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# SEX MAY SELL BUT GENDER IDENTITY PREDICTS: AN INVESTIGATION OF COLLEGE STUDENTS' PROPENSITY TO JOIN ENTREPRENEURSHIP CLUBS

Jerald Wallace

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SEX MAY SELL BUT GENDER IDENTITY PREDICTS: AN INVESTIGATION OF  
COLLEGE STUDENTS' PROPENSITY TO JOIN ENTREPRENEURSHIP CLUBS

by  
Jerald L. Wallace

A Dissertation

Presented in Partial Fulfillment of Requirements for the  
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Coles College of Business  
Kennesaw State University

Kennesaw, GA  
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*“So God created mankind in His own image, in the image of God He created them; male and female He created them.”*

Genesis 1:27

## ABSTRACT

### SEX MAY SELL BUT GENDER IDENTITY PREDICTS: AN INVESTIGATION OF COLLEGE STUDENTS' PROPENSITY TO JOIN ENTREPRENEURSHIP CLUBS

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A rich and diverse stream of research has focused on assessing different outcomes between men and women entrepreneurs. Popular stereotypes maintain that women are neither as interested, or successful as entrepreneurs compared to men. However, most past research has used biological sex as a proxy to measure differences between women and men dichotomously. The problem with this approach is that it is an oversimplified approach to a complex issue. To address this problem, the more recent literature suggests the inclusion of more meaningful variables, such as gender identity, an individual's concept of their traits both masculine and feminine, to assess perceived differences between women and men in general, and their interest to engage in entrepreneurship in particular. Based on relevant research in entrepreneurship, psychology, gender studies, sociology, vocational behavior, social linguistics, and educational pedagogy, the present study develops and tests a series of hypotheses utilizing variables within the entrepreneurial environment that are gendered in nature and predict entrepreneurial interest. The competitive climate of the entrepreneurial environment influencing men and women considering the field will further elucidate the causal linkages. Specifically, the

influence of gender identity, personality characteristics related to gender, and perceptions of fit into entrepreneurship communities is investigated based on college students' intent to engage in entrepreneurial clubs and associations at their universities. The results from this study will contribute to the literature on gender and entrepreneurship in areas previous research has not fully considered. The practical contributions of this research are aimed at better identifying past and present barriers to opportunity and promoting educational pedagogy that looks beyond the limitations of sex categorization.

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## CHAPTER 1: INTRODUCTION

Popular stereotypes maintain that women are neither as interested, nor as successful in entrepreneurship as men (Gupta, Turban & Bhawe, 2008; Gupta, Turban & Pareek, 2013; Gupta, Goktan & Gunay, 2014). Historically, empirical findings seem to have supported these assertions (e.g., Collins-Dobb, Gordon, & Smart, 2004; Fairlie & Robb, 2009; Green, Hart, Gatewood, Brush, & Carter, 2003; Koch, D’Mello & Sackett, 2015). The current study will uncover the relational linkage between gender identity, self-efficacy, perseverance, competitive climate with the interest to enter certain entrepreneurial communities. This will be accomplished by studying students’ intentions to join one of three university entrepreneur clubs, one coded masculine, one coded feminine, and one without obvious gender coding.

### 1.1 Gender Identity

Most studies assessing differences between men and women in entrepreneurship have tended to focus exclusively on the sex of the entrepreneur as the predictor of intentions to engage in entrepreneurial communities and even as a predictor of success (Ayala & Manzano, 2014; Chaganti & Parasuraman, 1996; Fairlie & Robb, 2009; Wilson et al., 2007). The problem with this approach, however, is that it takes a simplistic binary approach to a far more complex issue that demands a finer grained analysis (Gupta et al., 2014). Further, this approach assigns tendencies and psychological antecedents in the environment of entrepreneurship to a sex category rather than an individual’s gender

identity. This traditional method of assigning gender tendencies to sex categories has limited the understanding of the individualistic tendencies considered necessary in entrepreneurship (Markman & Baron, 2003; Wilson et al., 2007; Zhao et al., 2005).

