820
Cognitive Institutional Environment	1.802

Dependent Variable: Social Entrepreneurial Intention
VIF=Variance Inflation Factor

6.8 EVALUATION OF CONSTRUCTS

For the next part of the study, factor and reliability analyses were conducted on the data set to evaluate the constructs. As previously mentioned, some past social entrepreneurial intention studies have conducted both exploratory factor analysis (EFA) and confirmatory factor analysis (CFA) as part of factor analysis (Ashraf, 2020; Hockerts, 2015, 2017; Urban, 2013; Urban & Kujinga, 2017; Yang et al., 2015). In this study, EFA was performed first due to adding new items in the questionnaire to filter the items before conducting CFA on the remaining items (Chin, 1998; Costello & Osborne, 2005; Gaskin, 2020b, 2020a). EFA explores the items associated with theoretical support, whereas CFA confirms the items that fit the data to build the appropriate model (Gaskin, 2020b, 2020a; Hair et al., 2018).

From the 412 valid responses in the main study, a random subset of 100 responses was used for exploratory work in EFA and the remaining 312 responses were used for confirming work in CFA to avoid data fitting or snooping (Carroll et al., 2013; DeCoster, 1998; Håvold & Nesset, 2009). Sample sizes above 200 are considered large and up to 200 considered as medium for performing CFA (Byrne, 2016; Hair et al., 2018; Kline, 2015). According to DeCoster (1998) and Hinkin (1995), 200 can be a sufficient sample size to generate a standard model in CFA. The two step process of EFA and CFA will ensure the validity of the research findings as well (Bentler & Chou, 1987; Hockerts, 2015, 2017; Hurley et al., 1997). The following section will discuss the EFA and the reliability analysis for the main study. After that a detailed review will be provided for the CFA to maintain the relevant flow of the discussion and analysis.

6.9 EXPLORATORY FACTOR ANALYSIS (EFA) OF MAIN STUDY

In the main study, the exploratory factor analysis (EFA) was conducted on a randomly selected subset of 100 responses of the sample. The principal component analysis (PCA) was applied to a total of 43 items with promax oblique rotation. In the initial EFA, Kaiser-Meyer-Olkin (KMO) value was 0.757 but a few item loadings were less than 0.55. For a sample size of 100, the sufficient loading needs to be a minimum of 0.55 (Hair et al., 2018). To continue the analysis, eight items were removed for insufficient loadings and a total of 35 items were retrieved with an improved KMO value. The final exploratory factor analysis (principal component analysis [PCA]) was

conducted on 35 items with oblique rotation (promax). The KMO (=0.775) measure verified the sampling adequacy for the analysis and all individual items were >0.55, which is above the acceptable limit. Bartlett's test of sphericity X (100)=2113.218, p<0.001, indicated that correlations between items were sufficiently large for the EFA. An initial analysis was run to obtain eigenvalues for each component in the data. All eight components had eigenvalues over Kaiser criterion of 1 and, in combination, explained 68.985% of the variance. Based on the scree plot, the researcher retained six to eight components.

Given the sample size and the convergence of the scree plot, the Kaiser's criterion on eight components were retained in the final analysis. The items that load on the same components suggests that component 1 (Social Entrepreneurial Self-efficacy) represented 8.920 and explained 25.486% of the variance. Similarly, component 2 (Social Entrepreneurial Intention) represented 4.008 explaining 11.448%; component 3 (Regulatory Institutional Environment) represented 2.753 explaining 7.865%; component 4 (Empathy) represented 2.624 explaining 7.496%; component 5 (Normative Institutional Environment) represented 1.672 explaining 4.778%; component 6 (Cognitive Institutional Environment) represented 1.533 explaining 4.379%; component 7 (Moral Obligation) represented 1.409 explaining 4.025% and component 8 (Perceived Social Support) represented 1.228 explaining 3.508% as shown in table 6.10.

Table 6.10 Total Variance Explained for Main Study

	Initial Eigenvalues			Extraction Sums of Squared Loadings			Rotation Sums of Squared Loadings
	Total	% of Variance	Cumulative %	Total	% of Variance	Cumulative %	Total
1 SESE	8.920	25.486	25.486	8.920	25.486	25.486	5.805
2 SEI	4.007	11.448	36.934	4.007	11.448	36.934	5.488
3 REG	2.753	7.865	44.799	2.753	7.865	44.799	5.799
4 EMP	2.624	7.496	52.296	2.624	7.496	52.296	3.462
5 NORM	1.672	4.778	57.073	1.672	4.778	57.073	4.726
6 COG	1.533	4.379	61.452	1.533	4.379	61.452	3.815
7 MO	1.409	4.025	65.477	1.409	4.025	65.477	3.028
8 PSS	1.228	3.508	68.985	1.228	3.508	68.985	3.565
9	.989	3.159	72.145				
10	.985	2.815	74.960				

11	.906	2.587	77.547				
12	.780	2.228	79.775				
13	.675	1.929	81.704				
14	.623	1.779	83.483				
15	.556	1.590	85.073				
16	.518	1.480	86.552				
17	.498	1.422	87.975				
18	.466	1.331	89.306				
19	.458	1.310	90.616				
20	.366	1.047	91.663				
21	.340	.970	92.633				
22	.314	.896	93.529				
23	.278	.794	94.323				
24	.251	.716	95.040				
25	.242	.690	95.730				
26	.223	.638	96.368				
27	.212	.606	96.974				
28	.195	.557	97.530				
29	.170	.485	98.015				
30	.147	.420	98.435				
31	.143	.409	98.844				
32	.125	.358	99.203				
33	.103	.295	99.497				
34	.091	.259	99.757				
35	.085	.243	100.000				

Extraction Method: Principal Component Analysis.
REG=Regulatory Institutional Environment; **NORM**=Normative Institutional Environment; **COG**=Cognitive Institutional Environment; **EMP**=Empathy; **PSS**=Perceived Social Support; **SESE**=Social Entrepreneurial Self-efficacy; **SEI**=Social Entrepreneurial Intention

6.9.1 Convergent Validity

The requirement of convergent validity was met for the sub-set of the main sample. The retrieved eight constructs were highly correlated within their intended factor. Also, all the item loadings were greater than 0.55 in the pattern matrix which is sufficient based on the sample size (Hair et al., 2018) as demonstrated in the table 6.11 below.

Table 6.11 Pattern Matrix for Main Study Subset

Pattern Matrix

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	SESE	SEI	REG	EMP	NORM	COG	MO	PSS
SESE_7	.855							
SESE_5	.830							
SESE_4	.786							
SESE_3	.753							
SESE_2	.711							
SESE_8	.682							
SESE_1	.652							
SEI_3		.884						
SEI_6		.836						
SEI_5		.835						
SEI_2		.808						
SEI_8		.633						
SEI_7		.555						
REG_3			.877					
REG_1			.867					
REG_2			.796					
REG_4			.628					
EMP_2				.764				
EMP_3				.751				
EMP_4				.745				
EMP_1				.710				
EMP_6				.668				
NORM_2					.842			
NORM_1					.784			
NORM_4					.741			
NORM_3					.686			
COG_3						.881		
COG_2						.845		
COG_1						.565		
MO_2							.755	
MO_3							.747	
MO_1							.742	
PSS_3								.764
PSS_2								.719
PSS_4								.626

REG=Regulatory Institutional Environment; **NORM**=Normative Institutional Environment; **COG**=Cognitive Institutional Environment; **EMP**=Empathy; **MO**=Moral Obligation; **PSS**=Perceived Social Support; **SESE**=Social Entrepreneurial Self-efficacy; **SEI**=Social Entrepreneurial Intention (Dependent Construct)

6.9.2 Discriminant Validity

The 100-sample data set of the main study met the requirement of discriminant validity showing a clear difference between each construct. Based on the component correlation matrix, all the components represent correlation below 0.412 indicating distinct differentiated constructs (Hair et al., 2018) as demonstrated in the table 6.12 below.

Table 6.12 Component Correlation Matrix for Main Study Subset

Component Correlation Matrix

	SESE	SEI	REG	EMP	NORM	COG	MO	PSS
SESE	1.000	.317	.307	.214	.249	.296	.186	.178
SEI	.317	1.000	.347	.034	.264	.249	.238	.285
REG	.307	.347	1.000	.007	.412	.389	.244	.338
EMP	.214	.034	.007	1.000	.009	.001	.181	.031
NORM	.249	.264	.412	.009	1.000	.279	.039	.302
COG	.296	.249	.389	.001	.279	1.000	.145	.209
MO	.186	.238	.244	.181	.039	.145	1.000	.179
PSS	.178	.285	.338	.031	.302	.209	.179	1.000

REG=Regulatory Institutional Environment; **NORM**=Normative Institutional Environment; **COG**=Cognitive Institutional Environment; **EMP**=Empathy; **MO**=Moral Obligation; **PSS**=Perceived Social Support; **SESE**=Social Entrepreneurial Self-efficacy; **SEI**=Social Entrepreneurial Intention (Dependent Construct)

6.10 RELIABILITY ANALYSIS

The reliability analysis demonstrated internal consistency among the items of all the eight constructs associated with the 100 response sub-sample of the main study. Cronbach's alpha scores were above 0.8 and below 0.95 for six of the constructs indicating excellent levels of reliability (Hair et al., 2018; Ursachi et al., 2015). The other two constructs score were 0.672 for perceived social support and 0.716 for moral obligation indicating acceptable levels of reliability (Hulin et al., 2001; Ursachi et al., 2015). The table 6.13 below demonstrates the items, factor loadings, and the Cronbach's alpha scores.

Table 6.13 Reliability Analysis for Main Study Subset

Construct	Item	Factor Loadings	Cronbach's α

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Empathy (EMP)	**EMP_1** When thinking about socially disadvantaged people, I try to put myself in their shoes	.710	**.827**
	EMP_2 Seeing socially disadvantaged people triggers an emotional response in me	.764	
	EMP_3 I feel compassion for socially marginalised people	.751	
	EMP_4 I care how people feel who live on the margins of society	.745	
	EMP_6 I find it easy to feel compassionate for people less fortunate than myself	.668	
Moral Obligation (MO)	**MO_1** It is an ethical responsibility to help people less fortunate than ourselves	.742	**.716**
	MO_2 We are morally obliged to help socially disadvantaged people	.755	
	MO_3 Social justice requires that we help those who are less fortunate than ourselves	.747	
Social Entrepreneurial Self-efficacy (SESE)	**SESE_1** I am convinced that I personally can contribute to address societal challenges if I put my mind to it	.652	**.878**
	SESE_2 I could figure out a way to help solve the problems of the society	.711	
	SESE_3 Solving societal problems is something each of us can contribute to	.753	
	SESE_4 I believe it is possible for me to bring about significant social change	.786	
	SESE_5 I am confident in creating new products or services to solve social problems	.830	
	SESE_7 I can think creatively to benefit others	.855	
	SESE_8 I can commercialise an idea for social enterprise	.682	
Perceived Social Support (PSS)	**PSS_2** People would support me if I wanted to start an organisation to help socially marginalised people	.719	**.672**
	PSS_3 If I planned to address a significant societal problem, people would back me up	.764	
	PSS_4 If I were to start a social enterprise, I would expect to receive plenty of support	.626	
Social Entrepreneurial Intention (SEI)	**SEI_2** I have a preliminary idea for a social enterprise on which I plan to act in the future	.808	**.877**
	SEI_3 I plan to start a social enterprise	.884	
	SEI_5 I had a strong intention to start my own social enterprise before I started studying	.835	
	SEI_6 I am ready to do anything to be a social entrepreneur	.836	
	SEI_7 I have very seriously thought of starting an enterprise that helps society in some way.	.555	
	SEI_8 My professional goal is to be a social entrepreneur	.633	
Normative Institutional Environment (NORM)	**NORM_1** Turning new ideas into social ventures is admired in this country	.784	**.888**
	NORM_2 In this country, innovative and creative thinking is viewed as a route to success	.842	
	NORM_3 Social entrepreneurs are admired in Bangladesh	.686	
	NORM_4 People in Bangladesh greatly admire those who start own social ventures	.741	
Regulatory Institutional Environment (REG)	**REG_1** Government organisations assist individuals in starting their own social ventures	.867	**.885**
	REG_2 Government sponsors organisations that help new social ventures develop	.796	
	REG_3 Local and national governments have support for individuals starting a social venture	.877	
	REG_4 Government sets aside government contracts for new and small social ventures	.628	
Cognitive Institutional Environment (COG)	**COG_1** Individuals in Bangladesh know how to protect a new social venture legally	.565	**.803**
	COG_2 Those who start new social ventures in Bangladesh know how to deal with risk	.845	
	COG_3 Those who start new social ventures in Bangladesh know how to manage risk	.881	

6.11 CONFIRMATORY FACTOR ANALYSIS (CFA)

A confirmatory approach verifies the loadings of items on the constructs to validate the model (Brown, 2015; Byrne, 2016; Hair et al., 2018; Tabachnick & Fidell, 2013). Before proceeding to confirmatory factor analysis (CFA), a brief discussion on Structural equation modelling (SEM) is necessary. Fundamentally, SEM is a series of statistical techniques that applies a confirmatory approach to analyse the proposed theoretical framework in a research study (Bentler & Bonett, 1980; Byrne, 2012, 2016; Kaplan, 2009; Ullman & Bentler, 2012). Similarly, Rouse and Corbitt (2008) defined SEM as a set of tools to investigate the structural relationship between the theoretical variables and the structural adequacy. The main aim of SEM is to determine whether the data set supports the proposed theoretical model or not (Chipeta, 2019; Schumacker & Lomax, 2004; Ullman & Bentler, 2012). Basically, SEM is a combination of two sub-models: the measurement model and the structural model (Byrne, 2001; Ullman & Bentler, 2012).

Initially, Anderson and Gerbing (1998) favoured conducting a two-step approach: i) measurement model; and ii) structural model. In this two-step approach, the measurement model attempts to measure the theoretical constructs and the structural model attempts to test the hypothesised relationship between the constructs (Anderson & Gerbing, 1998). These authors argued that a two-step approach can provide more insight on theory testing and validity of the findings due to the separate estimation process of the measurement model and structural model (Anderson & Gerbing, 1998). On the same note, Kline (2015) stressed the importance of a valid measurement model before evaluating the structural model. According to Tharenou et al. (2007), it is essential to obtain measurement model fitted separately before running the structural model. The measurement model and CFA are basically the same, as both confirm the extent of the observed items representing the latent constructs (Byrne, 2016; Rouse & Corbitt, 2008).

Covariance-based SEM (CB-SEM) seems most appropriate to apply in this research as all the items in the measurement scales are reflective in nature (discussed in Chapter 4, Section 4.8). In covariance-based SEM (CB-SEM), the hypotheses testing becomes easier and efficient as this estimation technique contains maximum-likelihood (ML) procedures to test a series of relationships based on theoretical intervention (Byrne, 2016; Kline, 2015). Also, it is most suitable for inferential data

analysis (Geneste, 2010; Schumacker & Lomax, 2004). Additionally, covariance-based SEM (CB-SEM) analysis includes the measurement error estimation to ensure the validity and reliability of the measurement model (Byrne, 2001; Kaplan, 2009; Schumacker & Lomax, 2004; Tabachnick & Fidell, 2013). From this point onward, covariance-based SEM (CB-SEM) will be referred to as SEM. The measurement model and structural model analysis in SEM allows the researcher to incorporate theoretical constructs and observed variables to develop the sophisticated theoretical model (Chipeta, 2019; Hair et al., 2018; Kline, 2015; Schumacker & Lomax, 2004).

The measurement model presents the confirmatory factor analysis (CFA) by measuring, designing and analysing the links between observed indicators on the intended latent constructs (Brown, 2015). Conversely, the structural model represents a series of structural equations that efficiently translate the strength of the relationships between observed variables and unobserved variables (Byrne, 2016; Hair et al., 2018; Kline, 2015; Schumacker & Lomax, 2004). In this research, the SEM program the analysis of a moment structures (AMOS) version 26 was used to perform the measurement model and structural model analyses. AMOS is a structural analysis software used for structural equation modelling produced by IBM that complements and integrates with the Statistical Package for the Social Sciences (SPSS). AMOS is the more suitable choice to measure latent constructs compared to SPSS as it addresses the measurement errors at every level, unlike SPSS which assumes perfect measurement (Byrne, 2016). Also, AMOS can apply the maximum-likelihood (ML) method to estimates the parameters based on the differences between the observed and estimated covariance matrices (Byrne, 2012, 2016).

Compared to other SEM software programs, Byrne (2012, 2016) favours AMOS for its user-friendly and efficient approach. For example, AMOS has a more pictorial approach rather than syntax as applied in Mplus (Byrne, 2012, 2016). According to Arbuckle (2011), AMOS can present the hypothesised relationship among the variables by developing an intuitive path diagram (Byrne, 2016). These features of AMOS makes its application quicker, easier and attractive to specify, estimate, assess and present the models (Arbuckle, 2011; Bacon, 2001; Byrne, 2012, 2016; Nam et al., 2018). Curtin University offers the most updated version of SPSS and AMOS to conduct the research analyses for HDR students. Additionally, Ashraf (2020), Hockerts (2015, 2017), Kazmi et al. (2019), Kruse (2020), Rambe and Ndofirepi

(2019), and Wannamakok and Chang (2020) applied AMOS software to measure social entrepreneurial intention.

6.11.1 Goodness-of-Fit Measures

Goodness-of-fit measures indicate the structural adequacy by assessing the correspondence between the output generated from the actual data set matrix and the proposed model matrix (Bentler & Bonett, 1980; Brown, 2015; Hair et al., 2018). SEM software programs generate fit indices while analysing the measurement and structural models of the data set. It is important to review the goodness of fit indices to assess the structural adequacy. A good model fit for SEM comprises of being independent of the sample size, reflecting differences in the fit and penalising the model for including parameters that produce more complex models (Schumacker & Lomax, 2004). However, meeting all these criteria can be extremely difficult, so, it is not possible to have a perfect model fit (Hair et al., 2018; Hu & Bentler, 1999).

Chi-square (χ^2) is the most common fit statistic to test the significance of the model (Bentler & Bonett, 1980). The model can fit the data perfectly, if χ^2 scores is closer to zero (Kline, 2015). Higher χ^2 values indicate worse model fit of the data; these indices measure the "badness of fit" (Kline, 2015; Schumacker & Lomax, 2004). However, χ^2 value can be strongly influenced by the sample size (Bentler & Bonett, 1980; Cangur & Ercan, 2015; Kline, 2015), indicating higher χ^2 values for larger sample sizes. Likewise, Gaskin (2020a) argued that χ^2 value will inevitably be higher and p-value will be lower for any sample size above 250. Additionally, χ^2 statistics is sensitive to the higher number of constructs and larger correlations (Gaskin, 2020a). However, it can be subjective to have an adequate model fit with χ^2 value closer to zero in the real research world (Hu & Bentler, 1999; Kline, 2015). As a result, Bentler and Bonett (1980) proposed the chi-square/degrees of freedom (χ^2/df) as a helpful indicator compared to the χ^2 value. Hair et al. (2018) suggested a χ^2/df ratio between 3 and 5 as an acceptable value for the model fit, whereas Hu and Bentler (1999) and Nasser and Wisenbaker (2003) advocated for a stricter ratio of 2:1 χ^2/df for the better model fit of the data. Due to the limitations associated with the χ^2 statistic, other types of goodness-of–fit measures such as absolute fit indices and incremental fit indices were developed to assess the model fit (Hu & Bentler, 1999).

Besides the χ^2/df statistic, Byrne (2016), Hair et al. (2018) and Kline (2015) suggested to report some other set of fit indices while presenting the results of SEM analysis. Likewise, Nasser and Wisenbaker (2003) recommended reporting different families of measures to assess a good model fit. The most prominent fit indices are briefly described below:

1) The Bentler comparative fit index (CFI) is one of the most applied incremental fit indices for measuring complete covariance in the data by comparing the hypothesised model to the baseline model (Hair et al., 2018; Hu & Bentler, 1999; Kamaruddin & Abeysekera, 2013). This index measures the comparative improvement in the fit of the proposed model with hypothesised relationships to the baseline model with uncorrelated observed variables (Cangur & Ercan, 2015; Kline, 2015). The excellent score for CFI is above 0.95 and values above 0.90 are considered as acceptable for achieving a good model fit (Byrne, 2016). In certain contexts, CFI scores above 0.80 are also considered marginally acceptable (Hair et al., 2018).

2) The Steiger–Lind root mean square error of approximation (RMSEA) is a part of absolute fit indices indicating the error approximation in the population of the data set (Hair et al., 2018; Hu & Bentler, 1999; Kamaruddin & Abeysekera, 2013). The RMSEA measures how well the proposed model fits the population covariance matrix with the chosen parameters (Kamaruddin & Abeysekera, 2013; Kline, 2015). Although this index is sensitive to the number of estimated parameters, it considered as one of the most informative indices in SEM (Byrne, 2016; Kaplan, 2009). The RMSEA estimates the error by differentiating the fit between the sample covariance matrix and population covariance matrix (Kaplan, 2009; Kline, 2015). The ideal RMSEA score is below 0.05 (Byrne, 2016), however, a value up to 0.08 is considered as an adequate fit (Kamaruddin & Abeysekera, 2013; Kaplan, 2009; Kline, 2015), whereas any value below 0.10 indicates acceptable fit for errors of approximation according to Hair et al. (2018).

3) The standardised root mean square residual (SRMR) is a part of absolute fit indices and represents the correlations of the residual variances in the observed variables (Hair et al., 2018; Hu & Bentler, 1999; Kamaruddin & Abeysekera, 2013). It measures the average of standardised residuals between the observed

and the hypothesised covariance matrices (Cangur & Ercan, 2015; Gaskin, 2020a; Kamaruddin & Abeysekera, 2013; Kaplan, 2009). The ideal score for SRMR is below 0.05 (Byrne, 2016), however, up to 0.08 score is regarded as highly acceptable (Hair et al., 2018), whereas any value below 0.10 is considered as favourable for a well-fitting model (Kline, 2015).

Other indices are also available for measuring incremental fit and absolute fit: under the incremental fit index, the normed fit index (NFI) and the non-normed fit index (NNFI) can also be found. The CFI was developed as a revised version of NFI to account for large sample sizes (Bentler & Chou, 1987; Hu & Bentler, 1999; Kamaruddin & Abeysekera, 2013). The NNFI is also widely known as the Tucker–Lewis Index (TLI). It represents the model complexity by addressing the parsimony, sample size and degrees of freedom (Byrne, 2016; Cangur & Ercan, 2015; Catford, 1998; Kamaruddin & Abeysekera, 2013). The TLI compares the hypothesised model and the predicted model while penalising for added parameters (Hu & Bentler, 1999). Any value above 0.90 indicates satisfactory model fit for both NFI and TLI (Hair et al., 2018; Hu & Bentler, 1999). The goodness of fit index (GFI) and the adjusted goodness of fit index (AGFI) are found under the absolute fit indices. The GFI estimates the overall degree of fit by comparing the difference between the squared residuals of predictions and the actual data but it does not consider the error variances (Bollen, 1990; Gaskin, 2020a; Kamaruddin & Abeysekera, 2013). AGFI estimates the comparison between the hypothesised model and the predicted model by adjusting the degrees of freedom unlike the GFI (Byrne, 2016). Any value above 0.90 indicates good model fit for both GFI and AGFI (Bollen, 1990; Byrne, 2016; Hair et al., 2018).

Furthermore, Byrne (2016), Hair et al. (2018), Kline (2015) and Nasser and Wisenbaker (2003) advocated for the reporting of a minimum of two incremental fit indices and one absolute fit index for assessing the model fit appropriately. Accordingly, two incremental fit indices CFI and TLI alongside four absolute fit indices χ^2 statistics, χ^2/df, RMSEA, and SRMR will be reported for the SEM analysis in this research. Although goodness of fit measures are key indicators for assessing model fit, solely relying on these indices can be misleading in determining well-fitted models (Anderson & Gerbing, 1998; Byrne, 2016; Hair et al., 2018; Hu & Bentler, 1999; Schumacker & Lomax, 2004). Likewise, Byrne (2016) argued that good model fit does not always guarantee model adequacy and effectiveness. It is important to

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highlight the theoretical reasoning as well the judgement of the researcher while assessing the model fit (Geneste, 2010). Therefore, the researcher needs to focus on the theoretical, statistical, and practical considerations while assessing the model adequacy.

6.11.2 Modification Indices

SEM software such as AMOS can identify modifications that could improve the goodness of fit measures in the model. Modification indices have the potential to identify the parameters that could improve the model fit (Byrne, 2016; Geneste, 2010; Schumacker & Lomax, 2004; Tabachnick & Fidell, 2013). In structural models, it can be a useful way to modify the hypothesised model by adding or deleting parameters (Geneste, 2010; Kenny, 2020). If the model fit significantly improves, correlating error term parameters in the same constructs can be acceptable (Hermida, 2015; Kaplan, 2009; Kenny, 2020). However, Gaskin (2020d), Hair et al. (2018) and Hermida (2015) argued not to add or delete parameters or even correlate error terms to reserve the validity of the original model. According to Hair et al. (2018), applying the modification indices can raise questions on the validity of the construct. Likewise, Byrne (2016) suggested that re-specifying the model can impact on the originality of the model by becoming more an exploratory approach instead of being confirmatory in nature (Geneste, 2010; Tabachnick & Fidell, 2013). According to Brown (2015), Byrne (2016) and Kline (2015), the researcher should only modify the parameters when it seems theoretically feasible and strict care must be taken to avoid temptation. Considering this discussion, the researcher did not modify any parameters in this research to practice strict confirmatory approach and avoid any doubt on the construct validity.

6.11.3 Construct Validity

In confirmatory factor analysis (CFA), construct validity can be achieved by meeting both convergent and discriminant validity in the measurement model (Hair et al., 2018). For convergent validity, the standardised loadings of the items need to converge on the intended construct (Brown, 2015; Geneste, 2010). In doing so, the standardised loadings should be ideally higher than 0.70 and minimum should be 0.50 (Brown, 2015; Hair et al., 2018). Average variance extraction (AVE) estimates the average amount of variance captured by the intended construct (Brown, 2015; Farrell, 2010;

Fornell & Larcker, 1981; Hair et al., 2018). It can be calculated by adding all the standardised squared factor loadings divided by the items in a construct (Hair et al., 2018). Average variance extracted (AVE) scores need to be at least 0.50, meaning that 50% of the variance can be explained by the intended construct to achieve convergent validity (Brown, 2015; Fornell & Larcker, 1981). However, the AVE score can be a strict measure, so, in case of early stage research, scores below 0.50 can be acceptable (Gaskin, 2020a; Rivard & Huff, 1988). Composite reliability (CR) assesses the internal consistency of a construct by addressing the measurement errors unlike Cronbach's alpha (Hair et al., 2018). According to Malhotra and Dash (2011), CR scores above 0.70 alone can be an adequate measure for achieving convergent validity in CFA (Gaskin, 2020a). Also, MaxR (H) refers to McDonald Construct Reliability and is considered as more robust in measuring the construct reliability in comparison to CR (Gaskin, 2020a). MaxR (H) measures the maximal reliability of the constructs by estimating the relationship between the latent constructs and its measured indicators (Padilla & Divers, 2016). Therefore, MaxR (H) scores above 0.70 can also be a sufficient measure to assess convergent validity (Gaskin, 2020a; Padilla & Divers, 2016). For this research, all three scores of standardised loadings, AVE, CR and MaxR (H) were applied to assess convergent validity.

For discriminant validity, the constructs in the model need to highlight the variations that differentiate them from each other (Hair et al., 2018). Based on the Fornell–Larcker (1981) criterion, the discriminant validity can be achieved if the AVE score of the construct is higher than the maximum shared variance (MSV) (Fornell & Larcker, 1981). Also, the square root of the AVE has to be greater than the inter-construct correlations to attain discriminant validity (Fornell & Larcker, 1981; Gaskin, 2020a; Hair et al., 2018). Moreover, Henseler et al. (2015) argued for heterotrait–monotrait (HTMT) ratio as a robust new criterion compared to the Fornell–Larcker criterion to assess discriminant validity. The HTMT ratio score strictly differentiates among the constructs in a model (Henseler et al., 2015). The ideal score of HTMT ratio is below 0.850 indicating strict threshold and the liberal threshold of HTMT score is below 0.900 to achieve discriminant validity (Henseler et al., 2015). For this research, all these criterions were applied to assess discriminant validity.

6.12 CONFIRMATORY FACTOR ANALYSIS (CFA) OF MAIN STUDY

Confirmatory factor analysis was conducted on the remaining 312 responses. All eight constructs were identified having thirty-five items for the proposed model. Before running the full measurement model, the researcher divided the main model into a series of models to exercise more control and care on understanding the constructs and the findings of the indicators. Therefore, this research applied separate confirmatory approaches to the three pillars of institutions (TPI), the Mair Noboa model (MNM) and social entrepreneurial intention (SEI) to attain better validity of the measurement model. Based on these stand-alone models, the full measurement model was generated which fitted well with the links between observed indicators and the intended constructs. The researcher also applied a confirmatory approach on the prior experience construct which will be later fitted in the structural model as a moderator in the next chapter. The following section will illustrate the model fit and construct validity for the series of models.

6.12.1 Confirmatory Factor Analysis (CFA) for Three Pillars of Institutions (TPI)

The three pillars of institutions (TPI) measure is associated with three constructs consisting of 11 items. The model fit index indicated a 117.974 χ^2 statistic and 41 degrees of freedom (df). The χ^2/df ratio is 2.877 which is under the minimum threshold of 3 (Hair et al., 2018; Hu & Bentler, 1999; Kline, 2015). The absolute fit indices, RMSEA scores 0.078 and SRMR scores 0.0364 are under the threshold limit of 0.08. The incremental fit indices, CFI scores 0.970 and TLI scores 0.960 are above the 0.90 threshold (Hair et al., 2018; Hu & Bentler, 1999; Kline, 2015). The model fit findings are presented in a tabular format below in Table 6.14.

Table 6.14 Model Fit for TPI Model

	χ2	df	χ2/df	RMSEA	CFI	SRMR	TLI
TPI	**117.974**	**41**	**2.877**	**.078**	**.970**	**.0364**	**.960**
Threshold			3-5	<0.08	>0.90	<0.08	>0.90

Threshold sources: Hair et al. (2018), Kline (2015), Hu and Bentler (1999)

This stand-alone model met the minimum standardised loading estimates for convergent validity. The minimum standardised loading estimates at 0.780 are above the 0.7 ideal threshold (Hair et al., 2018). The composite reliability (CR) scores are above 0.7 and the average variance extraction (AVE) scores are above 0.5 for all three TPI constructs (Fornell & Larcker, 1981; Hair et al., 2018; Malhotra et al., 2013). The

MaxR (H) scores are above the threshold limit as well. Thus, the TPI model achieved the convergent validity. Table 6.15 below demonstrates the factor loadings of each item of the constructs, the composite reliability, AVE and MaxR (H).

Table 6.15 Convergent Validity of TPI Model

Construct	Items	Factor Loadings	Composite Reliability	AVE	MaxR (H)
Normative Institutional Environment	NORM_4 NORM_2 NORM_3 NORM_1	.858 .828 .875 .841	0.913	0.723	0.914
Regulatory Institutional Environment	REG_4 REG_2 REG_1 REG_3	.830 .858 .803 .913	0.914	0.726	0.922
Cognitive Institutional Environment	COG_2 COG_3 COG_1	.894 .879 .780	0.888	0.727	0.899

The findings of the TPI constructs as well demonstrated a good fitting model to the data as shown in Figure 6.1 below.
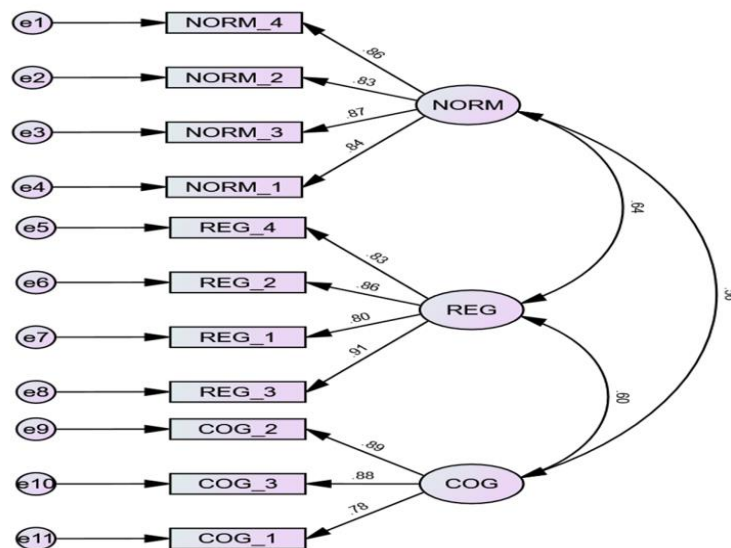

Figure 6.1 Confirmatory Factor Analysis (CFA) of TPI Model

This stand-alone model also met the requirements for discriminant validity as shown in Table 6.16 below. Based on the Fornell–Larcker criterion, all the AVE value of the constructs are higher than their maximum shared variance (MSV). Also, the square

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root of AVE (bold faces in diagonals) for the constructs are greater than inter-construct correlations (Fornell & Larcker, 1981; Hair et al., 2018). Additionally, the heterotrait–monotrait (HTMT) ratio scores are below the stricter threshold of 0.850 (Henseler et al., 2015). Therefore, the TPI constructs model met the construct validity.

Table 6.16 Discriminant Validity of TPI Model

	AVE	MSV	NORM	REG	COG
NORM	0.723	0.413	**0.851**		
REG	0.726	0.413	0.643	**0.852**	
COG	0.727	0.363	0.561	0.603	**0.853**

Notes: **REG**=Regulatory Institutional Environment; **NORM**=Normative Institutional Environment; **COG**=Cognitive Institutional Environment; AVE=Average Variance Extracted; MSV=Maximum Shared Variance; square root of AVE is shown in the bold font in the diagonals.

Table 6.17 Heterotrait–Monotrait (HTMT) Ratio of TPI Model

	NORM	REG	COG
NORM	■		
REG	0.639	■	
COG	0.583	0.621	■

Notes: **REG**=Regulatory Institutional Environment; **NORM**=Normative Institutional Environment; **COG**=Cognitive Institutional Environment; HTMT scores below 0.850 meet discriminant validity (Henseler et al., 2015)

6.12.2 Confirmatory Factor Analysis (CFA) of Mair Noboa Model (MNM)

The Mair Noboa model (MNM) is associated with four constructs consisting of 18 items. The model fit index indicated a 340.726 χ^2 statistic and 129 degrees of freedom (*df*). The χ^2/df ratio is 2.642 which is under the threshold of 3 (Hair et al., 2018; Hu & Bentler, 1999; Kline, 2015). The absolute fit indices RMSEA and SRMR scores were 0.073 and 0.0614 respectively and are under the threshold limit of 0.08. The incremental fit indices scores for CFI and TLI were 0.926 and 0.912, respectively, and are above the acceptable 0.90 threshold (Hair et al., 2018; Hu & Bentler, 1999; Kline, 2015). The model fit findings are presented in tabular format below:

Table 6.18 Model Fit for MNM

	χ2	df	χ2/df	RMSEA	CFI	SRMR	TLI
MNM	**340.726**	**129**	**2.642**	**.073**	**.926**	**.0614**	**.912**
Threshold			3-5	<0.08	>0.90	<0.08	>0.90

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This model met the minimum standardised loading estimates for convergent validity. The minimum standardised loadings estimated at 0.601 are above the 0.5 minimum threshold (Hair et al., 2018). The composite reliability (CR) score are above 0.7 and the average variance extraction (AVE) scores are above 0.5 for all four MNM constructs (Fornell & Larcker, 1981; Hair et al., 2018; Malhotra & Dash, 2011). The MaxR (H) scores are above the threshold limit as well. Therefore, the MNM meets the requirements for convergent validity. Table 6.19 below demonstrates the factor loadings for each item of the constructs, the composite reliability, the AVE and MaxR (H).

Table 6.19 Convergent Validity of MNM

Construct	Items	Factor Loadings	Composite Reliability	AVE	MaxR (H)
Empathy	EMP_1 EMP_3 EMP_2 EMP_6 EMP_4	.601 .775 .757 .672 .768	0.841	0.516	0.850
Moral Obligation	MO_2 MO_3 MO_1	.844 .788 .730	0.831	0.622	0.840
Social Entrepreneurial Self-efficacy	SESE_5 SESE_8 SESE_2 SESE_1 SESE_7 SESE_4 SESE_3	.828 .796 .814 .770 .728 .702 .636	0.903	0.572	0.910
Perceived Social Support	PSS_2 PSS_3 PSS_4	.853 .768 .737	0.830	0.620	0.841

The findings of the MNM constructs demonstrated a good fitting model to the data as shown in the diagram below.
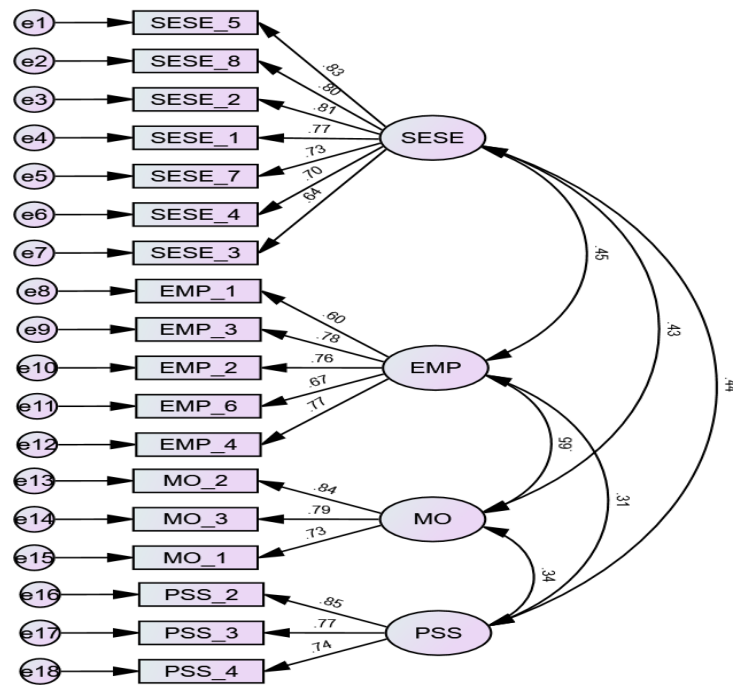
Figure 6.2 Confirmatory Factor Analysis (CFA) of MNM

Based on the Fornell–Larcker criterion, all the AVE values of the constructs are higher than the maximum shared variance (MSV). Also, the square root of AVE (boldface in diagonals) for the constructs are greater than inter-construct correlations (Fornell & Larcker, 1981; Hair et al., 2018). Additionally, the heterotrait–monotrait (HTMT) ratio scores below the stricter threshold of 0.850 (Henseler et al., 2015). Therefore, the MNM met the discriminant validity as shown in Tables 6.20 and 6.21 below.

Table 6.20 Discriminant Validity of MNM

	AVE	MSV	SESE	EMP	MO	PSS
SESE	0.572	0.199	**0.756**			
EMP	0.516	0.426	0.446	**0.718**		
MO	0.622	0.426	0.426	0.653	**0.789**	
PSS	0.620	0.191	0.437	0.308	0.338	**0.787**

Notes: EMP=Empathy; **MO**=Moral Obligation; **PSS**=Perceived Social Support; **SESE**=Social Entrepreneurial Self-efficacy; **CR**=Composite Reliability; AVE=Average Variance Extracted; MSV=Maximum Shared Variance; square root of AVE is shown in bold font in the diagonals.

Table 6.21 Heterotrait–Monotrait (HTMT) Ratio of MNM

	SESE	EMP	MO	PSS
SESE	■			

EMP	0.488		
MO	0.445	0.663	
PSS	0.467	0.327	0.353

Notes: **EMP**=Empathy; **MO**=Moral Obligation; **PSS**=Perceived Social Support; **SESE**=Social Entrepreneurial Self-efficacy; HTMT scores below 0.850 meet discriminant validity (Henseler et al., 2015)

6.12.3 Confirmatory Factor Analysis (CFA) of Social Entrepreneurial Intention (SEI)

Social Entrepreneurial Intention (SEI) is the dependent construct consisting of 6 items. The model fit index indicated a $\chi2$ statistic value of 55.279 and 9 degrees of freedom (df). The $\chi2$/df ratio is therefore 6.142 which is above the threshold range of 3 to 5 (Hair et al., 2018). The RMSEA score is 0.129 and is also slightly above the acceptable threshold limit of 0.10 (Hair et al., 2018). However, the SRMR score is 0.0381 which indicates an acceptable fit to the model (Byrne, 2016). Also, the incremental fit indices scored 0.954 for the CFI while the TLI scored 0.924 which are above the 0.90 threshold (Hair et al., 2018; Hu & Bentler, 1999; Kline, 2015). According to Hu and Bentler (1999), a good SRMR score should be accompanied by another good index such as CFI or RMSEA for assessing a good model fit. Therefore, the SRMR and CFI score for this model reflects a possibly good model fit. The model fit findings are presented in a tabular format in Table 6.22 below:

Table 6.22 Model Fit for Social Entrepreneurial Intention (SEI)

	$\chi2$	df	$\chi2$/df	RMSEA	CFI	SRMR	TLI
SEI	55.279	9	6.142	.129	.954	.0381	.924
Threshold			3-5	<0.10	>0.95	<0.05	>0.90

Threshold sources: Hair et al. (2018), Kline (2015), Hu and Bentler (1999)

This construct meets the minimum standardised loading estimates for convergent validity. The minimum standardised loading estimated at 0.701 which is above the 0.5 minimum threshold (Hair et al., 2018). The composite reliability (CR) score is 0.896 which is above 0.7 and the average variance extraction (AVE) score is 0.591 which meets the criteria for convergent validity (Fornell & Larcker, 1981; Hair et al., 2018; Malhotra & Dash, 2011). The MaxR (H) score is above the threshold limit as well. The discriminant validity could not be tested as this model has a single construct only. Table 6.23 below demonstrates the factor loadings of each item of the construct, the composite reliability, AVE and MaxR (H).

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Table 6.23 Convergent Validity of Social Entrepreneurial Intention (SEI)

Construct	Items	Factor Loadings	Composite Reliability	AVE	MaxR (H)
Social Entrepreneurial Intention	SEI_8	.797	0.896	0.591	0.901
	SEI_7	.797			
	SEI_6	.829			
	SEI_5	.727			
	SEI_3	.753			
	SEI_2	.701			

The social entrepreneurial intention (SEI) construct demonstrates an acceptable fitting model to the data, despite the poor χ^2/df ratio and RMSEA value as shown in the diagram below:
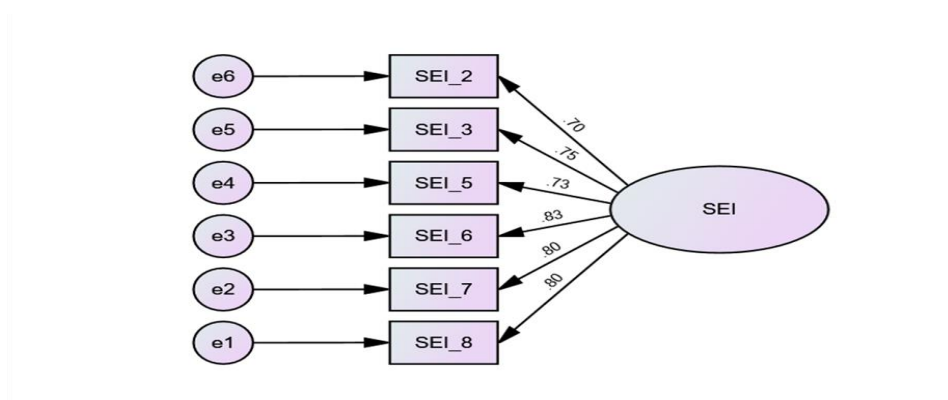
Figure 6.3 Confirmatory Factor Analysis (CFA) of Social Entrepreneurial Intention (SEI)

6.12.4 Full Measurement Model

The full measurement model consists of eight constructs with 35 items. The model fit index indicated a χ^2 statistic value of 1012.493 and 532 degrees of freedom (df). The χ^2/df ratio is 1.903 which is under the strict threshold of 2 as per Hu and Bentler (1999). The absolute fit indices consisted of an RMSEA score of 0.054 and SRMR score of 0.0494 and are under the threshold limit of 0.08 (Hair et al., 2018; Hu & Bentler, 1999; Kline, 2015). The incremental fit indices included a CFI score of 0.930 and TLI score of 0.922 which are above the 0.90 threshold (Hair et al., 2018; Hu & Bentler, 1999; Kline, 2015). The model fit findings are presented in tabular format below:

Table 6.24 Model Fit for Full Model

	χ^2	df	χ^2/df	RMSEA	CFI	SRMR	TLI
Full Model	1012.493	532	1.903	.054	.930	.0494	.922
Threshold			1-3	<0.08	>0.90	<0.08	>0.90

Threshold sources: Hair et al. (2018), Kline (2015), Hu and Bentler (1999)

The findings of the full measurement model demonstrated a good fit to the data. The full CFA diagram for the eight constructs is shown below.
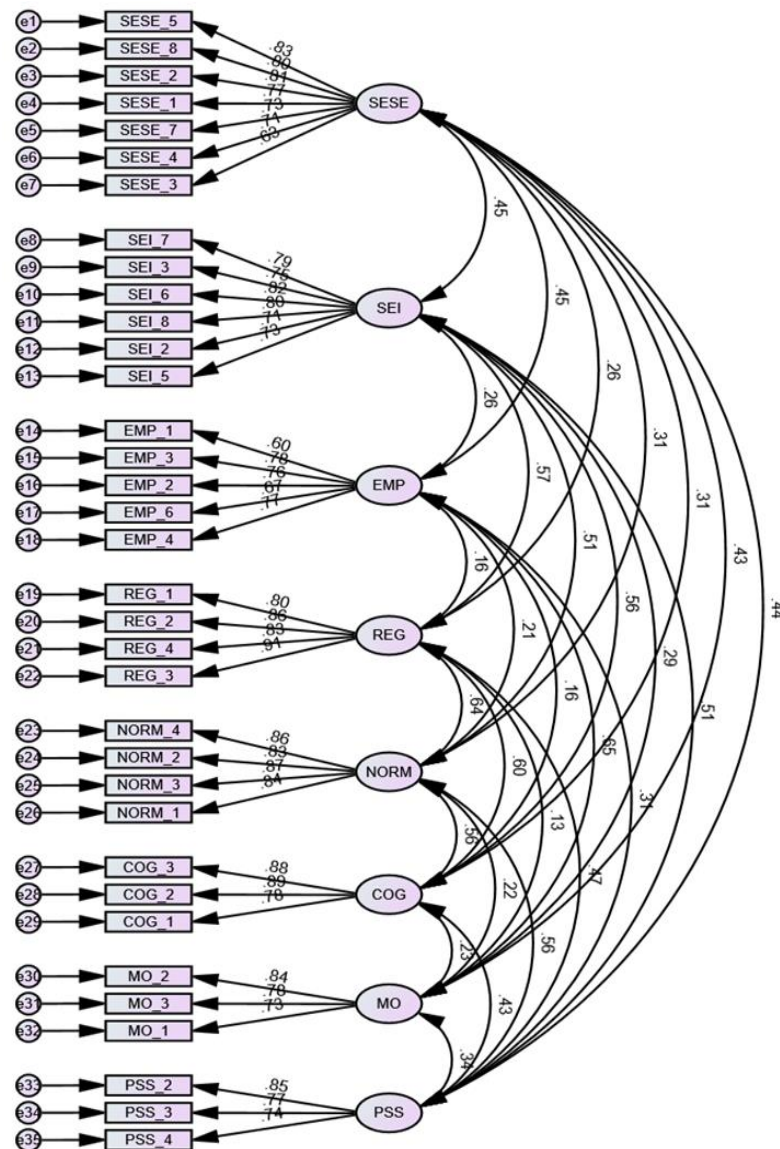
Figure 6.4 Confirmatory Factor Analysis (CFA) of Full Model

This full measurement model achieved construct validity by confirming both convergent and discriminant validity. For the convergent validity, the standardised loading estimates should be at least 0.5 and preferably above 0.7 (Hair et al., 2018). In the full measurement model, all the standardised loadings are above 0.600. Also, the average variance extracted (AVE) score should be above 0.5 and composite reliability (CR) score above 0.7 to meet construct validity (Fornell & Larcker, 1981; Hair et al., 2018; Malhotra & Dash, 2011). The AVE score is above 0.516 and CR above 0.83 for the eight constructs in the full measurement model. Therefore, the convergent validity requirement for the full measurement model was met by having loadings above 0.5,

AVE scores above 0.5 and CR scores above 0.7. Also, the MaxR (H) scores are above the 0.7 threshold limit as shown in Table 6.25 below.

Table 6.25 Convergent Validity for Full Model

Construct	Items	Factor Loadings	Composite Reliability	AVE	MaxR (H)
Empathy	EMP_1 EMP_3 EMP_2 EMP_6 EMP_4	.600 .776 .757 .673 .767	0.841	0.516	0.850
Moral Obligation	MO_2 MO_3 MO_1	.845 .784 .734	0.831	0.622	0.840
Social Entrepreneurial Self-efficacy	SESE_5 SESE_8 SESE_2 SESE_1 SESE_7 SESE_4 SESE_3	.827 .796 .814 .771 .726 .706 .634	0.903	0.572	0.910
Perceived Social Support	PSS_2 PSS_3 PSS_4	.849 .765 .744	0.830	0.620	0.839
Social Entrepreneurial Intention	SEI_7 SEI_3 SEI_6 SEI_8 SEI_2 SEI_5	.790 .749 .825 .803 .706 .734	0.896	0.591	0.900
Normative Institutional Environment	NORM_4 NORM_2 NORM_3 NORM_1	.860 .825 .872 .844	0.913	0.723	0.914
Regulatory Institutional Environment	REG_1 REG_2 REG_4 REG_3	.804 .859 .831 .912	0.914	0.726	0.922
Cognitive Institutional Environment	COG_3 COG_2 COG_1	.879 .894 .781	0.888	0.727	0.899

The full measurement model also met the requirements of discriminant validity as shown in Tables 6.26 and 6.27 below. Based on the Fornell–Larcker criterion, all the constructs' AVE values are higher than the maximum shared variance (MSV). Also, the square root of the AVE of the constructs are greater than inter-construct correlations as shown in Table 6.26 (Fornell & Larcker, 1981; Gaskin, 2020a; Hair et al., 2018).

Table 6.26 Discriminant Validity for Full Model

	AVE	MSV	SESE	SEI	EMP	REG	NORM	COG	MO	PSS
SESE	0.572	0.201	**0.756**							
SEI	0.591	0.320	0.449	**0.769**						
EMP	0.516	0.427	0.447	0.263	**0.718**					
REG	0.726	0.413	0.257	0.566	0.164	**0.852**				
NORM	0.723	0.413	0.311	0.509	0.214	0.643	**0.851**			
COG	0.727	0.364	0.306	0.556	0.163	0.603	0.561	**0.853**		
MO	0.622	0.427	0.426	0.291	0.653	0.132	0.223	0.231	**0.789**	
PSS	0.620	0.316	0.439	0.508	0.311	0.472	0.562	0.435	0.340	**0.787**

Notes: **REG** = Regulatory Institutional Environment; **NORM** = Normative Institutional Environment; **COG** = Cognitive Institutional Environment; **EMP** = Empathy; **MO** = Moral Obligation; **PSS** = Perceived Social Support; **SESE** = Social Entrepreneurial Self-efficacy; **SEI** = Social Entrepreneurial Intention; **AVE**= Average Variance Extracted; **MSV**=Maximum Shared Variance; **Square root of AVE** is shown in the bold faces in diagonals.

As mentioned earlier, Henseler et al. (2015) argued heterotrait–monotrait ratio (HTMT) as the new criterion for measuring discriminant validity. The HTMT ratio score of below 0.850 indicates a strict threshold for differentiating among the constructs in a model (Gaskin, 2020a; Henseler et al., 2015). Table 6.27 below demonstrates that no value in the HTMT analysis is above 0.663 meeting the strict threshold and in turn meets the requirement for discriminant validity. Therefore, the full model achieved construct validity by meeting the criteria for attaining discriminant and convergent validity.

Table 6.27 Heterotrait–Monotrait (HTMT) Ratio for Full Model

	SESE	SEI	EMP	REG	NORM	COG	MO	PSS
SESE								
SEI	0.453							
EMP	0.488	0.262						
REG	0.275	0.573	0.158					
NORM	0.322	0.514	0.210	0.639				
COG	0.321	0.569	0.172	0.621	0.583			
MO	0.445	0.290	0.663	0.115	0.214	0.230		

PSS	0.467	0.533	0.327	0.477	0.565	0.452	0.353	■

Notes: **REG**=Regulatory Institutional Environment; **NORM**=Normative Institutional Environment; **COG**=Cognitive Institutional Environment; **EMP**=Empathy; **MO**=Moral Obligation; **PSS**=Perceived Social Support; **SESE**=Social Entrepreneurial Self-efficacy; **SEI**=Social Entrepreneurial Intention; HTMT scores below 0.850 meet discriminant validity (Henseler et al., 2015)

6.12.5 Confirmatory Factor Analysis (CFA) of Prior Experience

The prior experience construct will be applied as a moderator in the structural model. This construct consists of three items derived from the past studies. Before proceeding into the structural model, the researcher applied confirming approach to test this construct's validity. The findings indicated a perfect fit as $\chi 2$ scores zero with zero degree of freedom and the CFI scored 1. Therefore, this model can be referred as a just-identified model (Hair et al., 2018; Kenny, 2020). The standardised factor loadings are 0.708 (PriorExp_1), 0.840 (PriorExp_2) and 0.602 (PriorExp_3). The minimum loadings are above 0.60 indicating convergent validity. The composite reliability (CR) score is 0.764 and the average variance extraction (AVE) score is 0.523 indicating convergent validity (Fornell & Larcker, 1981; Hair et al., 2018; Malhotra & Dash, 2011). The MaxR (H) scores is above the threshold limit as well. This is a single construct so discriminant validity could not be tested here. Table 6.28 below demonstrates the factor loadings of each item of the construct, the composite reliability, AVE and MaxR (H).

Table 6.28 Convergent Validity of Prior Experience

Construct	Items	Factor Loadings	Composite Reliability	AVE	MaxR (H)
Prior Experience	**PriorExp_1** I have volunteered or otherwise worked with social enterprises	.708			
	PriorExp_2 I have some experience working with social problems	.840	0.764	0.523	0.799
	PriorExp_3 I know a lot about social enterprises	.602			

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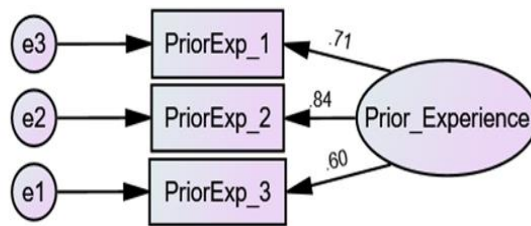
Figure 6.5 Confirmatory Factor Analysis (CFA) of Prior Experience

6.13 CONCLUSION

This chapter presented thorough analyses on the data set of the main study. A total of 412 valid responses was retrieved from the sample across twelve universities in Bangladesh for this study. The recruited sample demonstrated diversity across gender, age group, degrees, and division. Due to the inclusion of new items in the main study's questionnaire, an exploratory factor analysis was performed on the random 100 subsample. From the retrieved 35 items of the constructs, reliability analysis and construct validity were measured. This chapter also explained the confirmatory factor analysis, goodness of fit measures and modification indices. Later, confirmatory factor analysis was performed to confirm the constructs with the remaining 312 sample. The findings indicated model fit adequacy and construct validity. All the 35 items had standardised loadings above 0.50, average variance extraction (AVE) above 0.50, composite reliability (CR) and MaxR (H) above 0.70. Moreover, each construct's AVE value was higher than the maximum shared variance (MSV). Also, the constructs' square roots of AVE were greater than the inter-construct correlations, while the heterotrait–monotrait (HTMT) ratio scores were below the stricter threshold. Therefore, these measurement items are retained for analysing the structural model in the next chapter.