The apparent gap in interest in entrepreneurship between men and women has translated into many studies suggesting that men are more likely to become entrepreneurs than women are (Santos et al., 2016; Shinnar et al., 2012). For example, research has demonstrated that male students have a higher propensity to take courses with degree concentrations in entrepreneurship than female students (Menzies & Tatroff, 2006). The scholarly explanation for this disparity has been that women are more likely to perceive that entrepreneurship does not fit their personality (Menzies & Tatroff, 2006; Santos et al., 2016). It could be argued that this perception is based more on gender stereotyping and environmental climate fit perception rather than individual sex. In a modern egalitarian society such as the United States, differences in entrepreneurship interest between men and women should be minimal or non-existent. Hence, factors other than biological sex are needed to explain variation in entrepreneurial interest and activity between genders.

The traditional past practice of using biological sex as a proxy for more meaningful psychological processes has been criticized by numerous scholars (Ahl, 2006; Bird & Brush, 2002; Eddleston et al., 2006). Conflating sex with gender and treating them as the same binary opposition has perpetuated a discourse that has treasured differences over similarities and reinforced the ideology of the status quo. This simplistic approach to sex and differences between men and women in past entrepreneurship

research has undermined researchers' ability to better understand individual interest, or lack thereof, in entrepreneurship. Therefore, scholars have called for research that transcends the limiting traditions of categorization and instead investigates the mechanisms that move individuals into the domain of entrepreneurship (Ahl, 2006).

The current study will thus consider gender identity rather than biological sex. Unlike sex and its "either or" binary categorization of women and men, gender identity represents the extent to which an individual conforms to traditional gender stereotypes (Bem, 1974). Gender stereotypes are societal shared beliefs about what psychological tendencies are characteristic for or assigned to each sex (Eagly & Steffen, 1984). These societal assignments are not exclusive to sex, as most individuals possess a combination of both masculine and feminine traits. Some of the traits are sex related (nature), although many are developed (nurture) through life experience (Martin et al., 2002).

Knowledge of gender stereotypes is developed during childhood and these stereotypes become social markers that determine future decisions (Martin et al., 2002). The career and occupational literature shows that these accepted social and behavioral norms about gender concepts influence individual beliefs about efficacy and thus guide vocational decisions and eventual career choices (Lent et al., 1994). Understanding gender identity differences and their affect in the decision to engage in entrepreneurship is of critical importance, both for the field of entrepreneurship overall and with respect to the gender gap in entrepreneurial involvement.

## 1.2 Self-efficacy, Perseverance, and Competitive Climate Perceptions

In addition to gender identity, other psychological traits considered antecedents for entrepreneurship (Markman & Baron, 2003), are entrepreneurial self-efficacy (Chen et al., 1998; Wilson et al., 2007) and perseverance (Markman et al., 2005). Both have been shown to be vital to the individual in the uncertain environment of entrepreneurship (Markman et al., 2005; Wilson et al., 2007) and have been considered gender-identity specific. Additionally, perceptions of the environmental climate, and whether one perceives it as competitive or not, will be the third moderator. All moderators are considered gender relevant to environmental choice expecting to increase or decrease this study's primary relationship.

### 1.3 Purpose and Methods of the Study

The purpose of this study will be to build and test a set of hypotheses, based on research and theory within entrepreneurship, gender studies, psychology, and other related disciplines, in which the influence of gender identity, self-efficacy, perseverance and environmental perception on the choice of becoming involved with entrepreneurial communities is tested (Hamilton, 2013; Saridakis et al., 2014;). Gender identity, represented by the dimensions of masculinity and femininity that varies among each sex, may better explain variance among women interested in entrepreneurship. In particular, women entrepreneurs who do and have lead high growth ventures (Eddleston & Powell, 2008). Person-environment fit will provide the theoretical basis for the proposed model (Kristof-Brown et al., 2005; Markman-Baron, 2003). Person-environment fit theory, broadly defined, is the compatibility between an individual and a work environment that occurs when the individual's characteristics are aligned with a particular environment

(Kristof-Brown et al., 2005). More specifically, person-entrepreneurship fit (Markman & Baron, 2003) will provide a framework to better accommodate the environmental demands of entrepreneurship, typically considered a masculine environment (Lewis, 2006). Person-environment fit theories have had a large influence on career research (Wang & Wanberg, 2017), where “interest” has been the major independent variable representing career choice. Given this past career research, applying person-environment fit (Lent et al., 1994; Lent et al., 2002), this study will consider interest as a proxy for entrepreneurial intentions.