7. RESULTS AND ANALYSIS – STRUCTURAL EQUATION MODELLING

7.1 INTRODUCTION

This research aims to understand the impact of the integrated framework between the three pillars of institutions and the Mair Noboa model on social entrepreneurial intention in Bangladesh. The previous chapter confirmed the model fit and construct validity by performing and analysing, step-by-step, the measurement model. This chapter focuses on the structural model analyses based on the items retained from the measurement model to test the proposed hypotheses for the integrated framework. According to Byrne (2001, 2016), Hair et al. (2018) and Schumacker and Lomax (2004), Structural equation modelling (SEM) can be the most appropriate technique to analyse and evaluate the causal relationships for the hypothesised model. SEM is a set of statistical techniques that can be appropriately analysed in a two-step approach: i) measurement model and ii) structural model (Anderson & Gerbing, 1998; Byrne, 2016; Kline, 2015). In doing so, this chapter aims to highlight the series of structural models to confirm the theoretical model. This chapter will review the relevant series of structural models to achieve model validity and test the proposed hypotheses. At the later stages of this chapter, the moderating effects will also be tested. The discussion on the final research findings and the implications will be discussed in the next chapter.

7.2 STRUCTURAL MODEL ASSESSMENT

In structural model assessment, the proposed models needs to achieve validity. The structural model validity requires the assessment of model fit, coefficient of determination (R^2) and P-value significance (Gaskin, 2020c). Similar to the measurement model, the structural model also applies the same goodness of fit measures such as $\chi 2/df$, RMSEA, CFI, SRMR, and TLI to assess the model fit. The significant value of coefficient of determination (R^2) offers the explanatory power of the proposed model (Henseler et al., 2009). According to Field (2013), Kline (2015) and Tabachnick & Fidell (2013), the R^2 value generates the percentage of variance in a dependent variable explained by the independent variables. The R^2 value should be a minimum of 0.25 (or 25%) reflecting acceptable explanation, whereas 0.50 (50%) is considered as moderate and 0.75 (75%) as substantial explanation of the model (Hair

et al., 2018; Henseler et al., 2009). However, Cohen, (1988, 1992) argued that effect sizes of R^2 values of 0.12 or below indicate low, between 0.13 to 0.25 values indicate medium, 0.26 and above values indicate high explanation of the variance of the dependent variable by the independent variables. The structural parameter estimates or path estimates are required to generate significant p-values to provide direct empirical evidence (Geneste, 2010; Rouse & Corbitt, 2008). In the proposed models, relationships between the constructs need to obtain statistical P-value significance (†$p < 0.100$, * $p < 0.050$, ** $p < 0.010$, *** $p < 0.001$) to confirm the hypotheses (Gaskin, 2020c; Hair et al., 2018). Generally, P-value significance at a minimum 0.05 level with a critical ratio (CR) value greater than 1.96 is widely preferable (Byrne, 2016; Gao et al., 2008; Hair et al., 2018). In circumstances such as early research development, minimum p-value significance at 0.100 level with a CR value of 1.645 can be acceptable practice to support the hypotheses. Additionally, the standardised estimate loadings are required to be same between the items of the structural model and measurement model with less than 0.05 fluctuation threshold to meet the structural model validity (Geneste, 2010; Hair et al., 2018).

This research aims to identify the possible mediating effect of the constructs of the Mair Noboa model (MNM) on the relationship between the constructs of the three pillars of institutions (TPI) and social entrepreneurial intention (SEI). Also, this research aims to investigate the interrelationships among the constructs of the MNM impacting on SEI. Before proceeding to explore these indirect relationships, this research needs to explore the direct relationship between TPI constructs and SEI, MNM constructs and SEI, and the direct relationship between the TPI and MNM constructs. The structural models validate the direct and indirect relationships (Kline, 2015). Therefore, a series of structural models will be tested to generate desirable, relevant, and improved findings for this research using AMOS version 26. Also, Bootstrap method was applied in AMOS with 2,000 bias-corrected samples and 90% confidence interval (CI) to test the mediation effects among the proposed constructs (Gaskin, 2021; Preacher, 2015; Preacher & Hayes, 2008). For this research, a strong possibility of multi-step mediation exists due to the proposed interrelationships. Basically, multi-step mediation occurs when multiple mediators exist in between the predictor and outcome variables (Preacher, 2015; Preacher et al., 2007; Preacher & Hayes, 2008). The proposed model will be split into a series of stand-alone models.

Based on these stand-alone models, the collective model will be generated with the most suitable path estimates. Each stand-alone model will be tested to assess the structural validity with the hypothesised constructs' relationships. The paths can be added or deleted and the relationship can be altered among the constructs in the stand-alone series of structural models prior to the generation of the collective model (Kline, 2015)

Six stand-alone structural models were tested to generate the collective model. In the series, the first stand-alone model was to test the direct relationship between the TPI constructs and social entrepreneurial intention (SEI). Then, the second stand-alone model was to test the direct relationship between the MNM constructs and SEI. The third stand-alone model tested the direct relationship among the MNM constructs and their impact on SEI. The fourth stand-alone model tested mediating effects of the MNM constructs impacting on the relationship between regulatory institutional environment and SEI. This was followed by the fifth stand-alone model which tested the mediating effects of MNM on the normative institutional environment and SEI. The final stand-alone model tested the mediating effects of the MNM constructs on the cognitive institutional environment and SEI. Based on the assessment of each stand-alone model, when necessary, paths were deleted and relationships altered to generate the collective model. In both the stand-alone and collective models, structural model validity comprised of analysing model fit, R^2 and p-value significance to ensure all hypotheses for this research were tested. The conceptual model is presented below as proposed in Chapter 2.
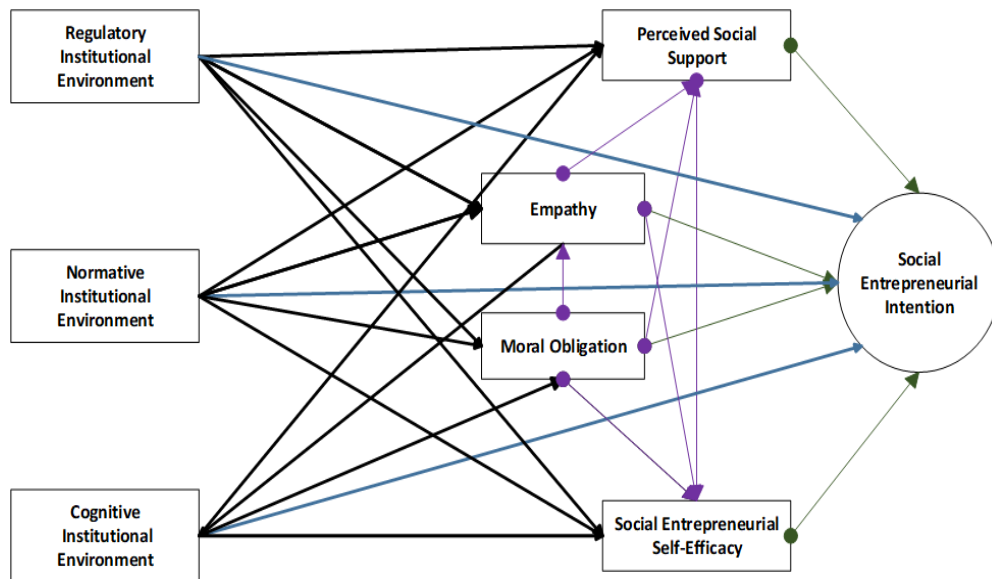
Figure 7.1 Proposed Conceptual Model

7.3 STAND-ALONE MODEL ASSESSMENT

The stand-alone approach will explore a series of structural models with a combination of the constructs of the three pillars of institutions (TPI), the Mair Noboa model (MNM) and social entrepreneurial intention (SEI). The stand-alone structural model assessment tends to reduce the effects of error in the findings of the collective model (Byrne, 2016; Kline, 2015). A step-by-step analysis of the six stand-alone models will be assessed in the following section.

7.3.1 Stand-alone Model 1

The first stand-alone model explores the direct relationship between the constructs associated with the three pillars of institutions (TPI) and social entrepreneurial intention (SEI). In total, 17 items were run based on the following constructs: regulatory institutional environment (REG), normative institutional environment (NORM), cognitive institutional environment (COG) and social entrepreneurial intention (SEI). This structural model demonstrates a good fit with the data. The goodness of fit index indicated a χ^2 statistic value of 259.843 and 113 degrees of freedom (df). The χ^2/df ratio is 2.299 which is under the threshold of 3 (Hair et al., 2018; Hu & Bentler, 1999; Kline, 2015). The absolute fit indices scores for RMSEA, 0.065, and SRMR, 0.0380, are under the threshold limit of 0.08. The incremental fit indices values for CFI, 0.961, and TLI, 0.953, are well above the 0.90 threshold (Hair et al., 2018; Hu & Bentler, 1999; Kline, 2015). Moreover, the R^2 value of SEI is 0.407 indicating 40.7% of explanatory power for this model (Henseler et al., 2009). In other

words, this model explains 40.7% variance through the influence of the TPI variables on SEI. The model fit findings are presented in a tabular format below in Table 7.1.

Table 7.1 Model Fit for Model 1

	χ2	df	χ2/df	RMSEA	CFI	SRMR	TLI
Model 1	**259.843**	**113**	**2.299**	**.065**	**.961**	**.0380**	**.953**
Threshold			1-3	<0.08	>0.90	<0.08	>0.90

Threshold sources: Hair et al. (2018), Kline (2015), Hu and Bentler (1999)

The findings of this structural model indicate that all three TPI constructs have significant positive relationships with social entrepreneurial intention (SEI). The constructs REG (β=0.284, p<0.001) and COG (β=0.294, p<0.001) very significantly in their influence on SEI, whereas NORM (β=0.162, p<0.050) significantly influences SEI. Therefore, H1a, H1b and H1c are supported in the standalone model 1. Table 7.2 below demonstrates the direct relationships among the constructs with the standardised coefficients (β) and critical ratio (CR) values. The diagrammatic analyses captured from AMOS are also later presented in figure 7.2.

Table 7.2 Significance Test for Model 1

Estimated Parameter	Standardised Coefficient (β)	CR	P-Value
H1a:REG→SEI	.284	3.667	***
H1b:NORM→SEI	.162	2.207	.027*
H1c:COG→SEI	.294	4.103	***

Notes: CR=Critical Ratio, Significance Level: † p < 0.100, * p < 0.050, ** p < 0.010, *** p < 0.001
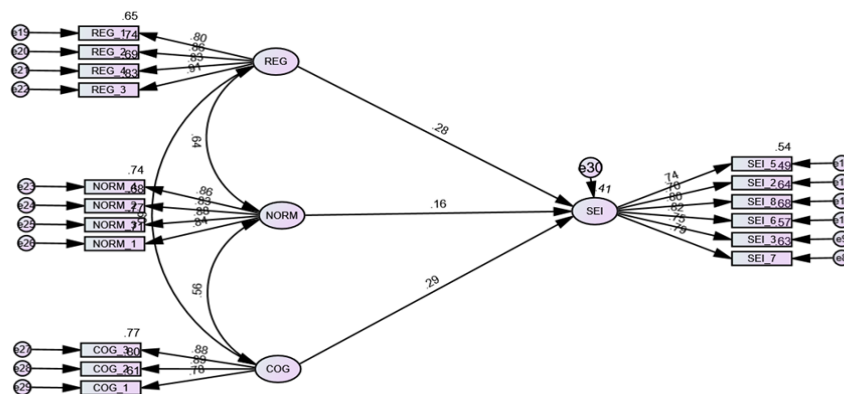

Figure 7.2 Structural Model for Model 1

7.3.2 Stand-alone Model 2

The second structural model explores the direct relationship between the constructs associated with the Mair Noboa model (MNM) and social entrepreneurial intention

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(SEI). A total 24 items were run based on the following constructs: empathy (EMP), moral obligation (MO), perceived social support (PSS), social entrepreneurial self-efficacy (SESE) and social entrepreneurial intention (SEI). The Goodness-of-Fit Index (GFI) indicated a χ^2 statistic value of 552.515 and 242 degrees of freedom (*df*). The χ^2/df ratio was 2.283 which is under the threshold of 3 (Hair et al., 2018; Hu & Bentler, 1999; Kline, 2015). The absolute fit indices included a RMSEA score of 0.064 and SRMR of 0.0566 which were under the threshold limit of 0.08. The incremental fit indices scores included a CFI of 0.922 and TLI of 0.912 which were above the 0.90 threshold (Hair et al., 2018; Hu & Bentler, 1999; Kline, 2015). Furthermore, the R^2 value of SEI was 0.325 indicating 32.5% of explanatory power for this structural model (Henseler et al., 2009). This initial model explained 32.5% variance of SEI through the MNM variables. The initial findings of this model indicated EMP (β=-0.007, p=0.936>0.100) and MO (β=0.055, p=0.515>0.100) had no significant relationship with social entrepreneurial intention (SEI). Hence, H2a and H2b was not supported in the standalone model 2. However, PSS (β=0.0378, p<0.001) and SESE (β=0.261, p<0.001) both had a very significant relationship with social entrepreneurial intention (SEI). Therefore, the non-significant path estimates were deleted to generate a significant structural model. As a result, the model fit indices slightly improved as demonstrated in Table 7.3 below.

Table 7.3 Model Fit for Model 2

	χ2	df	χ2/df	RMSEA	CFI	SRMR	TLI
Model 2	553.129	244	2.267	.064	.923	.0568	.913
Threshold			1-3	<0.08	>0.90	<0.08	>0.90

Threshold sources: Hair et al. (2018), Kline (2015), Hu and Bentler (1999)

Based on the altered relationships, the updated goodness of fit index for model 2 slightly improved with a 553.129 χ2 value and 244 degrees of freedom (df) reflecting a slightly smaller 2.283 χ2/df ratio. Although the RMSEA value is the same, the value of SRMR, CFI, and TLI slightly changed. The R^2 value also remained the same. Based on this revised structural model, PSS (β=0.390, p<0.001) and SESE (β=0.278, p<0.001) demonstrate very significant relationships with SEI, with a slightly improved standardised coefficient. Therefore, H2c and H2d are supported in the standalone model 2. Table 7.4 below demonstrates the constructs' relationships, standardised coefficients (β) and critical ratio (CR) values. Later, the pictorial analyses captured from AMOS is presented in figure 7.3.

Table 7.4 Significance Test for Model 2

Estimated Parameter	Standardised Coefficient (β)	CR	P-Value
H2c:PSS→SEI	.390	5.665	***
H2d:SESE→SEI	.278	4.334	***

Notes: CR=Critical Ratio, Significance Level: † p < 0.100, * p < 0.050, ** p < 0.010, *** p < 0.001
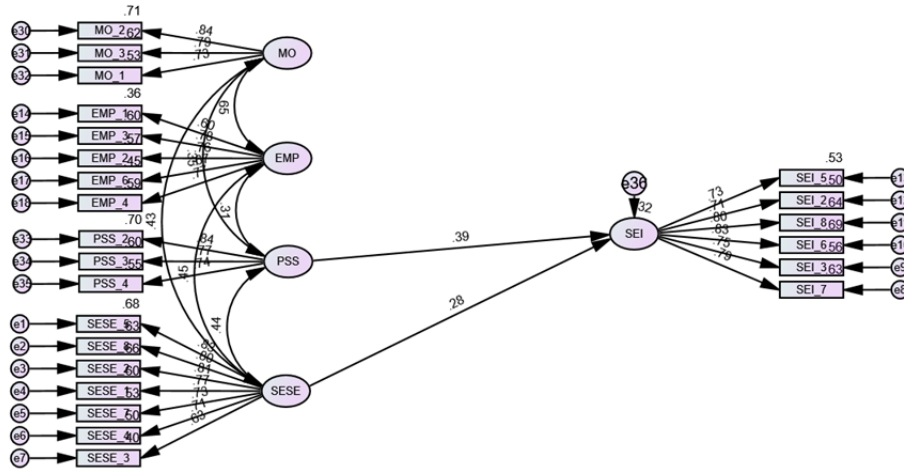
Figure 7.3 Structural Model for Model 2

7.3.3 Stand-alone Model 3

The third structural model explores the interrelationships among the constructs associated with the Mair Noboa model (MNM) and their influence on social entrepreneurial intention (SEI). To generate this model, a total 24 items were run from the following constructs, moral obligation (MO), empathy (EMP), perceived social support (PSS), social entrepreneurial self-efficacy (SESE) and social entrepreneurial intention (SEI). Based on the second structural model analysis previously discussed, only the significant relationships were applied for assessing further interrelationships in these constructs.

The goodness of fit measures initially indicated a 553.129 χ^2 statistic and 244 degrees of freedom (*df*). The χ^2/df ratio of 2.283 was under the threshold 3 (Hair et al., 2018; Hu & Bentler, 1999; Kline, 2015). The absolute fit indices scores included a RMSEA of 0.064 and SRMR of 0.0568, both under the threshold limit of 0.08. The incremental fit indices scores included a CFI of 0.923 and TLI of 0.913 which were both above the 0.90 threshold (Hair et al., 2018; Hu & Bentler, 1999; Kline, 2015). Moreover, the R^2 value of SEI was 0.325 indicating 32.5% of explanatory power for this structural model (Henseler et al., 2009). This model explained 32.5% variance in SEI through

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the interrelationships of the MNM constructs. This is the same as that of the previous model 2. The initial findings of this structural model indicted that only EMP (β=0.153, p=0.104>0.100) had no significant relationship with PSS. However, EMP holds a significant relationship with SESE (β=0.246, p<0.010). MO had a very significant relationship with EMP (β=0.653, p<0.001) and PSS (β=0.247, p<0.001), whereas MO had a somewhat significant relationship with SESE (β=0.159, p<0.100). Similarly, PSS (β=0.310, p<0.001) had a very significant relationship with SESE. Next, the non-significant parameter was deleted to generate a significant structural model. As a result, the model fit indices slightly changed as demonstrated in Table 7.5 below.

Table 7.5 Model Fit for Model 3

	χ2	df	χ2/df	RMSEA	CFI	SRMR	TLI
Model 3	555.770	245	2.268	.064	.922	.0590	.913
Threshold			1-3	<0.08	>0.90	<0.08	>0.90

Threshold sources: Hair et al. (2018), Kline (2015), Hu and Bentler (1999)

Due to these alterations in the relationships, the revised goodness of fit measures slightly changed to a χ2 value of 555.770 and 245 degrees of freedom (df) reflecting a slightly smaller 2.268 χ2/df ratio. Although the RMSEA value is the same, the value of SRMR, CFI, and TLI slightly changed. However, the R^2 value now was very slightly reduced to 0.323 indicating 32.3% of explanatory power for SEI unlike the 32.5% previously shown. However, 31.5% R^2 value of SESE indicates this model can explain 31.5% variance in SESE through the interrelationships of MO, EMP, and PSS. Similarly, 42.6% R^2 value of EMP indicates this model explains 42.6% variance in EMP through MO, whereas only 13.4% of variance in PSS could be explained through moral obligation (MO).

Based on this revised structural model, MO has a strong significant relationship with EMP (β=0.659, p<0.001), PSS (β=0.360, p<0.001) and a somewhat significant relationship with SESE (β=0.154, p<0.100). EMP has a significant relationship with SESE (β=0.254, p<0.010). Similarly, PSS has a very significant influence on SESE (β=0.314, p<0.001). Also, PSS (β=0.389, p<0.001) and SESE (β=0.279, p<0.001) indicate strong significant relationships with social entrepreneurial intention (SEI). The standardised coefficients slightly improved for the parameter estimates. Table 7.6 below demonstrates the relationships between the constructs, the standardised coefficients (β) and critical ratio (CR). Later, the pictorial analyses captured from AMOS is presented in figure 7.4.

Table 7.6 Significance Test for Model 3

Estimated Parameter	Standardised Coefficient (β)	CR	P-Value
MO→EMP	.659	8.190	***
MO→PSS	.360	5.400	***
MO→SESE	.154	1.748	.080†
EMP→SESE	.254	2.968	.003**
PSS→SESE	.314	4.886	***
PSS→SEI	.389	5.704	***
SESE→SEI	.279	4.383	***

CR=Critical Ratio, Significance Level: † p < 0.100, * p < 0.050, ** p < 0.010, *** p < 0.001
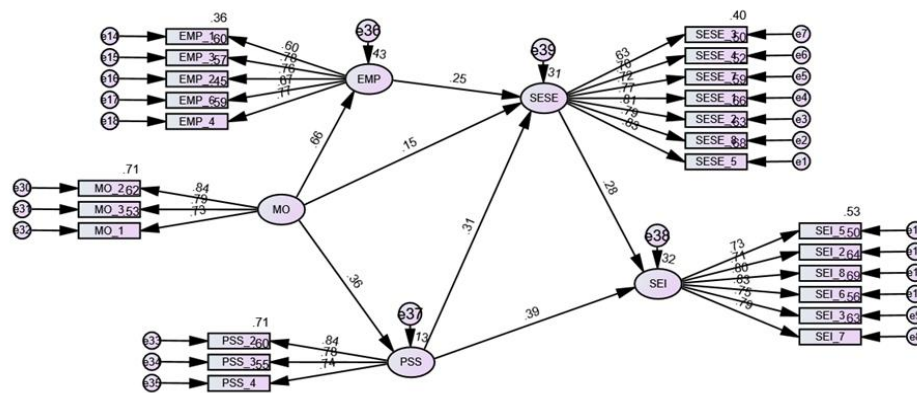
Figure 7.4 Structural Model for Model 3

One of the main objectives of this research is to investigate the interrelationships among the MNM constructs impacting on social entrepreneurial intention (SEI). In doing so, mediation effects were tested among the constructs through bootstrapping (bootstrap=2000) with 90% bias-corrected (Gaskin, 2021; Preacher, 2015; Preacher & Hayes, 2008). To begin, PSS (β=0.140, p<0.001) and SESE (β=0.043, p <0.100) fully mediate the relationship between MO and SEI (see Table 7.7, nos. 1 and 2). In the relationship between MO and SEI, the EMP, PSS and SESE mediators indicate multi-step mediation. Thus, EMP and SESE sequentially mediate the significant relationship between MO and SEI (β=0.167, p < 0.010) (see Table 7.7, no. 3). Likewise, PSS and SESE serially mediate the very significant relationship between MO and SEI (β=0.113, p<0.001). Accordingly, H3b, H3c and H3 are supported in the standalone model 3. Also, H4b is supported as SESE fully mediates the relationship between EMP and SEI (β=0.071, p<0.050). Likewise, H5 is supported as SESE partially mediates the relationship between PSS and SEI (β=0.087, p< 0.001). Table 7.7 demonstrates the

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mediating relationships and the 90% bias-corrected (BC) confidence intervals of the upper and lower values.

Table 7.7 Mediating Relationships in Model 3

No	Indirect Path	Lower BC	Upper BC	P-Value	Standardised Estimate (β)
1	H3b:MO --> PSS --> SEI	0.080	0.232	0.000***	0.140
2	H3c:MO --> SESE --> SEI	0.002	0.120	0.089†	0.043
3	H3:MO --> EMP --> SESE --> SEI	0.019	0.099	0.008**	0.167
4	H3:MO --> PSS --> SESE --> SEI	0.012	0.075	0.000***	0.113
5	H4b:EMP --> SESE --> SEI	0.031	0.173	0.011*	0.071
6	H5:PSS --> SESE --> SEI	0.035	0.150	0.001***	0.087

Notes: Significance Level: † p < 0.100, * p < 0.050, ** p < 0.010, *** p < 0.001 (Adapted from Gaskin et al., 2020)

7.3.4 Stand-alone Model 4

The fourth structural model explores the relationship between the regulatory institutional environment (REG) and SEI directly and indirectly together with the MNM constructs. To generate this model, a total of 28 items were run from the constructs MO, EMP, PSS, SESE, REG and social entrepreneurial intention (SEI). The goodness of fit measures indicated a χ^2 statistic value of 700.796 and 338 degrees of freedom (df). The χ^2/df ratio 2.073 was under the threshold of 3 (Hair et al., 2018; Kline, 2015). The absolute fit indices scores included a RMSEA of 0.059 and SRMR of 0.0548, both under the threshold limit of 0.08. The incremental fit indices included a CFI of 0.928 and TLI of 0.919, both above the 0.90 threshold (Hair et al., 2018; Hu & Bentler, 1999; Kline, 2015). Moreover, the R^2 value for SEI was 0.449 indicating 44.9% explanatory power for this model (Henseler et al., 2009). This model explains 44.9% influence on SEI through REG, MO, EMP, PSS, and SESE.

The initial findings of this structural model indicated that REG had very significant relationships with PSS (β=0.434, p<0.001), SEI (=0.400, p<0.001) and MO (β=0.134, p<0.050). However, REG indicated no significant direct relationship with EMP (β=0.080, p=0.142>0.100) and SESE (β=0.061 β, p=0.333>0.100). The non-significant path estimates were deleted to generate a revised structural model. The model fit indices are slightly changed in the revised structural model as demonstrated in Table 7.8 below:

Table 7.8 Model Fit for Model 4

	χ2	df	χ2/df	RMSEA	CFI	SRMR	TLI
Model 4	703.960	340	2.070	.059	.928	.0581	.920
Threshold			1-3	<0.08	>0.90	<0.08	>0.90

Threshold sources: Hair et al. (2018), Kline (2015), Hu and Bentler (1999)

Due to the altered relationships, the revised structural model indicates a slight change in goodness of fit measures of 703.960 χ2 value and 340 degrees of freedom (df) reflecting a slightly smaller 2.070 χ2/df ratio. Although CFI and RMSEA values are the same, the values of SRMR and TLI slightly changed. The R^2 value very slightly reduced to 0.443 indicating 44.3% variance for SEI through the effects of the REG, MO, EMP, PSS and SESE constructs. In the revised structural model, REG showed significant improved relationships with MO (β=0.149, p<0.050), PSS (β=0.433, p<0.001) and SEI (β=0.403, p<0.001) as demonstrated in Table 7.9 below, followed by the pictorial analyses captured from AMOS in figure 7.5.

Table 7.9 Significance Test for Model 4

Estimated Parameter	Standardised Coefficient (β)	CR	P-Value
REG→MO	.149	2.334	.020*
REG→PSS	.433	7.027	***
REG→SEI	.403	6.397	***

CR=Critical Ratio, Significance Level: † p < 0.100, * p < 0.050, ** p < 0.010, *** p < 0.001
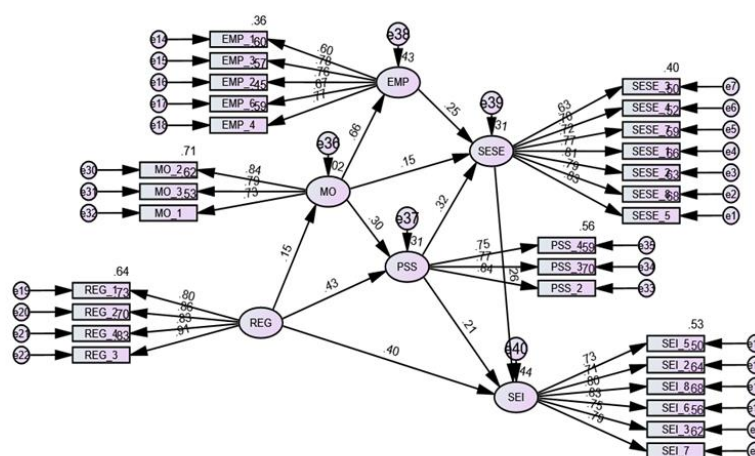
Figure 7.5 Structural Model for Model 4

This research also had the objective to identify the mediating effects of the MNM constructs on the relationships between REG and social entrepreneurial intention (SEI). The mediation analysis indicated that PSS (β=0.092, p<0.010) partially mediates the relationship between REG and social entrepreneurial intention (SEI). Also, PSS and SESE sequentially mediate the relationship between REG and social

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entrepreneurial intention (SEI) (β=0.139, p<0.001). The direct relationship between REG and MO developed a few multi-step mediations as well. MO and PSS serially mediate the relationship between REG and SEI (β=0.044, p < 0.010). Moreover, MO and SESE serially mediate the relationship between REG and SEI (β=0.023, p< 0.050). Sequentially MO, PSS and SESE (β=0.044, p < 0.010) mediate the relationship between REG and SEI (see Table 7.10, no. 5). Likewise, MO, EMP and SESE (β=0.098, p < 0.050) serially mediate the relationship between REG and SEI (see Table 7.10, no. 6). Therefore, H6c and H6 are supported in the standalone model 4. Table 7.10 below demonstrates the mediating relationships and the 90% bias-corrected (BC) confidence intervals of the upper and lower values.

Table 7.10 Mediating Relationships in Model 4

No	Indirect Path	Lower BC	Upper BC	P-Value	Standardised Estimate(β)
1	H6c:REG --> PSS --> SEI	0.033	0.149	0.006**	0.092
2	H6:REG --> PSS --> SESE --> SEI	0.015	0.061	0.001***	0.139
3	H6:REG --> MO --> PSS --> SEI	0.002	0.025	0.008**	0.044
4	H6:REG --> MO --> SESE --> SEI	0.001	0.025	0.046*	0.023
5	H6:REG --> MO --> PSS --> SESE --> SEI	0.001	0.011	0.008**	0.044
6	H6:REG --> MO --> EMP --> SESE --> SEI	0.001	0.018	0.012*	0.098

Significance Level: † p < 0.100, * p < 0.050, ** p < 0.010, *** p < 0.001 (Adapted from Gaskin et al., 2020)

7.3.5 Stand-alone Model 5

The fifth structural model explores the relationship between normative institutional environment (NORM) and social entrepreneurial intention (SEI) directly and indirectly. To generate this model, a total of 28 items were run from the constructs MO, EMP, PSS, SESE, NORM, and social entrepreneurial intention (SEI). The goodness of fit measures indicated a 709.584 $\chi 2$ value and 338 degrees of freedom (df). The $\chi 2$/df ratio of 2.099 was under the threshold of 3 (Hair et al., 2018; Kline, 2015). The absolute fit indices scores for RMSEA (0.059) and SRMR (0.0538) were both under the threshold limit of 0.08. The incremental fit indices included a CFI of 0.926 and TLI of 0.917, both above the 0.90 threshold (Hair et al., 2018; Hu & Bentler, 1999; Kline, 2015). Moreover, the R^2 value of SEI was 0.384 indicating 38.4% of

explanatory power for this model (Henseler et al., 2009). This model explained 38.4% of variance of SEI through the NORM, MO, PSS and SESE constructs.

The initial findings indicated that NORM had a very significant relationship with MO (β=0.225, p<0.001), PSS (β=0.510, p<0.001) and SEI (β=0.302, p<0.001). However, NORM showed no significant relationship with EMP (β=0.073, p=0.189>0.100) and SESE (β=0.071, p=0.305>0.100). These non-significant relationships were altered to generate the revised structural model. As a result, the model fit indices slightly changed as demonstrated in Table 7.11 below:

Table 7.11 Model Fit for Model 5

	χ2	df	χ2/df	RMSEA	CFI	SRMR	TLI
Model 5	712.427	340	2.095	.059	.926	.0565	.918
Threshold			1-3	<0.08	>0.90	<0.08	>0.90

Threshold sources: Hair et al. (2018), Kline (2015), Hu and Bentler (1999)

Due to the altered relationships, the revised structural model indicated slight changes in goodness of fit indices. The χ2 value is 712.427 with 340 degrees of freedom (df) reflecting a slightly smaller 2.095 χ2/df ratio. Although the CFI and RMSEA values are the same, the value of the SRMR and TLI slightly changed. The R^2 value slightly reduced to 0.379 indicating 37.9% explanatory power for this revised model. Also, NORM showed a significant improved relationship with MO (β=0.238, p<0.001), PSS (β=0.510, p<0.001) and SEI (β=0.304, p<0.001) as demonstrated in Table 7.12 below, followed by the pictorial analyses captured from AMOS in figure 7.6.

Table 7.12 Significance Test for Model 5

Estimated Parameter	Standardised Coefficient (β)	CR	P-Value
NORM→MO	.238	3.729	***
NORM→PSS	.510	8.350	***
NORM→SEI	.304	4.448	***

CR=Critical Ratio, Significance Level: † p < 0.100, * p < 0.050, ** p < 0.010, *** p < 0.001
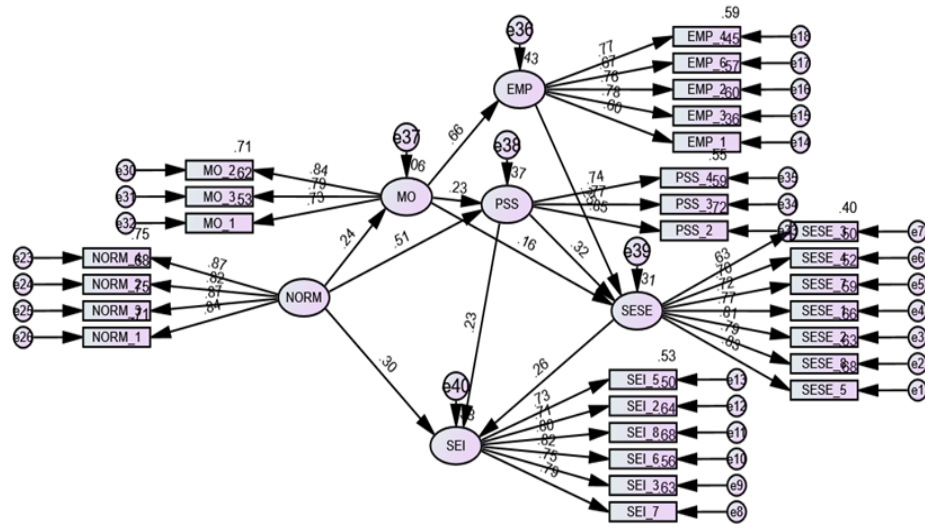
Figure 7.6 Structural Model for Model 5

Another major objective of this research was to identify the mediating effects of the MNM constructs on the relationship between NORM and social entrepreneurial intention (SEI). In doing so, PSS (β=0.116, p<0.010) partially mediates the relationship between NORM and social entrepreneurial intention (SEI). Serially PSS and SESE (β=0.163, p < 0.001) mediate the relationship between NORM and SEI (see Table 7.13, no. 2). The relationship between NORM and MO developed a few more multi-step mediations as well. MO and PSS serially mediate the relationship between NORM and SEI (β=0.056, p < 0.010) as shown in Table 7.13, no. 4. Then, MO and SESE sequentially mediate the relationship between NORM and SEI (β=0.037, p<0.100). Additionally, specific indirect effects from NORM to SEI are serially mediated by MO, PSS and SESE (β=0.056, p<0.010). Sequentially MO, EMP and SESE mediate the relationship between NORM and SEI (β=0.157, p<0.010). Therefore, H7c and H7 are supported in the standalone model 5. Table 7.13 demonstrates the mediating relationships and the 90% bias-corrected (BC) confidence intervals of the upper and lower values.

Table 7.13 Mediating Relationships in Model 5

No	Indirect Path	Lower BC	Upper BC	P-Value	Standardised Estimate(β)
1	H7c: NORM--> PSS --> SEI	0.033	0.152	0.009**	0.116
2	H7: NORM--> PSS --> SESE --> SEI	0.015	0.064	0.001***	0.163
3	H7: NORM --> MO --> PSS --> SEI	0.003	0.025	0.004**	0.056
4	H7: NORM --> MO --> SESE --> SEI	0.001	0.026	0.061†	0.037

| 5 | H7: NORM --> MO --> PSS --> SESE --> SEI | 0.001 | 0.012 | 0.001** | 0.056 |
| 6 | H7: NORM--> MO --> EMP --> SESE --> SEI | 0.002 | 0.021 | 0.009** | 0.157 |

Significance Level: † p < 0.100, * p < 0.050, ** p < 0.010, *** p < 0.001 (Adapted from Gaskin et al., 2020)

7.3.6 Stand-alone Model 6

The sixth structural model explores the relationship between cognitive institutional environment (COG) and social entrepreneurial intention (SEI) directly and indirectly together with the MNM constructs. To generate this model, a total 27 items were run from the constructs MO, EMP, PSS, SESE, COG, and social entrepreneurial intention (SEI). The goodness of fit measures indicated a χ^2 statistic of 647.160 and 312 degrees of freedom (df). The χ^2/df ratio 2.074 was under the threshold of 3 (Hair et al., 2018; Hu & Bentler, 1999; Kline, 2015). The absolute fit indices included a RMSEA score of 0.059 and SRMR score of 0.0551, both under the threshold limit of 0.08. The incremental fit indices included a CFI score of 0.928 and TLI score of 0.919 which are above the 0.90 threshold (Hair et al., 2018; Hu & Bentler, 1999; Kline, 2015). Moreover, the R^2 value for SEI, 0.436 indicated 43.6% of explanatory power for this model (Henseler et al., 2009). In other words, this model explained 43.6% of the variance of the SEI dependent variable through the COG, MO, EMP, PSS, and SESE constructs.

The initial findings of this structural model indicated COG had significant relationships with MO (β=0.231, p<0.001), PSS (β=0.374, p<0.001), SESE (β=0.114, p<0.100) and SEI (β=0.377, p<0.001). Only with EMP (β=0.015, p=0.790>0.100), did COG indicate no direct significant relationship. The non-significant relationship was deleted to generate a significant structural model. As a result, the values for the model fit indices are slightly changed, as demonstrated in Table 7.14 below.

Table 7.14 Model Fit for Model 6

	χ2	df	χ2/df	RMSEA	CFI	SRMR	TLI
Model 6	**647.231**	**313**	**2.068**	**.059**	**.928**	**.0554**	**.920**
Threshold			1-3	<0.08	>0.90	<0.08	>0.90

Threshold sources: Hair et al. (2018), Kline (2015), Hu and Bentler (1999)

Due to the alteration, the revised structural model demonstrated slightly changed model fit indices values. The goodness of fit measures changed to 647.231 χ^2 and 313 degrees of freedom (df) reflecting a slightly smaller 2.068 χ^2/df ratio. Although the

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CFI and RMSEA values are the same, the values of SRMR and TLI slightly changed. The R^2 value remained the same at 43.6% for the SEI variable. Also, COG showed significant relationships with MO (β=0.233, p<0.001), PSS (β=0.373, p<0.001), SEI (β=0.377, p<0.001) and SESE (β=0.115, p<0.100) as demonstrated in Table 7.15 below, followed by the pictorial analyses captured from AMOS in figure 7.7.

Table 7.15 Significance Test for Model 6

Estimated Parameter	Standardised Coefficient (β)	CR	P-Value
COG→MO	.233	3.633	***
COG→PSS	.373	5.929	***
COG→SESE	.115	1.853	.064†
COG→SEI	.377	6.148	***

CR=Critical Ratio, Significance Level: † p < 0.100, * p < 0.050, ** p < 0.010, *** p < 0.001
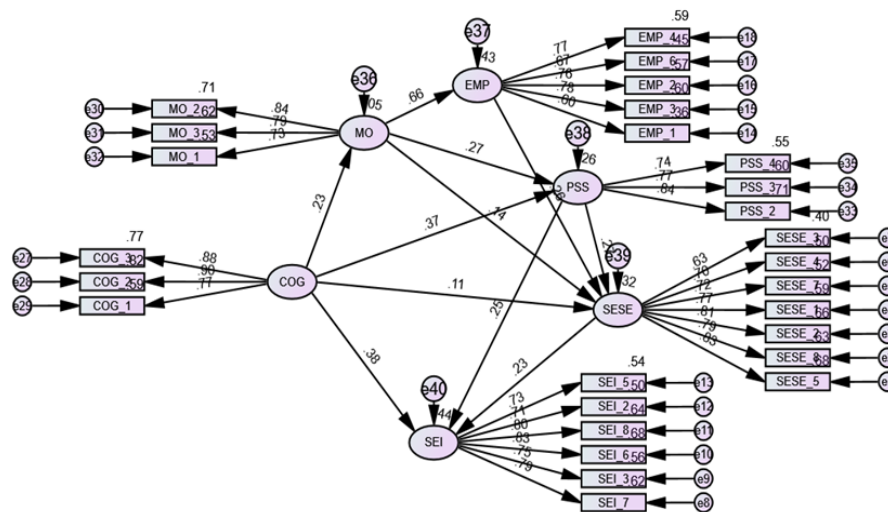
Figure 7.7 Structural Model for Model 6

This research also aimed to identify the mediating effects of the MNM constructs on the relationship between COG and social entrepreneurial intention (SEI). To do so, mediation effects were tested between the constructs through bootstrapping. PSS (β=0.092, p<0.010) partially mediates the relationship between COG and social entrepreneurial intention (SEI). Also, SESE (β=0.026, p<0.100) partially mediates the relationship between COG and social entrepreneurial intention (SEI). Serially, PSS and SESE (β=0.163, p < 0.001) mediate the relationship between NORM and social entrepreneurial intention (SEI). Sequentially, MO and PSS mediate the relationship between COG and SEI as shown in Table 7.16, no. 4 (β=0.063, p < 0.010). Serially MO and SESE mediate the relationship between COG and SEI (β=0.033, p< 0.100). Sequentially, MO, PSS and SESE (β=0.063, p < 0.001) mediate the relationship between COG and social entrepreneurial intention (SEI). Although COG had no direct

relationship with EMP, the findings indicated a multi-step mediation considering EMP's direct relationship with MO and SESE. Hence, MO, EMP and SESE serially mediate the relationship between COG and SEI as shown in Table 7.16, no. 7 (β=0.153, p < 0.010). Therefore, H8c, H8d and H8 are supported in the standalone model 6. Table 7.16 demonstrates the mediating relationships and the 90% bias-corrected (BC) confidence intervals of the upper and lower values.

Table 7.16 Mediating Relationships in Model 6

No	Indirect Path	Lower BC	Upper BC	P-Value	Standardised Estimate(β)
1	H8c:COG--> PSS --> SEI	0.036	0.139	0.002**	0.092
2	H8d:COG--> SESE --> SEI	0.001	0.058	0.070†	0.026
3	H8:COG--> PSS --> SESE --> SEI	0.008	0.043	0.001**	0.100
4	H8:COG --> MO --> PSS --> SEI	0.006	0.031	0.001**	0.063
5	H8:COG --> MO --> SESE --> SEI	0.001	0.024	0.070†	0.033
6	H8:COG --> MO --> PSS --> SESE --> SEI	0.001	0.012	0.001***	0.063
7	H8:COG--> MO --> EMP --> SESE --> SEI	0.003	0.020	0.007**	0.153

Significance Level: † p < 0.100, * p < 0.050, ** p < 0.010, *** p < 0.001 (Adapted from Gaskin et al., 2020)

7.4 COLLECTIVE MODEL ASSESSMENT

The collective model was developed based on all the six structural stand-alone models. This final model includes all the eight constructs consisting of a total of 35 items. For the structural validity of the collective model, four assessments were applied i) similarities between the measurement model and structural model standardised estimates' loadings, ii) model fit measures, iii) coefficient of determination (R^2), and iv) P-value significance. This collective model met the first assessment of structural model validity by indicating similar standardised estimate loadings of the items in the measurement model and the structural model. The standardised estimate loadings of the collective model indicated slight fluctuation of less than 0.05 threshold as shown in table 7.17 below (Geneste, 2010; Hair et al., 2018).

Table 7.17 Factor Loadings between Measurement and Structural Models

Construct	Items	Measurement Model Factor Loading	Collective Structural Model Factor Loading
Empathy (EMP)	EMP_1	.600	**.602**
	EMP_3	.776	**.776**
	EMP_2	.757	**.758**
	EMP_6	.673	**.670**
	EMP_4	.767	**.768**
Moral Obligation (MO)	MO_2	.845	**.844**
	MO_3	.784	**.783**
	MO_1	.734	**.732**
Social Entrepreneurial Self-efficacy (SESE)	SESE_5	.827	**.826**
	SESE_8	.796	**.794**
	SESE_2	.814	**.813**
	SESE_1	.771	**.770**
	SESE_7	.726	**.724**
	SESE_4	.706	**.705**
	SESE_3	.634	**.632**
Perceived Social Support (PSS)	PSS_2	.849	**.848**
	PSS_3	.765	**.767**
	PSS_4	.744	**.743**
Social Entrepreneurial Intention (SEI)	SEI_7	.790	.790
	SEI_3	.749	.749
	SEI_6	.825	**.824**
	SEI_8	.803	**.802**
	SEI_2	.706	**.705**
	SEI_5	.734	.734
Normative Institutional Environment (NORM)	NORM_4	.860	.860
	NORM_2	.825	.825
	NORM_3	.872	.872
	NORM_1	.844	.844
Regulatory Institutional Environment (REG)	REG_1	.804	.804
	REG_2	.859	**.858**
	REG_4	.831	.831
	REG_3	.912	.912
Cognitive Institutional Environment (COG)	COG_3	.879	.879
	COG_2	.894	.894
	COG_1	.781	.781

The collective model also met the second assessment of structural model validity by indicating good model fit adequacy. The goodness of fit measures indicated a $\chi 2$ statistic of 1017.816 and 540 degrees of freedom (df). The $\chi 2$/df ratio of 1.885 is under the strict threshold of 2 as per Hu and Bentler (1999). The absolute fit indices, RMSEA score of 0.053 and SRMR score of 0.0522 are well under the threshold limit of 0.080 (Hair et al., 2018; Hu & Bentler, 1999; Kline, 2015). The incremental fit indices include a CFI score of 0.930 and TLI score of 0.923 and are above the 0.90 threshold (Hair et al., 2018; Hu & Bentler, 1999; Kline, 2015). The model fit findings are presented in a tabular format below in Table 7.18.

Table 7.18 Model Fit for Collective Model

	χ2	df	χ2/df	RMSEA	CFI	SRMR	TLI
Collective Model	1017.816	540	1.885	.053	.930	.0522	.923
Threshold			1-3	<0.08	>0.90	<0.08	>0.90

Threshold sources: Hair et al. (2018), Kline (2015), Hu and Bentler (1999)

The collective model met the third assessment of structural model validity by indicating a sufficient R^2 value. The R^2 value for the SEI dependent variable is 0.483 indicating this model had 48.3% explanatory power (Henseler et al., 2009). In other words, this model could explain 48.3% variance in SEI through the variables associated with TPI and MNM. Also, the R^2 value for SESE is 0.321 which indicates that the model could explain 32.1% variance of SESE through the other variables of MNM and TPI. Similarly, the R^2 value for PSS is 0.395 indicating that the model could explain 39.5% variance of PSS through the other variables of MNM and TPI. The pictorial analyses captured from AMOS is presented in figure 7.8 below.
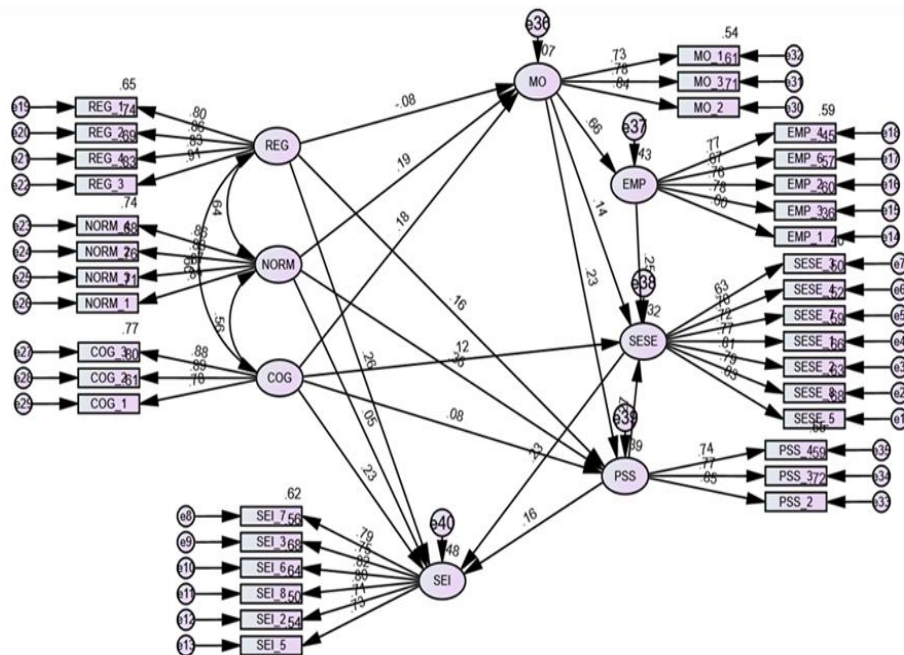
Figure 7.8 Structural Model of Collective Model

This collective model met the fourth assessment of structural model validity by indicating satisfactory *p*-value significance. This collective model findings illustrate that REG (β=0.258, p<0.001), COG (β=0.233, p<0.010), PSS (β=0.157, p<0.050) and SESE (β=0.227, p<0.001) had significant relationships with social entrepreneurial intention (SEI). Therefore, H1a, H1c, H2c and H2d were supported in the collective model.

Similar to the series of structural models, the findings of this collective model indicated very significant relationships between MO and EMP (β=0.658, p<0.001), MO and PSS (β=0.228, p<0.001), MO and SESE (β=0.144, p<0.100), EMP and SESE (β=0.254, p<0.010), PSS and SESE (β=0.265, p<0.001), REG and PSS (β=0.156, p<0.100), NORM and PSS (β=0.362, p<0.001), NORM and MO (β=0.187, p<0.050), COG and MO (β=0.179, p<0.050), COG and SESE (β=0.118, p<0.100). Unlike the findings generated in stand-alone models 1 and 5, NORM indicated no significant relationship with SEI (β=0.055, p>0.100) in the collective model. As a result, H1b was not supported. Also, REG shows no significant relationship with MO (β=-0.083, p>0.100), unlike the findings of stand-alone model 4. Similarly, COG shows no significant relationship with PSS (β=0.084, p>0.100) in contrast to the findings of stand-alone model 6. Accordingly, H8c was not supported in the collective model. Table 7.19 below demonstrates the estimated parameters, standardised coefficients (β), critical ratio (CR) and *p*-value significance generated from this collective model.

Table 7.19 Significance Test for Collective Model

Estimated Parameter	Standardised Coefficient (β)	CR	P-Value
PSS→SEI	.157	2.238	.025*
SESE→SEI	.227	4.010	***
REG→SEI	.258	3.496	***
NORM→SEI	.055	.732	.464
COG→SEI	.233	3.400	***
MO→EMP	.658	8.191	***
MO→PSS	.228	3.843	***
MO→SESE	.144	1.661	.097†
EMP→SESE	.254	3.008	.003**
PSS→SESE	.265	3.855	***
REG→MO	-.083	-.887	.375
REG→PSS	.156	1.921	.055†
NORM→MO	.187	2.075	.038*
NORM→PSS	.362	4.520	***
COG→MO	.179	2.064	.039*
COG→PSS	.084	1.111	.267
COG→SESE	.118	1.898	.058†

Notes: Significance Level: † p < 0.100, * p < 0.050, ** p < 0.010, *** p < 0.001

Based on the findings of the collective structural model, proposed hypotheses were reviewed. At first, the direct effects were tested and presented followed by the test for

mediation. Table 7.20 demonstrates the outcome of the hypotheses testing of the direct effects.

Table 7.20 Hypotheses 1 and 2 Outcomes

Direct Path	Standardised Coefficient (β)	CR	P-Value	Hypothesis
REG→SEI	.258	3.496	***	H1a: Supported
NORM→SEI	.055	.732	.464	H1b: Not Supported
COG→SEI	.233	3.400	***	H1c: Supported
PSS→SEI	.157	2.238	.025*	H2c: Supported
SESE→SEI	.227	4.010	***	H2d: Supported

Note: Significance Level: † p < 0.100, * p < 0.050, ** p < 0.010, *** p < 0.001

Another key objective of this research is to investigate the interrelationships among the MNM constructs and determining the mediating effects of MNM constructs impacting the relationship between TPI constructs and social entrepreneurial intention (SEI). To analyse this collective structural model bootstrapping (bootstrap=2000) with 90% bias-corrected were applied for testing the mediation effect (Gaskin, 2021; Preacher, 2015; Preacher et al., 2007; Preacher & Hayes, 2008). Multiple mediators are used in this research, such as Moral Obligation (MO), Empathy (EMP), Perceived social support (PSS) and Social entrepreneurial self-efficacy (SESE). Due to the interrelationships among these mediators, multiple-step mediation occurred in between the predictor and outcome variable (Preacher, 2015; Preacher et al., 2007; Preacher & Hayes, 2008).

H3b, H3c and H3 were supported. For MO as the predictor variable, PSS (β=0.036, p<0.050) and SESE (β=0.033, p<0.100) mediate the relationship between MO and social entrepreneurial intention (SEI). Also, PSS and SESE serially mediated the relationship between MO and SEI (β=0.061, p < 0.010). Likewise, EMP and SESE serially mediate the significant relationship between MO and SEI (β=0.167, p < 0.010). For empathy as a predictor variable, SESE fully mediates the relationship between EMP and SEI (β=0.058, p<0.050). For perceived social support as a predictor variable, SESE partially mediates the relationship between PSS and SEI (β=0.060, p<0.010).

H6c and H6 were supported. For REG as the predictor variable, PSS partially mediates the relationship between REG and SEI (β=0.024, p < 0.100). Also, PSS and SESE serially mediate the relationship between REG and SEI (β=0.041, p < 0.050).

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H7c and H7 were supported in this collective model. For NORM as the predictor variable, PSS fully mediates the relationship between NORM and SEI (β=0.057, p < 0.050). A few significant multi-step mediations are also present for NORM. Sequentially PSS and SESE mediate the relationship between NORM and SEI (β=0.096, p< 0.010). Also, MO and PSS serially mediate the relationship between NORM and SEI (β=0.043, p < 0.050). The sequence of MO and SESE significantly (at the p<0.100 level) mediate the relationship between NORM and SEI (β=0.027, p< 0.100). Accordingly, MO, EMP and SESE mediate the significant relationship between NORM and SEI (β=0.123, p < 0.050). Moreover, the significant relationship between NORM and SEI was mediated serially by MO, PSS and SESE (β=0.043, p< 0.050). In this collective structural model, NORM only had indirect relationships with SEI unlike REG and COG.

H8d and H8 were supported. For COG as the predictor variable, SESE (β=0.027, p < 0.100) mediates the relationship between COG and social entrepreneurial intention (SEI). In regard to the multi-step mediation, sequentially MO and PSS (β=0.041, p<0.050) mediate the relationship between COG and social entrepreneurial intention (SEI). Serially MO and SESE (β=0.026, p<0.100) mediate the relationship between COG and SEI. In sequence MO, EMP and SESE (β=0.118, p<0.050) mediate the significant relationship between COG and SEI. Similarly, MO, PSS and SESE (β=0.041, p<0.050) serially mediate the relationship between COG and SEI. Table 7.21 demonstrates the outcome of the mediating effect hypotheses testing and the 90% bias-corrected (BC) confidence intervals of the upper and lower values.