The interest of women students in undergraduate entrepreneurship courses are a minority when compared to men (Menzies & Tatroff, 2006). Therefore, the interest of a student population in joining different entrepreneurial clubs will be used to determine interest in entrepreneurship involvement. Language varieties that have been shown to symbolize different gender identities (Holmes, 1997) will be used in an experimental manipulation to promote three different entrepreneurial clubs, one advertised in masculine-coded language, one advertised in feminine-coded language, and one advertised in neutral language, in order to direct students’ choice into a prescribed gendered environment. Moreover, subtle linguistic cues have shown to signal group-based ostracism leading to members avoiding certain environments (Stout & Dasgupta, 2011). It is expected that the gender identity of the person will align with the gendered prescribed club. Additionally, the moderating variables of self-efficacy, perseverance, and climate perception are expected to increase or decrease the perceived associated fit.

Unlike previous research, which focused exclusively on the sex of the entrepreneur as the predicting variable of entrepreneurial engagement, this study will employ the more complete conceptualization of gender identity (Eddleston & Powell, 2008; Germain et al., 2012; Goktan & Gupta, 2015). Thus, the present research will contribute to the existing literature on entrepreneurship by providing a more precise predictor than merely the category of biological sex. This research contribution will also allow the exploration of differences within each sex, thus, providing a better understanding why some women (and men) display more interest than others in entrepreneurial involvement. This study represents one of the first steps towards a more comprehensive understanding of individual tendency factors relevant to interest into entrepreneurship.

These theoretical and research contributions are accompanied by a number of important practical contributions. Women's underrepresentation as entrepreneurs contributes to their global economic disempowerment (Ahl & Marlow, 2012). Increased knowledge about the mechanisms underlying women's reluctance to enter into entrepreneurship can help policymakers and educators to provide better resources and pedagogy to remediate these issues. Instead of taking a gender-essentialist perspective that assumes women's lack of interest as entrepreneurs is due to the fact that they are women (Crompton & Lyonette, 2005; England, 2010), the perspective put forth within this study has strong policy implications that can help develop institutional change in better communicating and enhancing their ability to attract more women into entrepreneurship.

#### 1.4 Structure of the Dissertation

The remainder of this proposal is structured as follows. Chapter 2 first provides the context and background for the current proposal by defining and reviewing relevant research from the field of entrepreneurship. Research on gender is then reviewed, followed by a section providing a review of gender in entrepreneurship. Next, Person-Environment Fit theory is presented to provide the theoretical underpinnings for the model that will be developed. To conclude Chapter 2 a conceptual model linking gender-related variables from the individual and contextual sides of the entrepreneurial interface will be presented. Chapter 3 presents the methodology to test the model proposed in Chapter 2 followed by the results in Chapter 4. Finally, Chapter 5 will conclude in a discussion of the findings, both theoretically and practically.

## CHAPTER 2: LITERATURE REVIEW

Like many other industries and vocations, entrepreneurship has historically been male dominated. Until the 1970s, men were the predominant population involved in entrepreneurial activity (Lewis, 2006). Consequently, the bulk of early theory and research on entrepreneurship was focused on male entrepreneurs (Brush, De Bruin, & Welter, 2009). Women and their needs and concerns are generally missing from early work and this work still underlies much of the current literature. As a result, much of the entrepreneurship literature shows a gender bias (Ahl, 2006; Brush et al., 2009; Hisrich & Brush, 1984; Hughes, Jennings, Brush, Carter, & Welter, 2012; Powell & Eddleston, 2013). In the current chapter, gender and gender identity are addressed in Section 2.2. Section 2.1 reviews the literature on entrepreneurship.

### 2.1 Entrepreneurship

Entrepreneurial endeavors are generally defined as those that involve some combination of ownership and control (Gorgievski & Stephan, 2016). Entrepreneurship can also be differentiated from similar areas of study in that the entrepreneurial environment can be thought of as being in a constant state of disequilibrium, where lucrative opportunities appear or are created and are recognized and pursued by alert entrepreneurs (Kirzner, 1997; 1999). Therefore, entrepreneurship is thought of as a somewhat more volatile and risky endeavor than many other areas of business (Shane & Venkataraman, 2000).

Opportunity has been a central theme within the field of entrepreneurship, and much of the field of entrepreneurship has traditionally focused on the recognition and exploitation of opportunity (Shane & Venkataraman, 2000; Venkataraman, 1997). An opportunity is not an objective concept that is the same for every entrepreneur. It is essentially a future situation discovered and deemed desirable and feasible in the subjective view of an individual (Alvarez et al., 2010; Krueger & Brazeal, 1994).