Table 7.21 Hypotheses 3–8 Outcomes

Indirect Path	Lower BC	Upper BC	P-Value	β	Hypotheses
MO --> PSS --> SEI	0.009	0.085	0.023	0.036*	H3b: Supported
MO --> SESE --> SEI	0.000	0.097	0.094	0.033†	H3c: Supported
MO --> PSS --> SESE --> SEI	0.004	0.037	0.002	0.061**	
MO --> EMP --> SESE --> SEI	0.015	0.081	0.009	0.167**	H3: Supported
EMP --> SESE --> SEI	0.023	0.143	0.014	0.058*	H4b: Supported
PSS --> SESE --> SEI	0.021	0.110	0.002	0.060**	H5: Supported
REG --> PSS --> SEI	0.002	0.073	0.067	0.024†	H6c: Supported
REG --> PSS --> SESE --> SEI	0.002	0.027	0.046	0.041*	
REG --> MO --> EMP --> SESE --> SEI	-0.014	0.001	0.241	-0.055	
REG --> MO --> PSS --> SESE --> SEI	-0.005	0.000	0.219	-0.019	H6: Supported
REG --> MO --> PSS --> SEI	-0.013	0.001	0.241	-0.019	
REG --> MO --> SESE --> SEI	-0.014	0.001	0.251	-0.012	

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NORM --> PSS --> SEI	0.012	0.103	0.024	0.057*	H7c: Supported
NORM --> PSS --> SESE --> SEI	0.006	0.041	0.001	0.096**	
NORM --> MO --> PSS --> SEI	0.001	0.018	0.037	0.043*	
NORM --> MO --> SESE --> SEI	0.000	0.020	0.082	0.027†	H7: Supported
NORM --> MO --> EMP --> SESE --> SEI	0.001	0.017	0.027	0.123*	
NORM --> MO --> PSS --> SESE --> SEI	0.000	0.008	0.021	0.043*	
COG --> PSS --> SEI	-0.004	0.049	0.262	0.013	H8c: Not Supported
COG --> SESE --> SEI	0.002	0.059	0.060	0.027†	H8d: Supported
COG --> PSS --> SESE --> SEI	-0.001	0.020	0.211	0.022	
COG --> MO --> PSS --> SEI	0.001	0.018	0.024	0.041*	H8: Supported
COG --> MO --> SESE --> SEI	0.000	0.019	0.073	0.026†	
COG --> MO --> PSS --> SESE --> SEI	0.001	0.008	0.011	0.041*	
COG --> MO --> EMP --> SESE --> SEI	0.002	0.017	0.014	0.118*	

Significance Level: † p < 0.100, * p < 0.050, ** p < 0.010, *** p < 0.001, β=Standardised Estimate

7.5 SUMMARY OF STRUCTURAL MODELS

For this research, a series of structural models were run before generating the final model. The collective model was generated based on the significant altered relationships from all the six stand-alone structural models. The collective model represents the final output of the hypotheses for this research. The final model achieved sufficient structural validity by meeting all the requisites. Table 7.22 below demonstrates a snapshot of the series of the stand-alone models and the collective model consisting both goodness-of-fit measures and the coefficient of determination (R^2). All these structural models indicated good fit of the data for this research.

Table 7.22 Summary of Structural Models

Main Study	χ2	df	χ2/df	RMSEA	CFI	SRMR	TLI	R^2 SEI
Model 1	259.843	113	2.299	.065	.961	.0380	.953	40.7%
Model 2	553.129	244	2.267	.064	.923	.0568	.913	32.5%
Model 3	555.770	245	2.268	.064	.922	.0590	.913	32.3%
Model 4	703.960	340	2.070	.059	.928	.0581	.920	44.3%
Model 5	712.427	340	2.095	.059	.926	.0565	.918	37.9%
Model 6	647.231	313	2.068	.059	.928	.0554	.920	43.6%
Collective Model	**1017.816**	**540**	**1.885**	**.053**	**.930**	**.0522**	**.923**	**48.3%**
Notes: Model 1: Three Pillars of Institutions (TPI) and Social Entrepreneurial Intention (SEI); Model 2: Mair Noboa model (MNM) and SEI; Model 3: MNM Constructs Interrelationship and SEI; Model 4: REG, MNM Constructs and SEI; Model 5: NORM, MNM Constructs and SEI; Model 6: COG, MNM Constructs and SEI; Collective Model: All the significant parameters generated from model 1 to 6								

The collective model represents the final hypotheses outcome for this research. Table 7.23 below demonstrates a snapshot of all the hypotheses output for the direct and mediating effects, standardised estimate and *p*-value significance.

Table 7.23 Summary of Hypotheses 1–8 Outcomes

Hypotheses	Outcome	Collective Model	
		P-Value	β
H1a:REG➜SEI	**Supported**	*******	**.258**
H1b:NORM➜SEI	Not supported	.464	.055
H1c: COG➜SEI	**Supported**	*******	**.233**
H2a: EMP➜SEI	Not supported	N/A	N/A
H2b:MO➜SEI	Not supported	N/A	N/A
H2c:PSS➜SEI	**Supported**	**.025***	**.157**
H2d:SESE➜SEI	**Supported**	*******	**.227**
H3a: MO --> EMP --> SEI	Not supported	N/A	N/A
H3b: MO --> PSS --> SEI	**Supported**	**.023***	**.036**
H3c: MO --> SESE --> SEI	**Supported**	**.094†**	**.033**
H3: MO --> PSS --> SESE --> SEI	**Supported**	**.002****	**.061**
H3: MO --> EMP --> SESE --> SEI	**Supported**	**.009****	**.167**
H4a:EMP --> PSS --> SEI	Not supported	N/A	N/A
H4b: EMP --> SESE --> SEI	**Supported**	**.014***	**.058**
H5: PSS --> SESE --> SEI	**Supported**	**.002****	**.060**
H6a: REG --> EMP --> SEI	Not supported	N/A	N/A
H6b: REG --> MO --> SEI	Not supported	N/A	N/A
H6c: REG --> PSS --> SEI	**Supported**	**.067†**	**.024**
H6d: REG --> SESE --> SEI	Not supported	N/A	N/A
H6: REG --> PSS --> SESE --> SEI	**Supported**	**.046***	**.041**
H7a: NORM --> EMP --> SEI	Not supported	N/A	N/A
H7b: NORM --> MO --> SEI	Not supported	N/A	N/A
H7c: NORM --> PSS --> SEI	**Supported**	**.024***	**.057**
H7d: NORM --> SESE --> SEI	Not supported	N/A	N/A
H7: NORM --> PSS --> SESE --> SEI	**Supported**	**.001****	**.096**
H7: NORM --> MO --> PSS --> SEI	**Supported**	**.037***	**.043**
H7: NORM --> MO --> SESE --> SEI	**Supported**	**.082†**	**.027**
H7:NORM-->MO-->PSS-->SESE--> SEI	**Supported**	**.021***	**.043**
H7:NORM-->MO-->EMP-->SESE-->SEI	**Supported**	**.027***	**.123**
H8a: COG --> EMP --> SEI	Not supported	N/A	N/A
H8b: COG --> MO --> SEI	Not supported	N/A	N/A
H8c: COG --> PSS --> SEI	Not supported	.262	.013
H8d: COG --> SESE --> SEI	**Supported**	**.060†**	**.027**
H8: COG --> MO --> PSS --> SEI	**Supported**	**.024***	**.041**
H8: COG --> MO --> SESE --> SEI	**Supported**	**.073†**	**.026**
H8: COG --> MO --> PSS --> SESE --> SEI	**Supported**	**.011***	**.041**
H8: COG --> MO --> EMP --> SESE --> SEI	**Supported**	**.014***	**.118**

Notes: β=Standardised Estimate; Significance Level: † p < 0.100, * p < 0.050, ** p < 0.010, *** p < 0.001

7.6 MODERATION MODELS

This research also sought to examine the moderating impacts of prior experience and age on social entrepreneurial intention. Kline (2015) argues that moderating variables can strengthen or even weaken the relationship between the predictor and outcome variable. To test the moderating effects in this research, the Mair Noboa model (MNM) antecedents are the predictor variables and social entrepreneurial intention (SEI) is the outcome variable. This research aims to investigate the positive effect of prior

experience and age on the positive relationship between the MNM constructs and social entrepreneurial intention (SEI). The MNM antecedents are empathy (EMP), moral obligation (MO), perceived social support (PSS) and social entrepreneurial self-efficacy (SESE). According to Frazier et al. (2004) and Sauer and Dick (1993), structural equation modelling can be applied to examine the moderating effects of scale or even categorical variables. Prior running the moderation model, all the constructs were computed in mean centred values (Gaskin, 2021; Sauer & Dick, 1993). In AMOS, such observed variables are preferred or else the cross-multiplication between the variables and moderators makes the model extremely cluttered and large (Gaskin, 2021). Also, moderating variables will be tested separately with the original model to exercise more control and avoid heavy cluttering.

7.6.1 Interaction Effects of Prior Experience

The three items of prior experience were validated and confirmed in the previous chapter. The prior experience construct along with all eight constructs were transformed into mean centred observed variables in a new data set using AMOS version 26. From this newly created data set, variables EMP, MO, PSS, SESE, and Prior experience (PriorExp) were transformed into standardised value using SPSS. Also, interaction such as PriorExp_x_EMP, PriorExp_x_MO, PriorExp_x_PSS and PriorExp_x_SESE were developed to run the interaction effects, as shown in Figure 7.9 below.

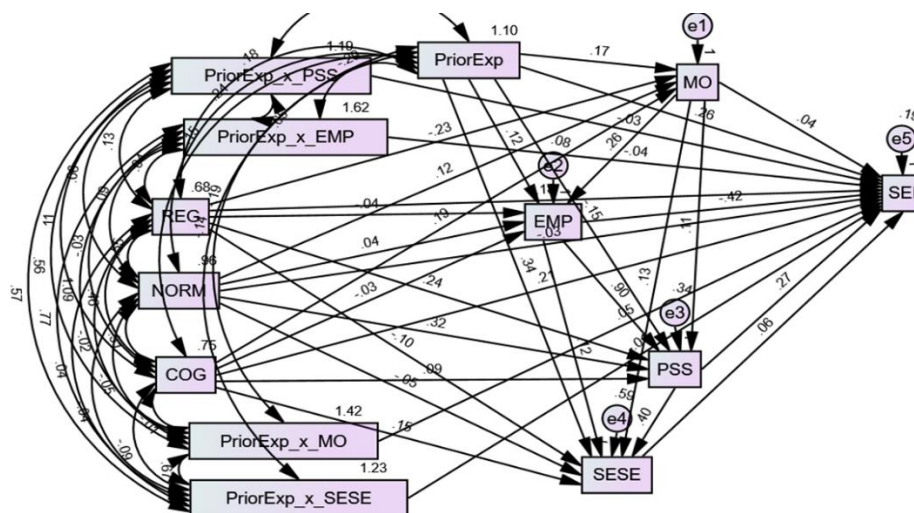*Figure 7.9 Moderating Effects of Prior Experience*

This moderation model demonstrated model fit adequacy. The model fit indices indicated a χ2 statistic value of 41.936 and 16 degrees of freedom (df). The χ2/df ratio

of 2.621 is under the threshold of 3 (Hair et al., 2018; Hu & Bentler, 1999; Kline, 2015). The absolute fit indices included a RMSEA score of 0.072 and SRMR score of 0.054 which are under the threshold limit of 0.08. The incremental fit indices, CFI score of 0.986 and TLI score of 0.930 are above the 0.90 threshold (Hair et al., 2018; Hu & Bentler, 1999; Kline, 2015), as demonstrated in Table 7.24 below. Moreover, R^2 value of SEI is 0.619 indicating 61.9% explanatory power for this moderating model (Henseler et al., 2009). This model could explain 61.9% variance in SEI through prior experience, MNM, and TPI variables.

Table 7.24 Model Fit for Prior Experience Moderator

	χ2	df	χ2/df	RMSEA	CFI	SRMR	TLI
PriorExp	41.936	16	2.621	.072	.986	.054	.930
Threshold			1-3	<0.08	>0.90	<0.08	>0.90

Threshold sources: Hair et al. (2018), Kline (2015), Hu and Bentler (1999)

The overall findings suggest that the interaction between the MNM constructs and prior experience do not significantly influence social entrepreneurial intention (SEI). Based on the findings, the interaction between empathy and prior experience (unstandardised coefficient -0.036, p=0.234>0.100), moral obligation and prior experience (unstandardised coefficient 0.050, p=0.103>0.100), perceived social support and prior experience (unstandardised coefficient -0.026, p=0.350>0.100), social entrepreneurial self-efficacy and prior experience (unstandardised coefficient -0.009, p=0.762>0.100) do not significantly influence social entrepreneurial intention (SEI). Table 7.25 below demonstrates the unstandardised coefficients, critical ratio and *p*-value significance.

Table 7.25 Interaction Effects of Prior Experience

Direct Path	Unstandardised Coefficient	CR	P-Value
PriorExp_x_EMP →SEI	-.036	-1.190	.234
PriorExp_x_MO →SEI	.050	1.632	.103
PriorExp_x_PSS →SEI	-.026	-.934	.350
PriorExp_x_SESE→SEI	-.009	-.303	.762

Based on the findings, prior experience did not moderate the positive relationship between the MNM constructs and social entrepreneurial intention. As a result, Hypothesis 9 is not supported as it argued that prior experience moderates the positive relationship between moral obligation, empathy, perceived social support, and social entrepreneurial self-efficacy upon social entrepreneurial intention.

7.6.2 Interaction Effects of Age

To test the moderating effect of age, the age groups of the main study's respondents were divided into six clusters. The younger adult groups are within the 16–20 and 21–25 age clusters, whereas the mature adult group are in the 26–30, 31–35, 35–40, and 40 and above age clusters. As with prior experience, the age variable and the eight constructs of the original model were transformed into mean centred observed variables in a new data set using AMOS version 26. From that newly created data set, variables EMP, MO, PSS, SESE and AGE were transformed into standardised values using SPSS and interactions such as AGE_x_EMP, AGE_x_MO, AGE_x_PSS and AGE_x_SESE were developed to run the interactions as shown in Figure 7.10 below.
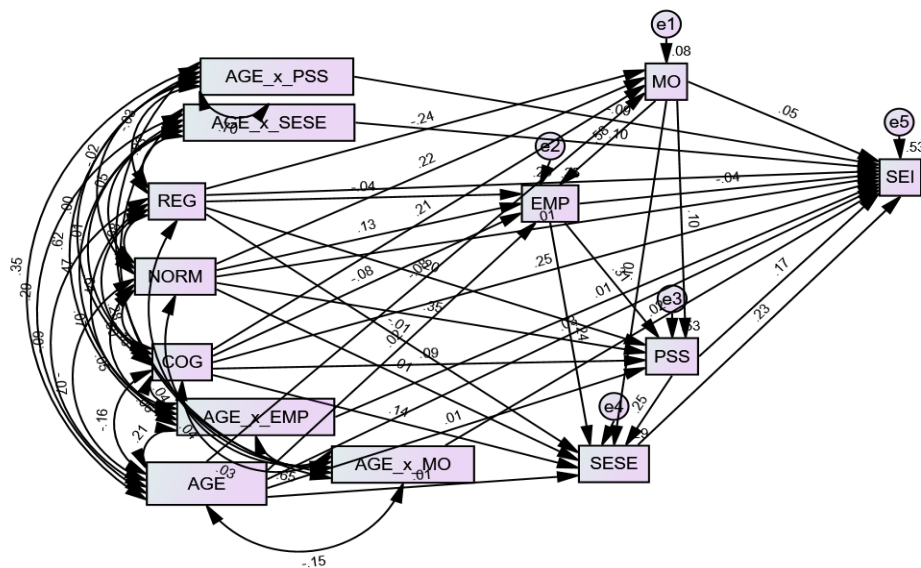
Figure 7.10 Moderating Effects of Age

This moderation model demonstrates model fit adequacy. The model fit indices indicated a $\chi2$ statistic value of 39.481 and 16 degrees of freedom (df). The $\chi2$/df ratio of 2.468 is under the threshold of 3 (Hair et al., 2018; Hu & Bentler, 1999; Kline, 2015). The absolute fit indices included a RMSEA score of 0.069 and SRMR score 0.0269 and both are under the threshold limit of 0.08. The incremental fit indices included a CFI score of 0.986 and TLI score of 0.934 which are above the 0.90 threshold (Hair et al., 2018; Hu & Bentler, 1999; Kline, 2015). Moreover, R^2 value of SEI is 0.527 indicating 52.7% explanatory power for this moderating model (Henseler et al., 2009). This model could explain 52.7% variance in SEI through age along with the variables associated with MNM and TPI.

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Table 7.26 Model Fit for Age Moderator

	χ2	df	χ2/df	RMSEA	CFI	SRMR	TLI
AGE	39.481	16	2.468	.069	.986	.0269	.934
Threshold			1-3	<0.08	>0.90	<0.08	>0.90

Threshold sources: Hair et al. (2018), Kline (2015), Hu and Bentler (1999)

Based on the overall findings, only the interaction between social entrepreneurial self-efficacy and age (unstandardised coefficient 0.066, p<0.100) significantly influenced social entrepreneurial intention (SEI). The other interactions between empathy and age (unstandardised coefficient 0.008, p=0.861>0.100), moral obligation and age (unstandardised coefficient 0.010, p=0.727>0.100), perceived social support and age (unstandardised coefficient -0.063, p=0.172>0.100) did not significantly influence SEI. Table 7.27 below demonstrates the unstandardised coefficients, critical ratio and *p*-value significance.

Table 7.27 Interaction of Age Moderator

Direct Path	Unstandardised Coefficient	CR	P-Value
AGE_x_EMP →SEI	.008	.043	.861
AGE_x_MO →SEI	.010	.027	.727
AGE_x_PSS →SEI	-.063	-1.367	.172
AGE_x_SESE→SEI	.066	1.741	.082

Based on the unstandardised coefficients of SESE (0.160), age (0.038) and interaction (0.066) the following interaction plot was generated (Gaskin, 2021) as shown in figure 7.11. It reflects that, age moderates the relationship between SESE and social entrepreneurial intention (SEI). As demonstrated in the plot below, age strengthens the positive relationship between SESE and SEI. Therefore, mature adults tend to have higher levels of social entrepreneurial self-efficacy to pursue social entrepreneurial intention compared to young adults. Hypothesis 10 was partially supported as age moderated the positive relationship between social entrepreneurial self-efficacy (SESE) and social entrepreneurial intention (SEI).
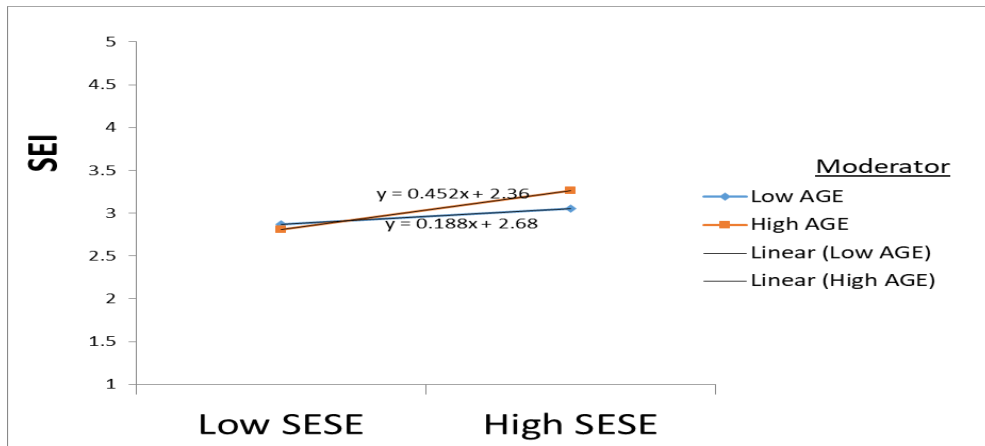
Figure 7.11 Moderating Effects of Age on SESE and SEI

7.7 CONCLUSION

This research purposes to understand the impact of the integrated framework between the three pillars of institutions and the Mair Noboa model on social entrepreneurial intention in Bangladesh. In doing so, **t**his chapter performed a series of structural model analyses based on items retained from the measurement model. The collective structural model was developed based on the altered significant relationships generated by the six stand-alone structural models. The stand-alone and collective models met all the requisites to achieve structural model validity. The theoretical model was confirmed, with the proposed hypotheses tested. The results of the overall significance levels and standardised estimates are feasible for further discussion. The next chapter will further discuss these findings and their implications. The snapshot of the hypotheses outcomes is presented in Table 7.28 below.

Table 7.28 Summary of Hypotheses Outcomes

Hypotheses	Outcome
H1a: The regulatory institutional environment is positively related to social entrepreneurial intention.	**H1a: Supported**
H1b: The normative institutional environment is positively related to social entrepreneurial intention.	**H1b: Not Supported**
H1c: The cognitive institutional environment is positively related to social entrepreneurial intention.	**H1c: Supported**
H2a: Empathy is positively related to social entrepreneurial intention.	**H2a: Not Supported**
H2b: Moral obligation is positively related to social entrepreneurial intention.	**H2b: Not Supported**
H2c: Perceived social support is positively related to social entrepreneurial intention.	**H2c: Supported**
H2d: Social entrepreneurial self-efficacy is positively related to social entrepreneurial intention.	**H2d: Supported**
H3a: Moral obligation positively affects social entrepreneurial intention through the mediation of empathy.	**H3a: Not Supported**
	H3b: Supported

|	
H3b: Moral obligation positively affects social entrepreneurial intention through the mediation of perceived social support. **H3c**: Moral obligation positively affects social entrepreneurial intention through the mediation of social entrepreneurial self-efficacy.	**H3c: Supported**
H4a: Empathy positively affects social entrepreneurial intention through the mediation of perceived social support. **H4b:** Empathy positively affects social entrepreneurial intention through the mediation of social entrepreneurial self-efficacy.	**H4a: Not Supported** **H4b: Supported**
H5: Perceived social support positively affects social entrepreneurial intention through the mediation of social entrepreneurial self-efficacy.	**H5: Supported**
H6a: The regulatory institutional environment positively affects social entrepreneurial intention through the mediation of moral obligation. **H6b:** The regulatory institutional environment positively affects social entrepreneurial intention through the mediation of empathy. **H6c:** The regulatory institutional environment positively affects social entrepreneurial intention through the mediation of perceived social support. **H6d:** The regulatory institutional environment positively affects social entrepreneurial intention through the mediation of social entrepreneurial self-efficacy.	**H6a: Not Supported** **H6b: Not Supported** **H6c: Supported** **H6d: Not Supported**
H7a: The normative institutional environment positively affects social entrepreneurial intention through the mediation of moral obligation. **H7b:** The normative institutional environment positively affects social entrepreneurial intention through the mediation of empathy. **H7c:** The normative institutional environment positively affects social entrepreneurial intention through the mediation of perceived social support. **H7d:** The normative institutional environment positively affects social entrepreneurial intention through the mediation of social entrepreneurial self-efficacy.	**H7a: Not Supported** **H7b: Not Supported** **H7c: Supported** **H7d: Not Supported**
H8a: The cognitive institutional environment positively affects social entrepreneurial intention through the mediation of moral obligation. **H8b:** The cognitive institutional environment positively affects social entrepreneurial intention through the mediation of empathy. **H8c:** The cognitive institutional environment positively affects social entrepreneurial intention through the mediation of perceived social support. **H8d:** The cognitive institutional environment positively affects social entrepreneurial intention through the mediation of social entrepreneurial self-efficacy.	**H8a: Not Supported** **H8b: Not Supported** **H8c: Not Supported** **H8d: Supported**
H9a: Prior experience moderates the positive relationship between moral obligation and social entrepreneurial intention. **H9b:** Prior experience moderates the positive relationship between empathy and social entrepreneurial intention. **H9c:** Prior experience moderates the positive relationship between perceived social support and social entrepreneurial intention. **H9d:** Prior experience moderates the positive relationship between social entrepreneurial self-efficacy and social entrepreneurial intention.	**H9a: Not Supported** **H9b: Not Supported** **H9c: Not Supported** **H9d: Not Supported**
H10a: Age moderates the positive relationship between moral obligation and social entrepreneurial intention.	**H10a: Not Supported**

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H10b: Age moderates the positive relationship between empathy and social entrepreneurial intention.	**H10b: Not Supported**
H10c: Age moderates the positive relationship between perceived social support and social entrepreneurial intention.	**H10c: Not Supported**
H10d: Age moderates the positive relationship between social entrepreneurial self-efficacy and social entrepreneurial intention.	**H10d: Supported**

8. DISCUSSION AND IMPLICATIONS

8.1 INTRODUCTION

The previous chapter confirmed the theoretical model by achieving structural model validity and hypotheses testing. This chapter discusses the results of the overall significance levels and standardised estimates. These empirical findings will be discussed based on theoretical, methodological, and practical significance. This research aimed to investigate the integrated relationships between the three pillars of institutions and the Mair Noboa model (MNM) as they impact on social entrepreneurial intention (SEI) in Bangladesh. Accordingly, the constructs of the three pillars of institutions and the MNM were integrated to identify the extent to which the MNM constructs mediate the relationships between the constructs of the three pillars of institutions and SEI (RQ1).

Also, this research aimed to investigate the inter-variable relationships among the individual level constructs influencing social entrepreneurial intention. In doing so, the MNM constructs were measured for determining the interrelationships and their impact on SEI (RQ2). In this research, several hypotheses were tested. Some of the findings were not addressed in earlier research in the domain of social entrepreneurial intention. This chapter begins with a discussion on the outcome of the hypothesised relationships between these constructs. Based on this discussion, the theoretical, methodological, and practical implications were developed and discussed at the end of this chapter. The next chapter presents the research limitations, future research directions and the conclusion.

8.2 DISCUSSION

The discussion on the empirical findings is divided into sections to address the research objectives. Each section discusses hypothesised outcomes based on the statistical evidence, established theories, and practices. The first section elaborates upon the relationship between the constructs of the three pillars of institutions (TPI) and social entrepreneurial intention (SEI) as part of Objective 1. Hypothesis 1 was proposed to examine the influence of the regulatory institutional environment (REG), normative institutional environment (NORM) and cognitive institutional environment (COG) on SEI. The next section discusses the relationship between the constructs of the Mair

Noboa model (MNM) and SEI as part of Objective 2. Hypothesis 2 was proposed to examine the influence of empathy (EMP), moral obligation (MO), perceived social support (PSS) and social entrepreneurial self-efficacy (SESE) on SEI.

Corresponding to Objective 2, this research investigated the interrelationships among the constructs of MNM impacting on SEI. To investigate these interrelationships, Hypotheses H3, H4 and H5 were developed. Corresponding to Objective 1, this research identified possible mediating effects of MNM constructs influencing the relationship between associated TPI constructs and SEI. To investigate the mediating effects, Hypotheses H6, H7 and H8 were developed. This research also investigated the moderating impact of prior experience and age on the relationship between MNM constructs and SEI as Objective 3. To investigate the moderating effects, Hypotheses H9 and H10 were proposed. The following section attempts to address and clearly explain the outcome of each hypothesis. Finally, the output summary of the hypotheses and revised model is generated.

8.2.1 Three Pillars of Institutions (TPI)

Hypothesis 1: *Regulatory, normative and cognitive institutional environments are positively related to social entrepreneurial intention.*

This research investigated the relationship between the constructs of the three pillars of institutions and social entrepreneurial intention (SEI) as part of Objective 1. The findings of the analysis indicate statistical evidence to support the positive relationship between **regulatory institutional environment (REG)** and SEI. The research outcome reports the association between REG and SEI (β=0.258, p<0.001, CR 3.496) and confirms the theoretical relationship that REG is positively related to SEI. It highlights that the more one considers favourable rules and regulations for social entrepreneurship, the more one's social entrepreneurial intention is enhanced, with this being consistent with the findings of Kujinga (2016), Stephan et al. (2015) and Wannamakok and Chang (2020). Other studies in the literature, such as Estrin et al. (2013) and Urbano et al. (2010), stressed the positive effects of formal institutions on facilitating social entrepreneurship.

The findings of this research highlight the importance of REG for increasing social entrepreneurial intention in Bangladesh. In Bangladesh, the Ministry of Planning develops policies to reduce poverty, basic access to health care facilities, education

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and employment by preparing the national plan (Bangladesh Planning Commission, 2015; British Council Report, 2016a). Moreover, SME (Small Medium Enterprise) Foundation, Bangladesh Bank, Ministry of Social Welfare and Ministry of Commerce tend to implement policies for the overall development of the country (British Council Report, 2016a). Also, the government initiated the "Start-up Bangladesh Limited" to build a sustainable start-up culture in the country (Startup Bangladesh, 2019). This aligns with the findings on the positive role of policies, rules, and regulations for social entrepreneurship enhancing the social entrepreneurial intention among Bangladeshi university students.

However, the findings of the analysis indicated no statistical evidence to support the proposed positive relationship between **normative institutional environment (NORM)** and social entrepreneurial intention (SEI). The research outcome reports no significant association between NORM and SEI (β=0.055, p>0.100, CR 0.732). Therefore, according to this research, NORM has no direct influence on increasing SEI. In other words, it appears society's favourable perception towards social entrepreneurship has no significant influence on the SEI of an individual which is consistent with the findings of Kujinga (2016) and Wannamakok and Chang (2020). As mentioned earlier, BRAC and Grameen Bank are the prominent social enterprises of Bangladesh that operate worldwide. The founder of Grameen Bank and the Yunus Centre, Professor Yunus, is the first Nobel laureate from Bangladesh that proudly represents the country on the world map. Moreover, young social entrepreneurs brought pride to the country by being listed in the 'Forbes Asia under 30 Social Entrepreneurs' over the years (see Chapter 1, Section 1.6.2). Therefore, university students' admiration for social entrepreneurship is probably given, which diminishes its impact on intention.

The findings of the analysis also indicated statistical evidence to support the positive relationship between the **cognitive institutional environment (COG)** and social entrepreneurial intention (SEI). The outcome reports the association between COG and SEI (β=0.233, p<0.001, CR 3.400) and supports the theoretical relationship of COG having a direct influence on increasing SEI. It underlines that cognitive knowledge on social entrepreneurship will enhance the SEI which is also consistent with the findings of Stephan et al. (2015) and Wannamakok and Chang (2020). The findings support the view that individuals with clear guidelines on managing, dealing and protecting social

enterprise may well be driven to become social entrepreneurs in the future. The findings of this research emphasise the importance of COG in increasing SEI in Bangladesh.

The incubators, accelerators and impact investors of Bangladesh such as Spark Bangladesh, TekShoi and Better Stories offers knowledge and guidelines on entrepreneurship (British Council Report, 2016a). Similarly, the Yunus Centre (https://www.muhammadyunus.org/) provides advisory services like training and workshops on mentoring, networking, legal and IT support to develop social enterprise start-ups. Also, universities have initiated incubation programs to offer training, key networking, and initial seed support to the students to build start-ups. This aligns with the research findings that the university students of Bangladesh will be more likely to become social entrepreneurs if proper guidance, training, and mentoring on social enterprise operations are readily available.

The Hypothesis 1 outcomes met the objective by examining the influence of the TPI construct on social entrepreneurial intention (SEI). Therefore, the outcome indicated that regulatory and cognitive institutional environments are positively related to social entrepreneurial intention; however, the normative environment is not.

Table 8.1 summarises the hypothesis 1 outcome discussed in this section.

Table 8.1 Hypothesis 1 Outcome

Hypotheses	Outcome	P-Value	CR	β	Objective
H1a:REG→SEI	**Supported**	*******	3.496	**.258**	To examine the
H1b:NORM→SEI	Not supported	.464	.732	.055	influence of the
H1c: COG→SEI	**Supported**	*******	3.400	**.233**	TPI constructs
β=Standardised Estimate, CR=Critical Ratio **Significance Level: † p < 0.100, * p < 0.050, ** p < 0.010, *** p < 0.001**					on SEI

8.2.2 Mair Noboa Model (MNM)

Hypothesis 2: Empathy, moral obligation, perceived social support and social entrepreneurial self-efficacy are positively related to social entrepreneurial intention.

This research examined the influence of the Mair Noboa model (MNM) constructs on social entrepreneurial intention (SEI) as part of Objective 2. The findings of the analysis indicated there was no statistical evidence to support the positive relationship between **empathy (EMP)** and SEI. In the previous chapter, the initial stand-alone model 2 indicated no significant association between EMP and SEI (β=-.007, p>0.100, CR -.080), thereby not supporting the theoretical proposal that EMP has a direct

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positive influence on SEI. It demonstrates that triggering emotional response and feeling compassion for disadvantaged groups are not necessarily impacting social entrepreneurial intention which is consistent with the findings of Ashraf (2020), Ernst (2011), Lacap et al. (2018), Rashid et al. (2018) and Sousa-Filho et al. (2020). According to Ashraf (2020), empathy indicated no significant influence on increasing Islamic social entrepreneurial intention in Bangladesh even after being exposed to a strong Islamic culture of helping the needy. The country has more than a 90% Muslim population (CIA, 2021) practising 'Zakat' by giving 2.5 per cent of personal assets every year to the needy (British Council Report, 2016b).

Although empathy is an essential religious aspect in Bangladesh, empathy had no significant influence on social entrepreneurial intention among university students. However, Sousa-Filho et al. (2020) rationalised such behaviour for the lower-income countries due to the constant exposure to poverty and social injustice. According to Sousa-Filho et al. (2020), residents of lower-income countries do not have strong emotional responses toward building a social enterprise, unlike residents of higher-income countries. Bangladesh is a developing country, with 24 million people living under the poverty line (World Bank, 2021). The constant exposure to poverty might have lowered the threshold of triggering emotional responses to build social enterprises. It might be the case for Bangladeshi university students' empathy not impacting the intention to become a social entrepreneur.

The findings of the analysis also indicated no statistical evidence to support the proposed positive relationship between **moral obligation (MO)** and social entrepreneurial intention (SEI). The initial stand-alone model 2 in the previous chapter indicated no significant association between MO and SEI (β=0.055, p>0.100, CR 0.650), disproving the theoretical relationship of MO having a direct influence on increasing SEI. It suggests that an individual's belief regarding society's ethical responsibility to help the needy does not impact an individual's social entrepreneurial intention, which is consistent with the findings of Aure (2018), Hockerts (2017), Ip et al. (2018), Kruse (2020) and Sousa-Filho et al. (2020). The Bangladeshi government works relentlessly to reduce poverty and support underprivileged groups. For example, the Ministry of Social Welfare (https://msw.gov.bd/) initiates programs and provides services specifically to underprivileged groups to improve their livelihood. Such initiatives are strongly promoted in mass media to increase awareness. Probably these

initiatives provide the university students with satisfaction on the government's role for the poor and diminish the impact on intention to become a social entrepreneur in Bangladesh.

The findings of the analysis supports the positive relationship between **perceived social support (PSS)** and social entrepreneurial intention (SEI). The research outcome reports the association between PSS and SEI (β=0.157, p<0.050, CR 2.238) and backs the proposed theoretical relationship that PSS has a positive influence on increasing SEI. It suggests that receiving support from family, friends and personal networks tends to facilitate the social entrepreneurial intention, which is consistent with the findings of Akhter et al. (2020), Ashraf (2020), Aure (2018), Fatoki (2018), Hockerts (2017), Ip et al. (2017, 2018), Lacap et al. (2018), Rambe and Ndofirepi (2019) and Urban and Teise (2015).

Bangladeshi culture practices strong family bonding and social harmony similar to other Asian cultures (Aure et al., 2019; Ip et al., 2017). University students are expected to share and discuss any important life decisions such as education, career, and work with the family members and the near ones. Similarly, it is common to expect emotional and financial support from family members and personal networks. Consequently, it is likely that university students also expect to receive support from their family members and networks when starting a social enterprise. Therefore, perceived social support plays a significant role in increasing the SEI of university students in Bangladesh.

The findings of the analysis also provided statistical evidence to support the positive relationship between **social entrepreneurial self-efficacy (SESE)** and social entrepreneurial intention (SEI). The research outcome reports the association between SESE and SEI (β=0.227, p<0.001, CR 4.010) and indicates that SESE has a positive influence on SEI. It demonstrates that an individual's belief and confidence to build a feasible social enterprise tend to enhance their social entrepreneurial intention, which is also consistent with the findings of Akhter et al. (2020), Ashraf (2020), Aure (2018), Aure et al. (2019), Bacq and Alt (2018), Fatoki (2018), Hassan (2020), Hockerts (2017), Kazmi et al. (2019), Kruse (2020), Lacap et al. (2018), Lim and Omar (2019), Peng et al. (2019), Rashid et al. (2018), Sousa-Filho et al. (2020), Urban and Teise (2015), and Younis et al. (2020).

Bangladeshi universities equip and educate students to recognise the opportunities better, which possibly increases students' confidence to prepare well ahead to bring significant social changes. As mentioned earlier, Akhter et al. (2020) and Hassan (2020) suggested that university education plays a vital role in becoming a social entrepreneur. The success stories of young Bangladeshi social entrepreneurs (see Chapter 1, Section 1.6.1) listed in 'Forbes Asia under 30 Social Entrepreneurs' might generate a positive 'can do' attitude among university students. This can improve their confidence to make social changes and think creatively about benefiting the needy.

In conclusion, Bangladeshi university students' intention to become social entrepreneurs increases through positive perceived social support and social entrepreneurial self-efficacy. Empathy and moral obligation did not directly motivate the university students to become social entrepreneurs. The Hypothesis 2 outcome met one of the objectives presented in Chapter 1 by examining the influence of the MNM constructs on social entrepreneurial intention (SEI). Therefore, the outcome of this hypothesis indicated that perceived social support and social entrepreneurial self-efficacy are positively related to social entrepreneurial intention.

Table 8.2 summarises hypothesis 1 outcome discussed in this section.

Table 8.2 Hypothesis 2 Outcome

Hypotheses	Outcome	P-Value	CR	β	Objective
H2a:EMP→SEI	Not supported	.936	-.080	-.007	To examine the influence of the MNM constructs on SEI
H2b:MO→SEI	Not supported	.515	.650	.055	
H2c:PSS→SEI	**Supported**	**.025***	**2.238**	**.157**	
H2d:SESE→SEI	**Supported**	*******	**4.010**	**.227**	
β=Standardised Estimate, CR=Critical Ratio Significance Level: † p < 0.100, * p < 0.050, ** p < 0.010, *** p < 0.001					

8.2.3 Role of Moral Obligation

Hypothesis 3: *Moral obligation positively affects social entrepreneurial intention through the mediation of empathy, perceived social support and social entrepreneurial self-efficacy.*

The research findings also report the association between **MO and EMP** (0.658 β, p<0.001, CR 8.191) and demonstrate that MO has a direct and positive influence on EMP. This indicates that although the university student's belief in society's favourable role for the needy does not directly impact social entrepreneurial intention, it nevertheless triggers care and compassion to help the underprivileged. As EMP did

not directly influence SEI for this research, the mediating role of EMP could not be tested further to test its relationship with MO and social entrepreneurial intention (SEI).

The research outcome reports a strong association between **MO and PSS** (β=0.228, p<0.001, CR 3.843) and supports the posited relationship that MO has a direct and positive influence on PSS. It indicates that students' positive perception of society's responsibility for the needy does activate the expectation to receive support from their personal network to start a social enterprise. Furthermore, even though MO had no direct relationship with SEI, the research found that PSS fully mediates the relationship between MO and SEI (β=0.036, p<0.050). University students of Bangladesh with strong beliefs on society's responsibilities for the poor seem to have increased SEI only through the increased expectations on receiving favours and support from their family, friends, and acquaintances. Perhaps a student who senses high levels of moral obligation to help society might expect others to have corresponding levels of MO which lead to increased social support.

Moreover, **MO and SESE** showed some level of association (β=0.144, p<0.100, CR 1.661), which provides some support for the theoretical proposal that MO has a direct influence on SESE. It indicates that an individual's feeling about society's obligation to help the poor does nurture the confidence to develop a social enterprise consistent with the findings of Kazmi et al. (2019). As a result, SESE fully mediates the relationship between MO and SEI (β=0.033, p<0.100). For the Bangladeshi scenario, university students with a strong moral obligation tend to have a stronger social entrepreneurial intention to benefit society only through possessing significant social entrepreneurial self-efficacy. Possibly, students who senses high levels of moral obligation might possess strong capabilities to help the marginalised which lead to increased self-efficacy.

This research demonstrates strong support for the role of moral obligation as an antecedent to perceived social support, social entrepreneurial self-efficacy and empathy, which also provides support for a few multi-step mediations (Preacher, 2015). Sequentially PSS and SESE fully mediate the relationship between MO and SEI (β=0.061, p<0.010). It specifies that a positive moral obligation in Bangladeshi university students tends to generate a higher social entrepreneurial intention only through significant support from students' personal networks followed by a strong

self-belief to perform such social tasks. Likewise, EMP and SESE serially mediate the relationship between MO and SEI (β=0.167, p<0.010). University students with a positive moral obligation tend to have higher social entrepreneurial intentions only through significant empathy to help the needy, followed by self-efficacy to build a social enterprise. Maybe a student who senses high levels of moral obligation to help society might expect others to have corresponding levels of MO which lead to increased social support and self-efficacy.

Due to the multi-step mediation, the Hypothesis 3 outcome indicates that moral obligation positively affects social entrepreneurial intention through the mediation of empathy, perceived social support and social entrepreneurial self-efficacy, as shown in Table 8.3.

Table 8.3 MNM Interrelationship Significance

Estimated Parameter	Standardised Coefficient (β)	CR	P-Value	Objective
EMP→SESE	.254	3.008	.003**	To investigate the interrelationships between the constructs of MNM
MO→EMP	.658	8.191	***	
MO→PSS	.228	3.843	***	
MO→SESE	.144	1.661	.097†	
PSS→SESE	.265	3.855	***	
Significance Level: † p < 0.100, * p < 0.050, ** p < 0.010, *** p < 0.001				

8.2.4 Role of Empathy

Hypothesis 4: *Empathy positively affects social entrepreneurial intention through the mediation of perceived social support and social entrepreneurial self-efficacy.*

Initial findings of the stand-alone model 3 report that **EMP and PSS** (β=0.153, p>0.100) are not positively related, negating the need for further testing of the theoretical relationship of EMP having an influence on SEI through PSS. The possible explanation for this result can be that an empathetic individual does not necessarily expect his/her family and network support to feel the same emotional responses for the needy. Empathy for the needy can be a personal mission for the university student rather than a career to expect support from the personal networks.

The analyses report the strong association between **EMP and SESE** (β=0.254, p<0.010, CR 3.008), providing support for the theoretical proposal that EMP has a direct and positive influence on SESE. It indicates that an individual with empathy for the needy tends to have a higher self-belief to solve social problems, which is consistent with the findings of Bacq and Alt (2018) and Younis et al. (2020). Although

empathy does not directly influence SEI in this research, it acted as an antecedent to social entrepreneurial self-efficacy as suggested by Bacq and Alt (2018). Therefore, the relationship between EMP and SEI can be fully mediated by SESE ($\beta=0.058$, $p<0.050$).

The university student who feels emotional and is compassionate towards the needy is likely to have a higher SEI only through their conviction and confidence in building a social enterprise in Bangladesh. Perhaps a student who senses high levels of empathy possess strong capabilities to help the marginalised which lead to increased self-efficacy. The Hypothesis 4 outcome indicates that empathy positively affects social entrepreneurial intention through the mediation of social entrepreneurial self-efficacy, while perceived social support did not mediate the relationship between empathy and social entrepreneurial intention.

8.2.5 Role of Perceived Social Support

Hypothesis 5: Perceived social support positively affects social entrepreneurial intention through the mediation of social entrepreneurial self-efficacy.

The research outcome reports the association between **PSS and SESE** ($\beta=0.265$, $p<0.001$, CR 3.855) and supports the theoretical proposal that PSS has a direct and positive influence on SESE. University students tend to experience higher confidence to help the poor when they receive support from his/her personal network, which is also consistent with the findings of Aure et al. (2019) and Tran and Von Korflesch (2016). Receiving family support generates a positive 'can do' attitude among university students confidence to build a social enterprise in Bangladesh. For this research, SESE partially mediates the relationship between PSS and SEI ($\beta=0.060$, $p<0.050$). For Bangladeshi university students, receiving support from their personal networks tend to increase their social entrepreneurial intention through significant social entrepreneurial self-efficacy. Therefore, the Hypothesis 5 outcome indicates that perceived social support positively affects social entrepreneurial intention through the mediation of social entrepreneurial self-efficacy.

Overall, the findings of the analyses for Hypotheses 3, 4 and 5 indicate statistical evidence to support the interrelationships among the MNM constructs and their impact on SEI corresponding to Objective 2 and RQ2, as shown in table 8.4.

Table 8.4 Hypotheses 3–5 Outcomes

Hypotheses	Outcome	Lower BC	Upper BC	P-Value	β	Objective 2	RQ 2
H3b:MO --> PSS --> SEI H3c:MO --> SESE --> SEI H3:MO --> PSS --> SESE --> SEI H3:MO --> EMP --> SESE --> SEI	Supported	0.009 0.000 0.004 0.015	0.085 0.097 0.037 0.081	0.023* 0.094† 0.002** 0.009**	0.036 0.033 0.061 0.167	To investigate the interrelationships between the constructs of MNM impacting on SEI	To what extent, do the interrelationships between the constructs of MNM influence SEI?
H4b:EMP --> SESE --> SEI	Supported	0.023	0.143	0.014*	0.058		
H5: PSS --> SESE --> SEI	Supported	0.021	0.110	0.002**	0.060		
β=Standardised Estimate, BC=Bias-Corrected Confidence Interval at 90% **Significance Level: † p < 0.100, * p < 0.050, ** p < 0.010, *** p < 0.001**							

8.2.6 Role of Regulatory Institutional Environment

Hypothesis 6: *The regulatory institutional environment positively affects social entrepreneurial intention through the mediation of moral obligation, empathy, perceived social support, and social entrepreneurial self-efficacy.*

This research investigated the mediating effects of the constructs of the Mair Noboa model (MNM) on the relationship between regulatory institutional environment (REG) and social entrepreneurial intention (SEI), corresponding to Objective 1. The findings of the analyses indicate no statistical evidence to support the positive relationship between REG and MO. The collective model indicates **REG and MO** ($β$=-.083, p>0.100, CR-.887) are not positively related and provide no support for REG directly influencing MO positively. It indicates that governmental regulations to facilitate social enterprises do not impact university students' feelings of societal obligation for the poor. The output also showed a negative non-significant association between REG and MO. This opposes the findings of stand-alone model 4 ($β$=0.149, p<0.050, CR 2.334). The possible explanation can be that REG can only positively influence MO on a stand-alone basis without the influence of these informal institutions such as NORM and COG. This means informal institutions have a greater impact on MO than the formal institution.

The findings of the analyses provided no statistical evidence to support the positive relationship between REG and EMP. In the previous chapter, the initial stand-alone model 4 indicated no significant association between **REG and EMP** ($β$=0.080, p>0.100) and demonstrated that REG did not have a direct and positive relationship with EMP. It indicates that a favourable governmental policy towards social

enterprises does not impact the university students' compassion and care for society's marginalised. Perhaps favourable policies on social enterprises and constant exposure to poverty diminish the effect on empathy among university students.

This research outcome reports the association between **REG and PSS** (β=0.156, p<0.100, CR 1.921) and provide some support for the proposed relationship that REG has a direct and positive influence on PSS. It specifies that favourable policies and complementary laws on social entrepreneurship can positively motivate the family and friends of university students to offer necessary support in building a social enterprise. The results also found that PSS partially mediates the relationship between REG and SEI (β=0.024, p<0.100). Favourable rules and regulations on social enterprises positively affects social entrepreneurial intention among university students through the significant support received from their personal networks.

The initial stand-alone model 4 indicated no significant association between **REG and SESE** (β=0.061, p>0.100) and did not support the proposal that REG had a direct and positive relationship with SESE. It indicated that governmental support towards social enterprises does not impact the university students' confidence to build a social enterprise. Probably, favorable policies on social enterprises provide the university students with satisfaction on the government's role for the poor and diminish the impact on self-efficacy to build a social enterprise to help the needy.

However, sequentially PSS and SESE mediated the relationship between REG and SEI (β=0.041, p<0.050). This suggests that favourable rules and regulations on social enterprises can only enhance social entrepreneurial intention through significant support from personal networks, followed by increased social entrepreneurial self-efficacy among university students. A possible explanation can be that positive policies on social entrepreneurship motivate the university student's family and friends to support the social venture which lead to increased self-efficacy to build a social enterprise.

This multi-step mediation effect was investigated based on the strong significant relationships between PSS and SESE, as shown in Hypothesis 5.

Therefore, the Hypothesis 6 outcome indicates that the regulatory institutional environment positively affects social entrepreneurial intention through the sequential mediation of perceived social support and social entrepreneurial self-efficacy.

Table 8.5 summarises the hypothesis 6 outcome discussed in this section.

Table 8.5 Hypothesis 6 Outcome

Hypotheses	Outcome	Lower BC	Upper BC	P-Value	β
H6c: REG --> PSS --> SEI H6: REG --> PSS --> SESE --> SEI	Supported	0.002 0.002	0.073 0.027	0.067† 0.046*	0.024 0.041
β=Standardised Estimate, BC=Bias-Corrected Confidence Interval at 90% Significance Level: † p < 0.100, * p < 0.050, ** p < 0.010, *** p < 0.001					

Table 8.6 below demonstrates the relationship between TPI and MNM constructs.

Table 8.6 Significance Tests between TPI and MNM Constructs

Estimated Parameter	Standardised Coefficient (β)	CR	P-Value	Objective
REG→MO	-.083	-.887	.375	To understand the relationship between the antecedents of TPI and MNM
REG→PSS	**.156**	**1.921**	**.055†**	
NORM→MO	**.187**	**2.075**	**.038***	
NORM→PSS	**.362**	**4.520**	*******	
COG→MO	**.179**	**2.064**	**.039***	
COG→PSS	.084	1.111	.267	
COG→SESE	**.118**	**1.898**	**.058†**	
Significance Level: † p < 0.100, * p < 0.050, ** p < 0.010, *** p < 0.001				

8.2.7 Role of Normative Institutional Environment

Hypothesis 7: *The normative institutional environment positively affects social entrepreneurial intention through the mediation of moral obligation, empathy, perceived social support and social entrepreneurial self-efficacy.*

This research also investigated the mediating effects of the Mair Noboa model (MNM) constructs as they impact on the relationship between normative institutional environment (NORM) and social entrepreneurial intention (SEI) corresponding to Objective 1. The findings of the analyses provide statistical evidence to support the positive relationship between NORM and MO. The outcome reports the association between **NORM and MO** (β=0.187, p<0.050, CR 2.075) and supports the proposal that NORM directly increases MO. In other words, the admiration of the concept of social entrepreneurship in Bangladesh can positively increase the university student's feelings on socially acceptable behaviour for the needy. Perhaps a student who admire social entrepreneurs such as Professor Yunus founder of Grameen Bank and Sir Fazle Hasan Abed founder of BRAC might expect others to correspond in a similar manner

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which lead to increased MO. Due to the fact that MO did not directly influence SEI for this research, the mediating role of MO could not be tested further on the relationship between NORM and social entrepreneurial intention (SEI). However, MO acts as an antecedent to PSS, SESE, and EMP (as shown in Hypothesis 4), and the relationship between NORM and SEI seems to have some multi-step mediations, as discussed later in this section.

The findings of the analysis indicate no statistical evidence to support the positive relationship between NORM and EMP. In the previous chapter, the initial stand-alone model 5 indicated no significant association between **NORM and EMP** (β=0.073, p>0.100), thereby not supporting the theorised proposal that NORM directly increases EMP. This indicates that the country's appreciation of social enterprises and the admiration of social entrepreneurs do not directly increase university students' emotions for the needy. Perhaps university students' admiration for social entrepreneurship is given, which weakens its impact on empathy.

The research outcome, however, reports very strong statistical evidence to support the positive relationship between **NORM and PSS** (β=0.362, p<0.001, CR 4.520) and supports the theorised proposal that NORM has a direct and positive relationship with PSS. This suggests that the admiration and appreciation of social enterprises and social entrepreneurs can directly increase the expectation of receiving support from the personal networks on building a social enterprise. Therefore, PSS fully mediates the relationship between NORM and SEI (β=0.057, p<0.050). Admiring social entrepreneurship in Bangladesh do trigger the social entrepreneurial intention among the university student only through significant perceived social support. For example, media coverage on 'Forbes Asia under 30 Social Entrepreneurs' representing youth social entrepreneurs of Bangladesh developed positive interest, awareness and admiration. These initiatives might motivate the university student's personal networks to support in developing a social enterprise.

The findings of the analyses provide no statistical evidence to support the positive relationship between NORM and SESE. The initial stand-alone model 5 indicated no significant association between **NORM and SESE** (β=0.071, p>0.100), disproving the theorised proposal that NORM has a direct and positive influence on SESE. It highlights that the appreciation of social entrepreneurship does not increase the confidence to build a social enterprise in Bangladesh. Probably university students

with satisfaction on the government's role for the poor which diminish its impact on self-efficacy to build a social enterprise.

Although there was no reported direct significant relationship between NORM and SESE, the strong association between PSS and SESE showed a multi-step mediation that influenced the relationship between NORM and social entrepreneurial intention (SEI). Sequentially PSS and SESE fully mediate the relationship between NORM and SEI ($\beta=0.096$, $p<0.010$). This multi-step mediation specifies that admiring social entrepreneurs can significantly impact Bangladeshi university students' intention to become social entrepreneurs only through the significant perceived social support followed by increased social entrepreneurial self-efficacy.

As previously discussed, NORM developed multi-step mediation based on the relationship between NORM and MO. Based on the relationships between MO, PSS, SESE and EMP as shown in Hypothesis 4, four more multi-step mediations are found. To begin, sequentially MO and PSS fully mediate the relationship between NORM and SEI ($\beta=0.043$, $p<0.050$). It indicates that the positive social value of social entrepreneurship in Bangladesh increases the likelihood of university students' intention to become social entrepreneurs only through increased moral obligation followed by perceived social support. Next, serially MO and SESE fully mediate the relationship between NORM and SEI ($\beta=0.027$, $p<0.100$). Through Bangladesh offering positive social norms on social entrepreneurship, this significantly impacts on university students' intention to become social entrepreneurs owing to their increased moral obligation, followed by their significant self-efficacy, to help the poor.

Serially MO, PSS and SESE fully mediate the relationship between NORM and SEI ($\beta=0.043$, $p<0.050$). This states that admiring Bangladeshi social entrepreneurs significantly influences university students' intention through their increased moral obligation, followed by perceived social support and social entrepreneurial self-efficacy. Although NORM reported no significant relationship with EMP, the strong significant association between MO and EMP developed a multi-step mediation. Sequentially MO, EMP and SESE fully mediate the relationship between NORM and SEI ($\beta=0.123$, $p<0.050$). This multi-step mediation specifies that positive normative value on social enterprises of Bangladesh can impact students' social entrepreneurial intention only through significant moral obligation, followed by enhanced empathy and self-efficacy to help the margins of the society.

Therefore, the Hypothesis 7 outcome indicates that the normative institutional environment positively affects social entrepreneurial intention through the mediation of moral obligation, empathy, perceived social support and social entrepreneurial self-efficacy.

Table 8.7 summarises the hypothesis 7 outcome discussed in this section.