Individual factors and entrepreneurial capabilities such as cognitive ability, personality, and other psychological traits are considered essential to entrepreneurship. Since these factors have been linked to both the desire to pursue opportunities and the eventual success of those pursuits, they have been a major focus of research (Krueger & Brazeal, 1994; Townsend et al., 2010). Unique individual characteristics such as knowledge structures, cognitive processes, and self-image direct the ability of the entrepreneur to recognize and exploit a given opportunity (McMullen, & Jennings, 2007; Mitchell & Shepherd, 2010; Shepherd). In addition, individual cognitive styles (patterns used when framing and solving problems) can facilitate or inhibit involvement when confronted with the inherent challenges within entrepreneurship (Baron, 2004; Brigham, De Castro, & Shepherd, 2007; Gregorie et al., 2011). For example, when new information about a potential opportunity becomes available, some individuals may view this as a potential possibility while others only see the risk and challenges involved. It is only the entrepreneur who sees an opportunity and is willing to attempt to exploit it (Shane, 2003).

The entrepreneurial nexus, the intersection of the individual with an opportunity (Venkataraman, 1997), has been conceptualized as a micro-level perspective and process (Davidsson, 2015). Opportunity had been a difficult concept to operationalize in the past, but viewing it from a micro-level perspective, has helped to separate out the choice variable within the opportunity nexus with opportunity confidence being a key individuated perception (Davidsson, 2015). In a micro-level perspective, three constructs are recognized to include *external enablers*; circumstances that make new venture creation possible, and *new venture ideas*; imaginary new combinations of product or service offerings, markets, or means of production. These two dimensions are opportunity driven, and their perceived strength viewed by the individual determines the third dimension, *opportunity confidence*, or the subjective evaluation of the individual given environmental perception factors. In other words, individual factors intersect the opportunity environment and a fit perception is evaluated. The strength of opportunity confidence includes self-confidence in one's ability to exploit and fully execute on the opportunity. Opportunity confidence is of great importance, as it serves as the decision variable and antecedent to the individual's choice of entrepreneurship involvement (Davidsson, 2015; Suddaby et al., 2014).

Cognition research has investigated the knowledge structures that entrepreneurs use to make decisions to exploit, assess, judge, and evaluate opportunities (Gregorie et al., 2010; Mitchell et al., 2002). De Carolis and Saporito (2006) found that opportunities are influenced by individuals' cognitions and their ability to develop social capital. In particular, De Carolis and Saporito suggested that entrepreneurial behaviors are the result

of the interplay of environments and certain cognitive biases of the individual. There are many cognitive biases that may affect one's thinking, both negative and positive. An example is over-confidence, which leads to treating one's assumptions as fact while ignoring new information. Cognitive biases become a unique individualistic "perspective lens" on how one views situations or opportunities. Cognitive biases lead to beliefs, which have been found to play a role in entrepreneurial action (Shepherd et al., 2007). Each individual's perception of an opportunity is unique, as he or she brings idiosyncratic cognitive resources to bear (Grégoire, Corbett, & McMullen, 2011). For example, Mitchell and Shepherd (2010) researched self-image as it pertains to decision-making. Their findings suggest that entrepreneurs' perceptions of opportunity are dictated by their self-image and their own assessment of their ability to act on an opportunity. This perceptual self-image lens on one's abilities is tainted with a bias towards capability or vulnerability, unique to the individual. The cognitive bias, forged through life experience, is shaped by one's past social environment exposure, which includes gender identity markers. The individual difference factors as they relate to entrepreneurship are discussed in the next section.

### 2.1.1 Individual Difference Factors

An individual difference approach has been understanding "who" becomes an entrepreneur and the associated interest in entrepreneurship is reflected in the large number of publications and literature reviews surrounding entrepreneurship (Gorgievski & Stephan, 2016). The focus in this particular research area has been on personality traits that are linked to ways of thinking, feeling, and behaving. In essence, soft skills such as

preferences, effort, and motivations are strong predictors of success in life (Heckman & Kautz, 2012). Individual difference factors that are gender relevant to entrepreneurship, such as self-efficacy and perseverance, are further elucidated upon below in order to develop a testable model.

2.1.1.1 self-efficacy. An important aspect of self-efficacy is that individuals tend to choose environments in which they feel confident (Chen et al., 1998). The idea of self-efficacy was originally derived from Bandura's (1977) social learning theory and is based on an individual's self-perception of their skills and abilities. This concept incorporates a person's innermost belief about themselves and their confidence in attaining certain goals (Boyd & Vozikis, 1994). Self-efficacy is domain specific (Bandura, 1989), meaning a person can have high self-efficacy in a certain task but low self-efficacy in another. Although men and women do not differ in ability, women, on average, tend to have lower self-efficacy (Hyde, 2014; Wilson et al., 2007). Cognitive constructs related to the environment, such as outcome expectations and perceived social support or barriers represent cognitive appraisals of the task environment that may limit confidence rather than the individual self (Zhao et al., 2005). In essence, past research suggests that women may feel as capable in performing entrepreneurial tasks as men, but still perceive the environment as more difficult or less rewarding than men. Given that entrepreneurs view themselves with certain ability expectations that influence their perceptions of a potential opportunity (Mitchell & Shepherd, 2010), one might expect that self-efficacy moderates the relationship between gender identity and opportunity pursuit. In other words, since women, more precisely feminine identities, tend to have lower self-efficacy in domain

specific environments like entrepreneurship, they would be less likely to view a new venture idea as an opportunity. Recent research has suggested that venture creation decisions are largely based on an individual's expectations of his or her ability within environments (Townsend et al., 2010). Furthering this logic, Mitchell and Shepherd (2010), drawing upon the self-representation literature, introduced two distinct images of self, either vulnerable or capable. These two opposing lenses of self-image represent a set of beliefs about and attitude toward the self as an object of reflection (Morgan & Schwalbe, 1990). The findings suggest that self-images of either vulnerability (fears) or capability (potential) significantly impact the individual's perception of and eventual decision to enter the entrepreneurial environment (Mitchell & Shepherd, 2010), further accentuating one's cognitive assessment of their fit into cultural norms.

Self-efficacy has been extensively applied in the career literature to explain perceived career preference, choice, and ultimately behaviors of entry or avoidance (Betz & Hackett, 1981; 1983; 2006; Eccles, 1994). People who have chosen to enter into entrepreneurship have been shown to be different from those who, instead, choose management or a career with an established organization (Baron, 1998; Chen et al., 1998). The distinct difference between a potential entrepreneur and a manager lies in the strength of their belief that they are capable of successfully performing the various roles and tasks of entrepreneurship. This is known as entrepreneurial self-efficacy (ESE) (Chen et al., 1998). Entrepreneurial self-efficacy is a domain-specific construct pertaining to specific entrepreneurial tasks.

ESE has been considered a particularly important variable for new venture intentions (Barbosa, Gerhardt, & Kickul, 2007; Boyd & Vozikis, 1994; Zhao et al., 2005). Multiple empirical studies involving ESE have concluded that ESE increases the possibility of becoming an entrepreneur (Arenius & Minniti, 2005; Chen et al., 1998), and that ESE is positively associated with entrepreneurial intentions (Chen et al., 1998). Wilson et al. (2009) found that MBA students with an entrepreneurship concentration not only experienced increases in ESE but also increases of interest in entrepreneurial career paths compared to students without an entrepreneurship concentration. In more recent research involving entrepreneurship students (Shinnar et al., 2014), findings revealed a positive correlation between ESE and entrepreneurial intentions, but, importantly, this relationship was moderated by gender. In particular, the ESE increase was only statistically significant for male students.

2.1.1.2 perseverance. Perseverance has been defined as commitment to a chosen course of action and its undaunted pursuit despite adversity (Markham et al., 2005; Markman & Baron, 2003). Further expanded, healthy perseverance represents a willingness to compete against the obstacles of adversity, but not necessarily at any cost (Markham et al., 2005; Patel & Thatcher, 2014). Too much perseverance can be devastating when that persistence becomes an escalated commitment to a failing course of action (DeTienne & Chandler, 2007). Furthermore, healthy perseverance includes expected utility where the calculated risk is considered worth the extended effort (Gimeno et al., 1997; McMullen & Shepherd, 2006; Pollack et al., 2012). A similar trait is grit. In psychological research, grit is considered to be perseverance and a passion for

long-term goals (Duckworth et al., 2007). In a recent meta-analytic synthesis of the grit literature, the primary finding was that the utility of the grit construct lies in the perseverance facet (Crede et al., 2016). For the current study's purpose, the terms grit and perseverance are considered to be synonymous.