Table 8.7 Hypothesis 7 Outcome

Hypotheses	Outcome	Lower BC	Upper BC	P-Value	β
H7c: NORM --> PSS --> SEI		0.012	0.103	0.024*	0.057
H7: NORM --> PSS --> SESE --> SEI	Supported	0.006	0.041	0.001**	0.096
H7: NORM --> MO --> PSS --> SEI		0.001	0.018	0.037*	0.043
H7: NORM --> MO --> SESE --> SEI		0.000	0.020	0.082†	0.027
H7: NORM --> MO --> EMP --> SESE --> SEI		0.001	0.017	0.027*	0.123
H7: NORM --> MO --> PSS --> SESE --> SEI		0.000	0.008	0.021*	0.043

β=Standardised Estimate, BC=Bias-Corrected Confidence Interval at 90%
Significance Level: † p < 0.100, * p < 0.050, ** p < 0.010, *** p < 0.001

8.2.8. Role of Cognitive Institutional Environment

Hypothesis 8: *The cognitive institutional environment positively affects social entrepreneurial intention through the mediation of moral obligation, empathy, perceived social support and social entrepreneurial self-efficacy.*

This research investigated the mediating effects of the Mair Noboa model (MNM) impacting the relationship between cognitive institutional environment (COG) and social entrepreneurial intention (SEI) corresponding to Objective 1. The findings of the analysis indicate strong statistical evidence to support the positive relationship between COG and MO. The outcome reports the association between **COG and MO** (β=0.179, p<0.050, CR 2.064) and supports the theoretical relationship that COG has a direct and positive influence on MO. This suggests that offering knowledge and expertise on social enterprise operations can activate university students' feelings on societal obligations in addressing the needy. For example, Bangladeshi incubators, accelerators and impact investors such as YYGoshti, TekShoi, OPEN accelerator, Yunus centre and NSU Start-up Next offer advisory and technical support for

operationalising social enterprise start-ups. This accessible support is likely to increase the university student's feelings on social acceptance for the margins of society.

The findings of the analysis indicated no statistical evidence to support the positive relationship between COG and EMP. In the previous chapter, the initial stand-alone model 6 indicated no significant association between **COG and EMP** (β=0.015, p>0.100). This suggests that offering expertise on social enterprises does not directly increase university students' feelings for the needy. Perhaps, students already have an underlying degree of empathy that will not be affected or increased due to the availability of expertise but this expertise does seem to impact positively the student's sense of moral obligation. Recall in the literature review (chapter 2), it was highlighted that moral obligation and empathy are not the same things. Further, COG appears to have a direct impact on students' SEI. This was discussed in section 8.2.1.

The collective model indicates **COG and PSS** (β=0.084, p>0.100, CR 1.111) are not positively related, thereby not supporting the proposal that COG directly influences PSS. This suggests that operational support for social enterprises does not impact the university students' expectations of receiving support from their family and personal networks. This is contrary to the findings of the stand-alone model 6 (β=0.373, p<0.001, CR 5.929). A possible explanation can be that COG can only positively influence PSS on a stand-alone basis without the influence of other institutions such as REG and NORM. So in this research study, it appears that offering cognitive knowledge on social entrepreneurship has no direct impact on receiving social support to build a social enterprise.

The findings of the analysis provided some statistical evidence to support the positive relationship between COG and SESE. The outcome reports the association between **COG and SESE** (β=0.118, p<0.100, CR 1.898) which is consistent with the findings of Vyas et al. (2014) albeit with a significance of only 10% . Therefore, the relationship between COG and SEI can be partially mediated by SESE (β=0.027, p<0.100). Even though the relationship between COG and SESE is not a strong one, this partial mediation suggests that organisations in Bangladesh offering cognitive knowledge are somewhat likely to enhance SEI through university students' increased self-belief.

Although COG indicates no direct influence on EMP and PSS, it indirectly influences both MO and SESE. As shown earlier, MO acts as an antecedent to PSS, SESE, and

EMP; as a result, the relationship between COG and SEI developed some multi-step mediations. To begin with, MO and PSS sequentially mediate the relationship between COG and SEI ($\beta=0.041$, $p<0.050$). This specifies that accessing knowledge on social enterprises can increase a university student's SEI because of enhanced moral obligation, followed by increased perceived social support. The services offered by the incubator, accelerators and impact investors potentially trigger moral obligation among students and consequently, increase the expectation of support from their surroundings to help the marginalised. Perhaps a student who senses high levels of moral obligation to help society might expect others to have corresponding levels of MO which lead to increased social support. Additionally, it was found, MO and SESE serially mediate the relationship between COG and SEI ($\beta=0.026$, $p<0.100$), however only at 10% significance. This demonstrates that offering relevant information on operating social enterprises can somewhat increase social entrepreneurial intention via moral obligation and self-efficacy among university students.

Furthermore, it was also found that MO, PSS and SESE sequentially mediate the relationship between COG and SEI ($\beta=0.041$, $p<0.050$). This multi-step mediation narrates that guiding expertise on social entrepreneurship can develop intention by increasing moral obligation, followed by significant perceived social support and social entrepreneurial self-efficacy among university students. For example, the Yunus Centre which offers valuable insight and networks to build a social enterprise can increase a student's social entrepreneurial intention as it activates the student's socially acceptable behaviour for the needy; as a result, they tend to expect support from their families and enjoy more self-efficacy to build a social enterprise. Serially MO, EMP and SESE mediate the relationship between COG and SEI ($\beta=0.118$, $p<0.050$). This multi-step mediation specifies that offering relevant operational knowledge on social entrepreneurship can positively affect the student's intention due to the higher level of moral obligation, followed by increased significant empathy and social entrepreneurial self-efficacy.

Therefore, the Hypothesis 8 outcome indicates that cognitive institutional environment positively affects social entrepreneurial intention through the mediation of moral obligation, empathy, perceived social support, and social entrepreneurial self-efficacy.

Table 8.8 summarises the hypothesis 8 outcome discussed in this section.

Table 8.8 Hypothesis 8 Outcome

Hypotheses	Outcome	Lower BC	Upper BC	P-Value	β
H8d:COG --> SESE --> SEI		0.002	0.059	0.060†	0.027
H8: COG --> MO --> PSS --> SEI	Supported	0.001	0.018	0.024*	0.041
H8: COG --> MO --> SESE --> SEI		0.000	0.019	0.073†	0.026
H8: COG --> MO --> PSS --> SESE --> SEI		0.001	0.008	0.011*	0.041
H8: COG --> MO --> EMP --> SESE --> SEI		0.002	0.017	0.014*	0.118
β=Standardised Estimate, BC=Bias-Corrected Confidence Interval at 90% Significance Level: † p < 0.100, * p < 0.050, ** p < 0.010, *** p < 0.001					

8.2.9 Moderating Effect of Prior Experience

Hypothesis 9: *Prior experience moderates the positive relationships between moral obligation, empathy, perceived social support and social entrepreneurial self-efficacy upon social entrepreneurial intention. The positive relationship will be stronger (weaker) when prior experience is higher (lower).*

This research investigated the moderating impact of prior experience on the relationship between MNM antecedents and social entrepreneurial intention (SEI) corresponding to Objective 3. As shown earlier, MO and EMP are not positively related to social entrepreneurial intention (SEI). As a result, the moderating effect of prior experience could not be tested further for MO and EMP. However, it was found that prior experience did not moderate the positive relationship between PSS, SESE and social entrepreneurial intention (SEI). The research outcome reports that prior experience does not moderate any positive relationships of MO, EMP, PSS and SESE on SEI. The path estimates for the prior experience affecting the relationship between the constructs of MNM and SEI were insignificant.

A possible explanation for such findings can be that university students' prior experience in social organisations was not pleasant or even sufficient to affect the relationship between the MNM antecedents and SEI. Perhaps the general nature of the prior experience measure might have been insufficient to tease out more nuanced aspects of the influence of experience (see 4.7.3 for the measure's items). In the current social entrepreneurship literature, prior experience is considered either a predictor or mediator variable (e.g. Hockerts, 2017; Ashraf, 2020; Sousa-Filho et al., 2020). Even though prior experience was not found to be a moderator in this research,

the testing of the moderating effect of prior experience, using a more nuanced measure, can be a stepping-stone for future research.

Therefore, the Hypothesis 9 outcome indicates that prior experience does not moderate the positive relationships between moral obligation, empathy, perceived social support, and social entrepreneurial self-efficacy upon social entrepreneurial intention for this research.

8.2.10 Moderating Effect of Age

Hypothesis 10: Age moderates the positive relationships between moral obligation, empathy, perceived social support and social entrepreneurial self-efficacy upon social entrepreneurial intention. The positive relationship will be stronger (weaker) when age is higher (lower).

This research investigated the moderating impact of age on the relationship between the Mair Noboa model (MNM) antecedents and social entrepreneurial intention (SEI) corresponding to Objective 3. In this research, the path estimates of age significantly affected the relationship between SESE and SEI (as shown in Figure 7.11) albeit at 10% significance. It shows that age strengthens the positive relationship between SESE and SEI. There were six clusters used in this research (16-20; 21-25; 26-30; 31-35; 35-40; 40 and above). From these clusters, it was found that the more mature adults aged 26 and above had higher levels of SESE to enhance SEI. A possible explanation is that mature adults have more hands-on learning and exposure through living which can offer more individual confidence. Hence, university students aged over 26 tend to be more confident to develop social enterprises in Bangladesh. Also, this research outcome is somewhat consistent with Terjesen et al. (2016), where the authors argued that adults aged above 25 tend to pursue social entrepreneurship in a developing economy.

As shown earlier, MO and EMP are not positively related to social entrepreneurial intention (SEI). As a result, the moderating effect of age could not be tested further for these factors. However, it was found that age did not moderate the positive relationship between PSS and SEI. A possible explanation can be that mature adults' exposure through living does not assure their families' support to build a social enterprise. This indicates that age does not strengthen the relationship between MO, EMP, PSS and SEI. A lack of studies investigating the moderating effect of age exists in the social

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entrepreneurship literature. This research can also be a stepping-stone for future research.

Therefore, the Hypothesis 10 outcome indicates that age moderates the positive relationship between social entrepreneurial self-efficacy and social entrepreneurial intention. Also, the positive relationship is stronger when a person is aged above 26.

Table 8.9 below presents the hypotheses that were supported by the data.

Table 8.9 Summary of Hypotheses Outcomes

Hypothesis	Outcome
H1: The regulatory and cognitive institutional environments are positively related to social entrepreneurial intention.	Supported
H2: Perceived social support and social entrepreneurial self-efficacy are positively related to social entrepreneurial intention.	Supported
H3: Moral obligation positively affects social entrepreneurial intention through the mediation of empathy, perceived social support and social entrepreneurial self-efficacy.	Supported Full Mediation
H4: Empathy positively affects social entrepreneurial intention through the mediation of social entrepreneurial self-efficacy.	Supported Full Mediation
H5: Perceived social support positively affects social entrepreneurial intention through the mediation of social entrepreneurial self-efficacy.	Supported
H6: The regulatory institutional environment positively affects social entrepreneurial intention through the mediation of perceived social support and social entrepreneurial self-efficacy.	Supported
H7: The normative institutional environment positively affects social entrepreneurial intention through the mediation of moral obligation, empathy, perceived social support and social entrepreneurial self-efficacy.	Supported Full Mediation
H8: The cognitive institutional environment positively affects social entrepreneurial intention through the mediation of moral obligation, empathy, perceived social support and social entrepreneurial self-efficacy.	Supported
H9: Prior experience moderates the positive relationship between moral obligation, empathy, perceived social support and social entrepreneurial self-efficacy upon social entrepreneurial intention. The positive relationship will be stronger (weaker) when prior experience is higher (lower).	Not Supported
H10: Age moderates the positive relationship between social entrepreneurial self-efficacy and social entrepreneurial intention. The positive relationship will be stronger (weaker) when age is higher (lower).	Supported

Based on the findings of the hypotheses, the revised model supported by the data is presented below in Figure 8.1.
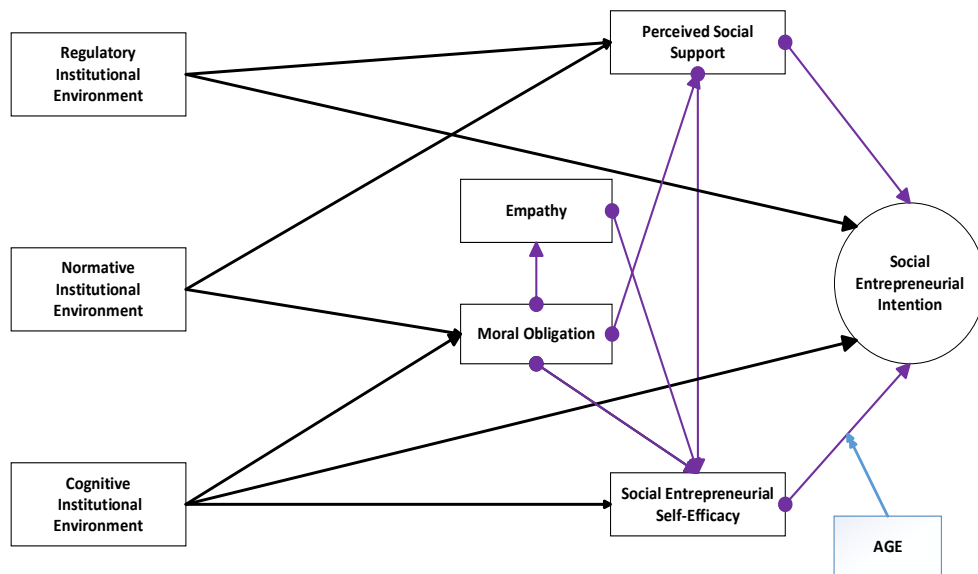
Figure 8.1 Revised Model

8.3 IMPLICATIONS

This research makes theoretical, methodological, and practical implications based on the findings. This research considered only Bangladesh as a case for determining social entrepreneurial intention. The following section discusses the theoretical, methodological, and practical implications.

8.3.1 Theoretical Implications

This research represents a comprehensive work on the three pillars of institutions and the Mair Noboa model by extending the literature on social entrepreneurial intention. The developed model for this research significantly contributes to the knowledge of social entrepreneurship. Based on the findings, the subsequent paragraphs discuss the theoretical implications of this research.

This research addresses the literature gap by identifying the significant relationship between institutional and individual-level antecedents to measure social entrepreneurial intention. This research extends the literature of social entrepreneurial intention by **integrating the three pillars of institutions and the Mair Noboa model (MNM)**. This integration addresses the knowledge gap that neither theory could independently fill. No research model to date has integrated these two theories in the context of social entrepreneurial intention (SEI), to the best of the researcher's knowledge. This model was developed based on the concept of integrating theories by Mayer and Sparrowe (2013) in the management context. This research model

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contributes to the body of knowledge for integrating theories in social entrepreneurship. This research empirically validated the measurement of these two powerful theories in a combined model.

This research has applied **three pillars of institutions** which is an extension of institutional theory to examine social entrepreneurial intention (SEI). Three pillars of institutions is a powerful framework that celebrates the strength and resilience of the country by combining formal and informal institutions. The research findings enriches the literature of institutional theory. Also, the institutional configuration perspective has advocated combining formal and informal institutions for gaining better explanatory power. The findings of this research also contribute to the institutional configuration perspective (Stephan et al., 2015). Although this framework claimed to offer better explanatory power, it was rarely applied in determining SEI. To date, no studies applied this framework in Bangladesh to determine SEI, as per the researcher's knowledge. The research findings contribute to the social entrepreneurship knowledge in the developing country context. The research findings make theoretical contributions to the existing literature of the three pillars of institutions, institutional configuration perspective and institutional theory. In this research, the individual institutions played significant role on SEI. For example, Regulatory institutional environment and cognitive institutional environment played a primary as well as secondary antecedents to SEI. Whereas, normative institutional environment played a secondary antecedents to SEI. Also, the certain roles played by these institutions contributes to the North's (1990, 2005) arguments on formal and informal institutions. Therefore, this research makes theoretical implications on the literature by identifying significant role of each institutions of the three pillars of institutions in examining SEI in the context of Bangladesh.

This research applied the **Mair Noboa model (MNM)** to determine the mediating effects. The relevant antecedents of this model were developed based on the Theory of Planned Behaviour (TPB) (Ajzen, 1991; Hockerts, 2017; Mair & Noboa, 2006). Although many studies have implemented the MNM to assess social entrepreneurial intention (SEI), very few studies have been conducted in developing countries. In this research, this model was implemented in Bangladesh, a developing country. Some of these research findings contradict the outcome of the developed country context. For example, empathy and moral obligation did not directly influence SEI in this research

which contradicts the findings from the developed countries. Therefore, this research findings enrich the social entrepreneurship knowledge for developing vision and logical perspective in the developing country context. In the social entrepreneurship domain, these constructs' direct and indirect role contributes to the existing MNM literature and the literature on the TPB.

The findings of this research offer theoretical support to confirm the mediating role played by the Mair Noboa Model constructs in the relationships between the constructs of the three pillars of institutions and social entrepreneurial intention (SEI). Till date, there are no research model that has integrated these theories in the context of SEI, as per the knowledge of the researcher. This research has addressed the literature gap and identified significant relationship between institutional level and individual level factor where three pillars of institutions represented perception on institutions and individual level perception was represented by Mair Noboa Model (MNM). For example, normative institutional environment had relationship with SEI only when mediated by moral obligation, empathy, perceived social support and social entrepreneurial self-efficacy. Whereas, cognitive institutional environment directly and indirectly influence SEI through the mediation of moral obligation, empathy, perceived social support and social entrepreneurial self-efficacy. Also, regulatory institutional environment directly and indirectly influence SEI through the mediation of perceived social support, and social entrepreneurial self-efficacy. This research outcome established a holistic model than those are currently available in the literature of SEI. In doing so, this research also addressed the aggregation and disaggregation biases by simultaneously testing both levels (Peterson et al., 2012; Saebi et al., 2019). The outcomes based on both levels of analysis enhance a better understanding of the antecedents' impact on the intention of social entrepreneurship. Therefore, this research makes theoretical implications on the literature as no previous model has integrated the three pillars of institutions framework and the MNM to measure SEI.

The findings of the proposed **interrelationships between the constructs of the Mair Noboa model (MNM)** extend the social entrepreneurial intention (SEI) literature. This interrelationship was conceptualised based on Heuer and Liñán's (2013) modified theory of planned behaviour in the entrepreneurial intention context. Social entrepreneurship research is scarce on exploring inter-variable relationships between the constructs of the MNM (Sousa-Filho et al., 2020; Urban & Galawe, 2019). This

research addressed the literature gap by empirically validating the interrelationships among the constructs of MNM. For example, moral obligation has significant relationship with empathy, perceived social support and social entrepreneurial self-efficacy. Whereas, empathy and perceived social support had significantly influence only on social entrepreneurial self-efficacy. Although a few studies in the literature have explored some factors related to the MNM to generate potential relationships, this research considered all the four constructs.

Additionally, this research justified and established clear roles for each construct. For example, this research validates that moral obligation positively influences on increasing empathy, contrary to Urban and Teise's (2015) argument on these two factors being the same and inseparable. The research outcomes shed light on the broader number of possible outcomes than those currently depicted in the social entrepreneurship literature. The findings indicated that moral obligation only affects social entrepreneurial intention (SEI) through the mediation of empathy, perceived social support and social entrepreneurial self-efficacy. Likewise, empathy only affects SEI through the mediation of social entrepreneurial self-efficacy. Whereas, perceived social support directly and indirectly affects SEI through the mediation of social entrepreneurial self-efficacy. Hence, this research makes theoretical implications by explaining a particular perspective on the interrelationship role of the MNM constructs on SEI. The direct and indirect role also contributes to the literature of the modified theory of planned behaviour in the context of social entrepreneurship.

The inclusion of prior experience and age as **moderators** helped to extend the social entrepreneurship literature. According to Saebi et al. (2019), the literature on measuring moderating effects on the overall social entrepreneurial intention (SEI) is scarce. To the best of the researcher's knowledge, no research model has tested the moderating effect of prior experience and age on the relationship between MNM constructs and SEI to date. The research findings addressed the gap by identifying the contribution of age strengthening the positive relationship between social entrepreneurial self-efficacy and SEI at a probability of less than 10%. Although prior experience indicated no moderating effect in this research, this can be a stepping-stone for the existing literature. This research adds value to the SEI literature by extending the conceptual dimension.

8.3.2 Methodological Implications

This research offers methodological implications by identifying multi-step mediation in the context of social entrepreneurial intention. Thomas (2003) referred to 'methodological contribution' as the innovative ways to collect and analyse the data. Thus, an innovative way of collecting and analysing primary and secondary data can be included in the methodological implication. This research offers two methodological implications based on secondary and primary data. The first is related to the secondary data analysis, which integrates the two prominent theories on the social entrepreneurial intention literature. The second methodological implication is related to the primary data using methods of multi-step mediation analysis to understand the relationship between the antecedents.

This research employed an in-depth literature review on the empirical studies on social entrepreneurial intention (SEI) based on secondary data. This study's findings offer methodological implications by developing a multi-level framework to determine SEI. The integration between the three pillars of institutions and Mair Noboa model (MNM) addresses the knowledge gap that neither theory could independently fill. In doing so, Mayer and Sparrowe's (2013) concept on integration based on sharing a common dependent variable was applied. The multi-level model has eight constructs consisting of 43 items to measure SEI. Also, the interrelationship linkages for the constructs of the MNM was developed from Heuer and Liñán's (2013) modified theory of planned behaviour. The findings offer the linkages and integration of these theories contributing to the methodological literature on integrating theories.

The literature review was done to develop this integrated framework. The systematic search for the relevant quantitative journal articles were limited to social entrepreneurial intention (SEI). Considering the relevant antecedents and SEI, 12 journal articles for institutional theory and five articles for three pillars of institutions were found to be relevant. Similarly, nine journal articles for theory of planned behaviour, 10 articles for Shapero's entrepreneurial event and 12 articles for Mair Noboa model were retrieved measuring SEI based empirical relevance. Thus, the literature strongly backed the development of integrated three pillars of institutions and Mair Noboa model framework.

This research findings suggested significant multi-step mediation contributing to the methodological literature on methods of multi-step mediation analysis. Despite the gap, little attention has been given to methods for testing multiple mediations (Preacher, 2015; Preacher et al., 2007; Preacher & Hayes, 2008). This research included several mediators in the same model and validated certain links between constructs that were not conducted previously in the literature of social entrepreneurship. This allowed testing the relative magnitudes of the specific indirect effects associated with all the mediators within a single structural model (Preacher & Hayes, 2008).

In the social entrepreneurial literature, it is quite rare to explore multi-step mediation. To the best of the researcher's knowledge, apart from Ip et al. (2018), no literature has explored multi-step mediation. This research estimated such mediation by applying the percentile bootstrapping method in AMOS for total indirect effects in multiple mediators (Gaskin, 2021; Kenny, 2021). The findings suggest significant multi-step mediation exists between the antecedents of the three pillars of institutions and the Mair Noboa model (MNM). Due to the multi-step mediation, serially moral obligation, empathy and social entrepreneurial self-efficacy mediates the positive relationship between normative institutional environment and social entrepreneurial intention. However, the normative institutional environment indicated no direct relationship with empathy and social entrepreneurial self-efficacy on a stand-alone basis. This research defined some strong relationships through multi-step mediation, which shed some perspectives on the possible connections between institutional and individual constructs. Therefore, this research findings enrich the methodological literature by exploring multi-step mediation between the antecedents of the three pillars of institutions and the MNM.

8.3.3 Practical Implications

This research findings offer multiple practical implications to increase social entrepreneurial behaviour. The relationships among the institutional and individual antecedents of this research aim to suggest key practical implications through the lens of policymakers, interested governmental organisations, non-governmental organisations (NGOs), venture capitalists, incubators, accelerators and education

providers. Based on the findings, the subsequent paragraphs discuss the practical implications of this research.

Since the regulatory institutional environment (REG) was seen to have both significant positive direct and indirect impacts on social entrepreneurial intention (SEI), policymakers and interested governmental organisations need to nurture the REG measures to boost social entrepreneurial behaviour. The existing policies on microfinance, non-governmental organizations (NGOs) and civil society, small and medium-sized enterprises (SMEs), Islamic philanthropy, private sector developments positively influence the intention to become a social entrepreneur. The national plan prepared by the Ministry of Planning does significantly favour social entrepreneurial activities in Bangladesh. The government also promotes social entrepreneurship by initiating "Start-up Bangladesh Limited" to nurture the start-up culture in the country. Based on the findings, REG directly influences SEI; thus, these policies favouring social enterprises can be an opportunity to increase university students' SEI in Bangladesh.

Moreover, REG positively influences perceived social support (PSS), the policies to support social enterprises accelerate social support in Bangladesh. For example, policies on the incentives for social entrepreneurship trigger the social support groups to provide necessary emotional and financial support to the nascent social entrepreneurs. PSS directly influence social entrepreneurial intention (SEI). The Bangladeshi culture involves strong family bonding; thus, family members support each other while making significant life decisions. Hence, family members and friends tend to support nascent social entrepreneurs when the policymakers and interested governmental organisations promote favourable rules on social enterprises as per the findings of this research. Therefore, these research findings would benefit policymakers and interested governmental organisations to make more favourable policies to increase social entrepreneurial behaviour.

Cognitive institutional environment (COG) was seen to have both significant positive direct and indirect impacts on social entrepreneurial intention (SEI), interested governmental organisations, NGOs, venture capitalists, incubators, accelerators and education providers need to promote COG to strengthen social entrepreneurial behaviour. The support organisations such as Yunus centre, Social Innovation Lab, YY Goshthi, Better Stories, Toru and TekShoi offers initial guidance and networking

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to the nascent social entrepreneurs for operating social enterprises. The COG directly influences SEI; thus, offering clear guidance and necessary information associated with social enterprises can be an opportunity to increase SEI in Bangladesh.

Also, COG positively influences social entrepreneurial self-efficacy (SESE), the clear guidance and necessary information associated with social enterprises can increase students' social entrepreneurial capabilities. The education providers such as universities can also increase SESE by introducing support programs and social service clubs for the interested students. For instance, start-ups Next is an incubation program of North South University to increase the university students SESE by offering start-ups training, networking and initial seed money. Currently, Bangladeshi education providers also host social business case competitions, social business champ, social business youth convention, Bangladesh Startup cup social, and BRACathon to offer the students initial cognitive knowledge and exposure. These cognitive knowledge motivates university students to be more confident in building a social enterprise as per this research findings. SESE directly influence social entrepreneurial intention (SEI). Therefore, these research findings would benefit the interested governmental organisations, NGOs and education providers to give clear guidelines and information on social entrepreneurship to minimise wasted effort and funding of social entrepreneurship.

Normative institutional environment (NORM) was seen to have only significant indirect impacts on social entrepreneurial intention (SEI), interested governmental organisations, NGOs, venture capitalists need to nurture the NORM to enhance perceived social support (PSS). These support organisations need to promote a positive mindset on the social entrepreneurship concept. For example, strong media coverage on 'Forbes Asia under 30 Social Entrepreneurs' representing youth social entrepreneurs of Bangladesh developed positive interest, awareness and admiration. Documentaries available on successful social entrepreneurs, such as Professor Yunus founder of Grameen Bank, Runa Khan founder of Friendship NGO, Sir Fazle Hasan Abed founder of BRAC etc. to inspire the interested groups. The strong media coverage on social entrepreneurship can motivate the personal networks of the nascent social entrepreneurs or the interested individuals to support the cause. These measures of positive promotion on social entrepreneurship can significantly increase PSS. Therefore, this research findings would benefit the interested governmental

organisations, NGOs and venture capitalists to invest in promoting social entrepreneurship to boost social entrepreneurial behaviour in Bangladesh.

The initiatives by the cognitive institutional environment (COG) and normative institutional environment (NORM) activates the moral obligation (MO). Although MO does not directly influence social entrepreneurial intention (SEI), it significantly increases empathy (EMP), perceived social support (PSS), and social entrepreneurial self-efficacy (SESE). Interested governmental organisations such as the social welfare ministry initiate plenty of programs to support the underprivileged groups in Bangladesh. These social welfare initiatives increases MO among the university students. The NGOs, such as BRAC, Grameen Bank and Jaago Foundation, offer internships and volunteer jobs for interested individuals to gain experience and contribute to the social task which also increases MO. The education providers such as universities run social services clubs to increase students' feelings on the societal obligation and social entrepreneurial interest. Therefore, this research findings would benefit the interested governmental organisations, NGOs and venture capitalists to invest on normative values and cognitive knowledge of social entrepreneurship to initiate MO; as a result, EMP, PSS and SESE increase.