Male-dominated fields such as entrepreneurship rarely provide welcoming or accepting environments for feminine identities, compared to vocations that have traditionally been female dominated, such as nursing or education (Ward & Summers, 2008). In combination with the already daunting task of starting a new venture (Aldrich, 1999), the result is barriers to involvement, rather than supportive mechanisms (McGowan et al., 2012). These contextual and perceptual factors have been empirically shown to affect and influence entrepreneurial involvement (Langowitz & Minniti, 2007). This same challenge to feminine involvement can be witnessed at university business schools where men greatly outnumber women in pursuit of degrees in entrepreneurship concentrations (Diaz-Garcia & Jimenez-Moreno 2010; Keat et al., 2011; Menzies & Tatoff, 2006). These facts raise the question, why are women less willing to join entrepreneurship communities? Additionally, do those women who do venture out against these contextual or perceptual barriers possess a strong internal psychological strength, like perseverance, that enables them to overcome the external environmental barriers?

Perseverance has been considered crucial to overcoming the challenges inherent within entrepreneurial settings (Markman et al., 2005). Indeed, scholars have empirically documented the above-average willingness or capacity to persevere of entrepreneurs

when faced with adversities (Gimeno et al., 1997; Markman et al., 2005). To persevere is a complex decision that becomes a function of both the person and the environment (DeTienne, Shepherd & DeCastro, 2008). This interaction predicates whether or not an entrepreneur has perceived control over the adversity (Markman et al., 2005). The decision threshold to persevere goes beyond basic economic factors to include available alternative options, non-financial attachments, and the cost of switching to an alternative (Gimeno et al., 1997). DeTienne et al. (2007) further expanded on this decision criterion by highlighting the impact of individual differences as a source of variance. Factors that can influence the decision to persevere include perceptions of the external environment (Gimeno et al., 1997), levels of personal investment (Markman et al., 2005), availability of personal options (DeTienne et al., 2008), and extrinsic motivation (DeTienne et al., 2008). Counter influences and enticing alternatives typically exist at the threshold of the decision to persevere in the entrepreneurial environment or move away from it (Holland & Shepherd, 2013). A growing research stream has suggested that effort matters as much as, if not more than, talent or intelligence in environments like entrepreneurship (Duckworth & Seligman, 2005; Duckworth et al., 2007). This same research has sought to address individual differences in effort by providing stronger theoretical and empirical links between social psychology and fields like entrepreneurship.

The link between the psychological mechanisms that shape effort and the acceptance of delayed gratification appears undisputable (Ericsson & Charness, 1994). Yet, past entrepreneurship research on perseverance (Gimeno et al., 1997; Holland & Shepherd, 2013) has been limited to existing entrepreneurs persevering in an existing

venture where the viable alternatives are to either continue or leave (Holland & Shepherd, 2013). However, if several viable alternatives exist, such as in the case prior to venture creation, how does perseverance moderate the entry decision? Regulatory focus has been suggested to be the cognitive mechanism that regulates this behavior (Higgins, 2005) and that determines the decision to persevere or not. Regulatory focus is defined as behavior regulation to achieve desired ends where individuals adopt one of two contrasting perspectives, promotion or prevention (Baron, 2004; Higgins, 1998). Promotion focus means that the ultimate goal is attaining positive outcomes, while in prevention focus, the ultimate goal is avoiding negative outcomes (Baron, 2004). Nascent entrepreneurs appear to share a tendency towards a promotion focus and its associated behaviors (Alvarez & Busenitz, 2001; Bryant, 2007) whereas prevention focus appears to be more prevalent in serial or experienced entrepreneurs. The key difference is experience: the promotion focus becomes tempered in time with some aspects of prevention focus (avoiding false alarms). This self-regulated promotion focus has been considered a potential powerful antecedent to perseverance (Mueller et al., 2017). A promotion focus implies an orientation towards environments that fit the individual's needs and that provides for certain expectancies. At venture creation, where uncertainty may be at its highest level, the regulatory fit prerequisite of promotion provides the cognitive mechanism to persevere (Baron, 2004). The self-confidence to persevere is an adaptive function acquired during prior developmental years where gender identity markers guide choices and biases (Dinella et al., 2014). Empirical results from the psychology literature indicate that men's greater endorsement of traditional western masculine norms such as

dominance and risk taking is associated with higher levels of personal courage and autonomy. However, conformity to masculine norms such as winning and emotional control is associated with lower levels of personal grit and resilience (Hammer & Good, 2010). The capacity to persevere in the face of challenges, setbacks, and adversity is one individual difference that may provide new insights into which individuals start new ventures and which individuals do not (Markman et al., 2002).