The interested governmental organisations and NGOs can focus more on nurturing individuals aged over 25 to have a better chance of developing social entrepreneurs. This research findings suggest that mature adults tend to strengthen the relationship between social entrepreneurial self-efficacy and social entrepreneurial intention compared to young adults. It can help the support organisations to decide which age group to support for developing social enterprises in Bangladesh.

8.4 CONCLUSION

This chapter outlined the main discussion of the research findings based on the research objectives and the implications. In this research, each institutional- and individual-level antecedents played district roles in determining social entrepreneurial intention. The research output suggests that regulatory institutional environment, cognitive institutional environment, perceived social support, and social entrepreneurial self-efficacy are positively related to social entrepreneurial intention. The regulatory institutional environment, normative institutional environment and moral obligation are direct antecedents to perceived social support. The cognitive

institutional environment, moral obligation, empathy and perceived social support are direct antecedents to social entrepreneurial self-efficacy.

Furthermore, this research established a clear role of moral obligation in connecting the institutional- and individual-level constructs. After the discussion, a summary table of the hypotheses and the revised model supported by the data was generated to provide clear insights and understanding. This research made some major theoretical implications on the knowledge of social entrepreneurial intention by integrating two prominent theories. The integrated framework and multi-step mediation analysis complement and add value to the existing methodology and social entrepreneurship literature. Also, this research offered some key practical implications to the interested governmental and non-governmental support organisations. The next chapter discusses the research limitation and future directions and concludes.

9. LIMITATIONS, FUTURE RESEARCH AND CONCLUSION

9.1 INTRODUCTION

This research aimed to develop more knowledge into social entrepreneurial intention by integrating antecedents of the three pillars of institutions and the Mair Noboa model. In doing so, this research examined the relationships between institutional-level and individual-level antecedents in the context of social entrepreneurial intention. It also identified the interrelationship among the individual-level antecedents to measure social entrepreneurial intention. This chapter will review the limitations of this research and outline the future research directions, followed by the conclusion, which summarises the study.

9.2 RESEARCH LIMITATIONS

This research involved complex multi-level modelling with institutional- and individual-level antecedents combined. Although this research successfully provides better explanatory power on determining social entrepreneurial intention, some limitations might have affected the findings. The limitations of this research needed to be acknowledged for providing directions to future research.

First, this research findings are limited to self-reported intention rather than the real-life action to build the social enterprise. Although intention is considered as the strongest proxy for behaviour, it does not ensure observable action.

Second, the data was collected in the pre-COVID-19 era (February 2019–October 2019) for this research. Based on the current COVID-situation in Bangladesh, the university students might have a change of heart and perception of social entrepreneurship activities. Therefore, the findings of this research might not be fully valid or applicable for a post-COVID world. Even the new research on post-COVID can challenge the pre-COVID literature on social entrepreneurial intention.

Third, this research adopted a cross-sectional design for investigation due to time constraints. Therefore, the data were collected at a single point in time. Although longitudinal design would have been best suited for the long-run outcome, it is not feasible for this doctoral thesis. The best scenario might have been to collect data in two phases and in two different years to gain more insight and knowledge. However,

the scholarship to pursue PhD study is limited to three years which does not allow sufficient time and opportunity to collect data in two different years.

Fourth, this research was solely quantitative due to the nature of the research questions. However, a mix-method approach might have offered more balance and perspective to this multi-level modelling. For example, after establishing the multi-level modelling based on the quantitative approach, interviewing social entrepreneurs on validating these findings might have added more value and confidence to the overall research findings.

Fifth, the findings of this research are limited to research in only one country. The success of this multi-level model applies to Bangladesh only. Other countries need to replicate and apply this model to increase the validity and confidence of this research.

Sixth, the research findings are limited to only 15 universities in Bangladesh. Due to time constrain, a purposive sampling process was applied to select these universities. Also, the retrieved data were dominated by a few universities more than the others. It might have affected the generalisation of the findings. Setting a minimum amount of responses per university would have increased the validity of the findings.

Seventh, the valid sample is another limitation for this research. Only 177 responses were retrieved from the pilot study out of 455 attempted responses. Similarly, only 412 responses were claimed valid out of 617 attempted responses in the main study. In this process, data were lost, which restricts data analysis opportunities.

9.3 FUTURE RESEARCH DIRECTIONS

This research generates several opportunities for future research. The research limitations discussed above provide possible directions to future research. It can assist future researchers with better understanding on social entrepreneurial intention to explore new directions. The future research directions are outlined below in subsequent paragraphs.

Future research needs to acknowledge the potential effect of COVID-19 on the institutional- and individual-level antecedents. This pandemic triggered the importance of the overall welfare of society. Therefore, the research on increasing social entrepreneurial behaviour is more important than ever. Due to this crisis, the perspective on helping the needy might be different from the pre-COVID situation.

For example, empathy was not directly influenced by any of the institutional factors in this research, and these findings might be different in a post-COVID scenario. It is important to incorporate this research model in future studies to determine whether the social entrepreneurial intention changed in the post-COVID era.

The proposed conceptual model of this research is dynamic and can be adapted in any country. Thus, researchers can incorporate this research model in another country with a similar or even different context. Therefore, comparison studies between developing and developed countries can add value to the literature on post-COVID changes.

This research emphasised the importance of interrelationships between individual-level antecedents. This can be a positive avenue for future research to explore whether these interrelationships are also valid for other countries and whether other individual-level antecedents, such as personality traits, personal values dimension, etc., indicate similar findings or not.

This research findings identified the role of moral obligation as an important antecedent to both institutional- and individual-level factors. In future studies, moral obligations can act as a moderator on strengthening the relationship between the institutional- and individual-level antecedents.

This research indicates no moderating effect of prior experience on the relationship between the Mair Noboa model constructs and social entrepreneurial intention. The moderating role of prior experience needs to be investigated further to determine whether prior experience shows a similar effect in other contexts or not.

Data should be collected from a similar sample in two different years for future research to gain more valid insight and knowledge. For example, the first phase of data collection can be done on the first year and second-year university students; the second phase of data collection can be done on a similar sample when they are in the final year. This would allow an opportunity to determine whether the intention and perspectives of these students changed over this 1–2 year gap or not. Similarly, this can be done on the final year and graduate students to test how many of them really put their intention into reality.

A mixed methodology could add more insights to social entrepreneurial behaviour in future research. A combination of quantitative and qualitative methodology might add more value to this multi-level model research. As part of the process, a survey can be

conducted on the university students to determine their intention to become social entrepreneurs. In the second phase, interviews can be conducted on the social entrepreneurs of that country to validate those findings and add confidence to the overall research findings.

9.4 CONCLUSION

Social entrepreneurial intention assessment tends to associate mostly with individual-level antecedents in the past literature. Although some studies have investigated social entrepreneurial intention based on institutional-level antecedents, very few of them combined both individual and institutional-level antecedents to measure social entrepreneurial intention (SEI). Hence, this research developed a model combining institutional-and individual-level antecedents to measure SEI. In addition, this research investigated the interrelationships between the individual-level antecedents. Furthermore, this research hypothesised the influence of prior experience and age moderators in the proposed model. This research assembled the dynamic model as a response to the widespread calls in the social entrepreneurship literature to pay more attention to capture the complex interactions between different levels, e.g. institutional and individual. To do this, the research integrated the three pillars of institutions (TPI) and the Mair Noboa model (MNM) to address the knowledge gap that neither theory could independently fill.

The research findings indicate that institutional-level antecedents influence individual-level antecedents, providing better explanatory power of the combined effort of the two in determining SEI. The findings of the research highlight the integration of the TPI constructs and constructs of the MNM. For instance, the regulatory and normative institutional environments directly influence perceived social support. The normative and cognitive institutional environments directly influence moral obligation, whereas the cognitive institutional environment directly influences social entrepreneurial self-efficacy. Also, the research output indicates strong interrelationships between individual-level factors and their impact on SEI. For example, moral obligation directly influences empathy, perceived social support, and social entrepreneurial self-efficacy. Empathy and perceived social support directly influence social entrepreneurial self-efficacy.

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Although moral obligation indicated no direct influence on SEI, it has the strongest influence on institutional- and individual-level antecedents. The regulatory environmental institution, cognitive institutional environment, perceived social support, and social entrepreneurial self-efficacy are the direct impactful antecedents of SEI. Also, age strengthens the positive relationship between individual-level factor of social entrepreneurial self-efficacy and SEI. On the other hand, prior experience did not affect the relationship between MNM constructs and SEI.

This research findings offer several theoretical and methodological implications by integrating the three pillars of institutions and the Mair Noboa model; these findings contribute to the knowledge of social entrepreneurship. Moreover, the research findings can assist the policymakers, interested governmental organisations, NGOs, venture capitalists, incubators, accelerators, impact investors and education providers to identify potential nascent social entrepreneurs. The proposed conceptual model is dynamic and has the potential to be adapted in any country for future research. Therefore, this research advances the existing knowledge on social entrepreneurial intention through the lens of institutional- and individual-level antecedents.

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APPENDICES

APPENDIX 1: RECRUITMENT EMAIL

Subject: Request for Participation in a Research Survey focusing on Social Entrepreneurial Intention in Bangladesh

Dear Student,

My name is Mehree Iqbal and I am a PhD student in the School of Management at Curtin University working under the supervision of Dr Louis Geneste and Dr Paull Weber.

The reason I am contacting you is that we are conducting a study that identifies the specific factors influencing social entrepreneurial intention that can facilitate social welfare in Bangladesh. For this study, we are seeking university students who are enrolled in any academic year and degree as respondents. There is a participant information form attached to this email that provides you with the details of the research project including why we are asking you to take part in the survey and the benefits and risks associated with your involvement in this study.

The survey should take you around 20-30 minutes to complete, and you have until October 7th 2019 to submit your response. You can access the survey from your laptop or mobile device by clicking on the link below. All your replies would be anonymous and confidential.

I would like to assure you that the Curtin University Human Research Ethics Committee (HREC) has approved this study (HREC number HRE2018-0775). Your participation is completely voluntary and you can withdraw at any time without providing an explanation and without negative consequences.

Your link to take the survey is here: ....

Kind Regards,

Mehree Iqbal

APPENDIX 2: PARTICIPANT INFORMATION STATEMENT

HREC Project Number:	HREC XXXX
Project Title:	**Social Entrepreneurial Intention: An Institutional Theory and Theory of Planned Behaviour Approach**
Chief Investigator:	Dr Louis Geneste, Lecturer, School of Management Curtin Business School, Perth, Australia
Student researcher:	Mehree Iqbal, PhD Student, School of Management
Version Number:	1
Version Date:	22/11/2018

What is the Project About?

This project aims to provide insight into factors that influence university students on becoming social entrepreneurs in Bangladesh. This study identifies the country support and personal choices that influence the intention of individuals to venture into social entrepreneurship. The proposed framework combines two robust theories for social entrepreneurship: Institutional Theory and the Theory of Planned Behaviour and their influence on social entrepreneurial intention.

Who is doing the Research?

The project is being conducted by Mehree Iqbal. I am a doctoral student at Curtin University and the results of this research project will be used by me to get insights for my doctoral research study.

Why am I being asked to take part and what will I have to do?

You have been invited to participate, as you are currently a student in a Bangladeshi university. You will be asked to complete a survey via Qualtrics. Questions have been designed and broken up into sections based on demographics and multidimensional interconnections between a number of domains, such as personal, home, government, and community. The majority of questions are in multiple choice, Likert-Scale or checkbox format. There are two (2) qualitative questions which will help provide additional information on social entrepreneurial intention based on your experiences. This survey should take no longer than 20-30 minutes to complete.

Are there any benefits' to being in the research project?

There may be no direct benefit to you from participating in this research. In the future, students might be able to benefit from this research as the results can help identify the specific factors influencing social entrepreneurial intention that can facilitate social welfare in Bangladesh. Policy makers can benefit from this research as they can use this data to inform policies and programs regarding the promotion of social entrepreneurial activity in students.

Are there any risks, side-effects, discomforts or inconveniences from being in the research project?

There are no foreseeable risks from this research project. Apart from giving up your time, we do not expect that there will be any risks or inconveniences associated with taking part in this study.

Who will have access to my information?

Your participation in this research is anonymous whereby data is collected in a way that it cannot be known or ascertained who has participated in this research. There are no right or wrong answers so respondents can answer questions as honestly as possible. The security and confidentiality of all information will be ensured by storing it securely on a password protected computer in the Chief Investigator's office. Data will be kept for a period of seven (7) years, and will then be destroyed.

The results of this research may be presented at conferences or published in professional journals. You will not be identified in any results that are published or presented.

Will you tell me the results of the research?

Results of this study will be made available to interested participants after the completion of the study. Participants can check a box at the end of the survey in regard to receiving the results from this research upon its completion. For those who wish to receive the results, a space is provided where an email address can be entered. This email address will only be used by the researchers to communicate the results of this study.

Do I have to take part in the research project?

Your participation is completely voluntary and you can withdraw at any time without providing an explanation and without negative consequence. Your participation is still treated as confidential and you will not be identified by this research.

What happens next and who can I contact about the research?

- Ms. Mehree Iqbal (mehree.iqbal@student.curtin.edu.au)
- Dr Louis Geneste, Lecturer (l.geneste@curtin.edu.au)
- Dr Paull Weber, Senior Lecturer (p.weber@curtin.edu.au)

By completing the survey for this this study, you agree that you have received information regarding this research and had an opportunity to ask questions. You understand the purpose, extent and possible risks of your involvement in this project and you voluntarily consent to take part.

Curtin University Human Research Ethics Committee (HREC) has approved this study. Should you wish to discuss the study with someone not directly involved, in particular, any matters concerning the conduct of the study or your rights as a participant, or you wish to make a confidential complaint, you may contact the Ethics Officer on (08) 9266 9223 or the Manager, Research Integrity on (08) 9266 7093 or email hrec@curtin.edu.au

APPENDIX 3: SURVEY QUESTIONNAIRE PILOT STUDY

'A Social Entrepreneur aims to help society and create social value in addition to economic value. Some examples of the social entrepreneurs practicing social entrepreneurship include micro-finance organizations (Grameen Bank), non-profits (JAAGO Foundation) helping a disadvantaged population (homeless, children) or a for-profit venture (Aarong) that donates profits to charity or helps society in some way.'

This is a study about your intention towards social entrepreneurship. The survey should take you around 20-30 minutes to complete. We hope from the results of this research will allow us to identify the specific factors influencing social entrepreneurial intention that can facilitate social welfare in Bangladesh. There are no foreseeable risks from this research project. Apart from giving up your time, we do not expect that there will be any risks or inconveniences associated with taking part in this study. The information we collect in this study will be kept under secure conditions at Curtin University for 7 years after the research is published and then it will be destroyed.

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If participants have any questions regarding this research, please contact Dr Louis Geneste at l.geneste@curtin.edu.au and Ms. Mehree Iqbal at mehree.iqbal@student.curtin.edu.au

By clicking the button below, you acknowledge that your participation in the study is voluntary, you are a university student, and that you are aware that you may choose to terminate your participation in the study at any time and for any reason.
> o I consent, begin the study
> o I do not consent, I do not wish to participate

Please answer all the questions truthfully. There are no right or wrong answers. All your replies will be anonymous and confidential. We will not record any personally identifiable information about you and your responses would be analyzed and reported only in an aggregate form.

Thank you very much for your participation in this study.

Q1 Do you have any social experience.
 (e.g., any voluntary or community work through online or any organization/club)

o   Yes
o   No

Q1a For how long?
  •   In months _____

Q1b Please Specify,
  •   the kind of social activities

         _____

Q2 Please indicate your level of agreement with the following statements (1=strongly disagree, 2=disagree, 3=neither agree nor disagree, 4=agree, 5=strongly agree)

When thinking about socially disadvantaged people, I try to put myself in their shoes	1	2	3	4	5
I feel compassion for socially marginalized people	1	2	3	4	5
I do care how people feel who live on the margins of society	1	2	3	4	5
Seeing socially disadvantaged people triggers an emotional response in me	1	2	3	4	5
I find it easy to feel compassionate for people less fortunate than myself	1	2	3	4	5

Q3 Please respond to the following questions (1=never, 2=sometimes, 3=about half the time, 4=most of the time, 5=always)

It is one of the principles of our society that we should help socially disadvantaged people	**1**	**2**	**3**	**4**	**5**
I do experience much emotion when thinking about socially excluded people	**1**	**2**	**3**	**4**	**5**
We are morally obliged to help socially disadvantaged people	**1**	**2**	**3**	**4**	**5**
It is an ethical responsibility to help people less fortunate than ourselves	**1**	**2**	**3**	**4**	**5**
Social justice requires that we help those who are less fortunate than ourselves	**1**	**2**	**3**	**4**	**5**

Q4 Please indicate your level of agreement with the following statements (1=strongly disagree, 2=disagree, 3=neither agree nor disagree, 4=agree, 5=strongly agree)

I am convinced that I personally can contribute to address societal challenges if I put my mind to it	**1**	**2**	**3**	**4**	**5**
I could figure out a way to help solve the problems that society	**1**	**2**	**3**	**4**	**5**
Each of us should contribute to solving societal problems	**1**	**2**	**3**	**4**	**5**
I believe it is possible for me to bring significant social change	**1**	**2**	**3**	**4**	**5**

If I were to start a social enterprise, I would expect to receive plenty of support	1	2	3	4	5

Q5 Please indicate your level of agreement with the following statements (1=strongly disagree, 2=disagree, 3=neither agree nor disagree, 4=agree, 5=strongly agree)

	1	2	3	4	5
My family, friends, and personal networks would support me if I want to start an organization to help socially marginalized people	1	2	3	4	5
My family, friends, and personal networks would back me up if I planned to address a significant societal problem	1	2	3	4	5
It is possible to attract investors for an organization that wants to solve social problems	1	2	3	4	5
Government organizations should assist individuals in starting their own social ventures	1	2	3	4	5
Government sets aside government contracts for new and small social ventures	1	2	3	4	5
Local and national governments have support for individuals starting a social venture	1	2	3	4	5
Even after failing, government should assist social entrepreneurs starting again	1	2	3	4	5

Q6 Please respond to the following questions (1=never, 2=sometimes, 3=about half the time, 4=most of the time, 5=always)

	1	2	3	4	5
At some point in the future, I expect that I will be involved in launching an organization that aims to solve social problems	1	2	3	4	5
I have a preliminary idea for a social enterprise on which I plan to act in the future	1	2	3	4	5
I do not plan to start a social enterprise	1	2	3	4	5
My qualification has contributed positively towards my interest in starting a social venture	1	2	3	4	5
I had a strong intention to start my own social venture before I started studying	1	2	3	4	5
I am ready to do anything to be a social entrepreneur	1	2	3	4	5

Q7 Please reflect upon why you want to start your social enterprise?

_____

Q8 Please indicate your level of agreement with the following statements (1=strongly disagree, 2=disagree, 3=neither agree nor disagree, 4=agree, 5=strongly agree)

	1	2	3	4	5
Individuals in Bangladesh know how to protect a new social venture legally	1	2	3	4	5
Those who start a new social venture in Bangladesh know how to deal with risk	1	2	3	4	5
Those who start a new social venture in Bangladesh know how to manage risk	1	2	3	4	5
Most people know where to find information about markets for their services	1	2	3	4	5
Those who start their own social ventures are greatly admired by the people of Bangladesh	1	2	3	4	5

Q9 Please indicate your level of agreement with the following statements (1=strongly disagree, 2=disagree, 3=neither agree nor disagree, 4=agree, 5=strongly agree)

	1	2	3	4	5
Innovative and creative thinking is observed as a route to success in Bangladesh	1	2	3	4	5
Turning new ideas into social ventures is admired in Bangladesh	1	2	3	4	5
Social entrepreneurs are admired in Bangladesh	1	2	3	4	5
Government sponsors organizations that help new social ventures develop	1	2	3	4	5

Q10 What is your current age?
o   21 - 25
o   26 - 30
o   31 - 35
o   35 - 40
o   40 and above

Q11 What gender do you identify as?
o   Male
o   Female
o   Transgender
o   Other

Q12 What division are you from?
o   Barishal
o   Chattogram
o   Dhaka
o   Khulna
o   Mymensingh
o   Rajshahi
o   Rangpur
o   Sylhet

Q13 Which university are you currently enrolled in?
o North South University (NSU)
o Independent University Bangladesh (IUB)
o Dhaka University (DU)
o University of Liberal Arts Bangladesh (ULAB)
o BRAC University (BU)
o American International University (AIUB)
o East West University (EWU)
o Other, please specify _____

Q14 Which degree are you currently enrolled in?
o   Undergraduate
o   Postgraduate

Q15 What year of your degree are you currently in?
o   First
o   Second
o   Third
o   Fourth or more

Q16 What school/faculty/department is your degree in? (e.g.: Business School, Computer Science, Economics, English, etc.)

_____

Q17 Please reflect upon what the Government can do to motivate individuals like you to start a social entrepreneurship?

APPENDIX 4: SURVEY QUESTIONNAIRE MAIN STUDY

'A Social Entrepreneur aims to help society and create social value in addition to economic value. Some examples of the social entrepreneurs practicing social entrepreneurship include micro-finance organizations (Grameen Bank), non-profits (JAAGO Foundation) helping a disadvantaged population (homeless, children) or a for-profit venture (Aarong) that donates profits to charity or helps society in some way.'

This is a study about your intention towards social entrepreneurship. The survey should take you around 20-30 minutes to complete. We hope the results of this research will allow us to identify the specific factors influencing social entrepreneurial intention that can facilitate social welfare in Bangladesh. There are no foreseeable risks from this research project. Apart from giving up your time, we do not expect that there will be any risks or inconveniences associated with taking part in this study. The information we collect in this study will be kept under secure conditions at Curtin University for 7 years after the research is published and then it will be destroyed.

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By clicking the button below, you acknowledge that your participation in the study is voluntary, you are a university student, and that you are aware that you may choose to terminate your participation in the study at any time and for any reason.
> o I consent, begin the study
> o I do not consent, I do not wish to participate

Please answer all the questions truthfully. There are no right or wrong answers. All your replies will be anonymous and confidential. We will not record any personally identifiable information about you and your responses would be analyzed and reported only in an aggregate form.

Thank you very much for your participation in this study.

Q1 Please indicate your level of agreement with the following statements (1=strongly disagree, 2=disagree, 3=neither agree nor disagree, 4=agree, 5=strongly agree)

When thinking about socially disadvantaged people, I try to put myself in their shoes	1	2	3	4	5
Seeing socially disadvantaged people triggers an emotional response in me	1	2	3	4	5
I feel compassion for socially marginalized people	1	2	3	4	5
I do care how people feel who live on the margins of society	1	2	3	4	5
I experience much emotion when thinking about socially excluded people	1	2	3	4	5
I find it easy to feel compassionate for people less fortunate than myself	1	2	3	4	5
It is an ethical responsibility to help people less fortunate than ourselves	1	2	3	4	5

Q2 Please indicate your level of agreement with the following statements (1=strongly disagree, 2=disagree, 3=neither agree nor disagree, 4=agree, 5=strongly agree)

We are morally obliged to help socially disadvantaged people	1	2	3	4	5
Social justice requires that we help those who are less fortunate than ourselves	1	2	3	4	5
It is one of the principles of our society that we should help socially disadvantaged people	1	2	3	4	5
I am convinced that I personally can contribute to address societal challenges if I put my mind to it	1	2	3	4	5
I could figure out a way to help solve the problems of the society	1	2	3	4	5
Solving societal problems is something each of us can contribute to	1	2	3	4	5
I believe it is possible for me to bring about significant social change	1	2	3	4	5

Q3 Please indicate your level of agreement with the following statements (1=strongly disagree, 2=disagree, 3=neither agree nor disagree, 4=agree, 5=strongly agree)

I am confident in creating new products or services to solve social problems	1	2	3	4	5
I can commit to help people	1	2	3	4	5
I can think creatively to benefit others	1	2	3	4	5
I can commercialize an idea for social enterprise	1	2	3	4	5
It is possible to attract investors for an organization that wants to solve social problems	1	2	3	4	5
People would support me if I wanted to start an organization to help socially marginalized people	1	2	3	4	5

If I planned to address a significant societal problem, people would back me up	1	2	3	4	5

Q4 Please indicate your level of agreement with the following statements (1=strongly disagree, 2=disagree, 3=neither agree nor disagree, 4=agree, 5=strongly agree)

If I were to start a social enterprise, I would expect to receive plenty of support	1	2	3	4	5
I expect that at some point in the future I will be involved in launching an enterprise that aims to solve social problems	1	2	3	4	5
I have a preliminary idea for a social enterprise on which I plan to act in the future	1	2	3	4	5
I do plan to start a social enterprise	1	2	3	4	5
My qualification has contributed positively towards my interest in starting a social enterprise	1	2	3	4	5
I had a strong intention to start my own social enterprise before I started studying	1	2	3	4	5
I am ready to do anything to be a social entrepreneur	1	2	3	4	5
I have volunteered or otherwise worked with social enterprises	1	2	3	4	5
I have some experience working with social problems	1	2	3	4	5
I know a lot about social enterprises	1	2	3	4	5

Q4 Please indicate your level of likelihood with the following statements (1=extremely unlikely, 2=somewhat unlikely, 3=neither likely nor unlikely, 4=somewhat likely, 5= extremely likely)

I have very seriously thought of starting an enterprise that helps society in some way.	1	2	3	4	5
My professional goal is to be a social entrepreneur	1	2	3	4	5
Turning new ideas into social ventures is admired in this country	1	2	3	4	5
In this country, innovative and creative thinking is viewed as a route to success	1	2	3	4	5
Social entrepreneurs are admired in Bangladesh	1	2	3	4	5
People in Bangladesh greatly admire those who start own social ventures	1	2	3	4	5
Government organisations assist individuals in starting their own social ventures	1	2	3	4	5

Q5 Please indicate your level of likelihood with the following statements (1=extremely unlikely, 2=somewhat unlikely, 3=neither likely nor unlikely, 4=somewhat likely, 5= extremely likely)

	1	2	3	4	5
Government sponsors organizations that help new social ventures develop	1	2	3	4	5
Local and national governments have support for individuals starting a social venture	1	2	3	4	5
Government sets aside government contracts for new and small social ventures	1	2	3	4	5
Even after failing, government should assist social entrepreneurs starting again	1	2	3	4	5
Individuals in Bangladesh know how to protect a new social venture legally	1	2	3	4	5
Those who start new social ventures in Bangladesh know how to deal with risk	1	2	3	4	5
Those who start new social ventures in Bangladesh know how to manage risk	1	2	3	4	5
Most people know where to find info about markets for their services	1	2	3	4	5

Q6 What is your current age?
o　　　16 - 20
o　　　21 - 25
o　　　26 - 30
o　　　31 - 35
o　　　35 - 40
o　　　40 and above

Q7 What gender do you identify as?
o　　　Male
o　　　Female
o　　　Transgender
o　　　Prefer not to say

Q8 What division are you from?
o　　　Barishal
o　　　Chattogram
o　　　Dhaka
o　　　Khulna
o　　　Mymensingh
o　　　Rajshahi
o　　　Rangpur
o　　　Sylhet

Q9 Which university are you currently enrolled in?
o North South University (NSU)
o Independent University Bangladesh (IUB)
o Dhaka University (DU)
o University of Liberal Arts Bangladesh (ULAB)
o BRAC University (BU)

o American International University (AIUB)
o East West University (EWU)
o Other, please specify _____

Q10 Which degree are you currently enrolled in?
o   Undergraduate
o   Postgraduate

Q11 What year of your degree are you currently in?
o   First
o   Second
o   Third
o   Fourth or more

Q12 What school/faculty/department is your degree in?(e.g.: Business School, Computer Science, Economics, English, etc.)

Q13 Please reflect upon what the Government can do to motivate individuals like you to start a social entrepreneurship?