In the teaching and educational research literature, grit and perseverance have been used to determine motivational characteristics related to learning and achievement. In recent research, multiple gender differences have been identified and it has been shown that women rank higher than men in most areas measured for perseverance in the career and educational learning environment (Christensen & Knezek, 2014). Christensen and Knezek (2014) found that the largest gender difference is that women are more consistent in their interests, leading to better study habits and a steady perseverance in the pursuit of a goal over time. They concluded that women have higher grit and perseverance. Perhaps this surplus of perseverance is a learned trait: having been a minority in a social environment that runs counter to their general gender identity, only women who learned to persevere were ultimately successful.

### 2.1.2 Entrepreneurial Environment

Although individual characteristics are important predictors of choice, it is well known that individual behavior is a function of the interaction between person and environment (Shaver & Scott, 1991; Zhao et al., 2010) and this has also been recognized by entrepreneurial cognition researchers (Lim, Morse, Mitchell, & Seawright, 2010;

Mitchell et al., 2000). It has thus been acknowledged that the entrepreneurial environment is an important predictor of individual choice and outcomes within the entrepreneurial domain (Shane & Venkataraman, 2000). Understanding entrepreneurship as a social phenomenon allows researchers to draw on other well-developed literature on social identity and social comparison (Thornton et al., 2011). In the social environment, gender differences have been primarily identified based on individual perception of past and present environmental influences (Santos et al., 2016). Self-esteem increase is achieved by perceiving one's selected group as superior to another. Moreover, recent research has further demonstrated that intergroup discrimination is due to in-group favoritism (Balliet et al., 2014).

Social group dynamics become even more complex when gender is added. Experiments in social psychology have shown that women are more interpersonally oriented while men are more group oriented (Baumeister & Sommer, 1997). Moreover, men engage more frequently in competitive between-group interactions than women do (Pemberton et al., 1996). Although humans readily discriminate against members of out-groups (Fiske, 2002), recent research suggests that men respond more strongly than women to intergroup threats (VanVugt et al., 2007).

In competitive work climates, such as the entrepreneurial community (Alvarez & Busenitz, 2001; Shane & Venkataraman, 2000), benchmarking and comparing against potential rivals is a typical activity. Competitive group perceptions often push individuals to compare themselves to those around them to conform to group norms (Ashforth & Saks, 1996) or differentiate themselves from others (Gardner et al., 2002). Additionally,

climates that promote competition may further intensify social comparison effects (Eddleston, 2009). In a competitive environment, individuals become rivals and the motivation associated with upward comparisons may be displaced with feelings of inferiority and a low self-confidence (Vecchio, 2000). Therefore, a feminine identity would be expected to be less attractive in a competitive or masculine climate.

Conversely, individuals who make downward comparisons in a competitive climate may perceive a superiority in contrasting effects with others. Therefore, a masculine identity would be expected to increase attractiveness into a competitive or masculine climate.

Consequently, an individual's perception of socio-cultural factors affects their choice of entering and participating in certain environments and with certain groups (Santos et al., 2016; Thornton et al., 2011). Since social comparison and the attractiveness of competitive environments is different between persons, the gender identity of the individual becomes a critical antecedent (Oyserman et al., 2006; Walton & Cohen, 2007).

Environments that are perceived as supportive and accepting by women appear to encourage assimilation rather than avoidance (Germain et al., 2012; Langowitz & Minniti, 2007). These environments provide emotional support and are relationship driven. The cooperative nature of this supportive environment seems to be in contrast to the typical masculine and competitive nature often ascribed to entrepreneurship (Lewis, 2006).

Past research has suggested that the relatively low involvement rate of women in entrepreneurship can be explained by the existence of gender-specific obstacles or barriers (Verheul et al., 2011). Perceived social barriers typically tend towards

systematically treating women different from men. For instance, Marlow and Patton (2005) have shown how women are disadvantaged when it comes to equal access for venture funding compared to men. This adverse and prejudicial outcome can also be experienced on the social capital level, where a lack of influence, networks, mentors, and even role models can create a perception of hostility for women, leading to avoidance (DeCarolis & Saparito, 2006). The environmental lack of support further exasperates other individual perceived barriers such as fear of failure and lack of competency (Langowitz & Minniti, 2007). The power of stereotypes is evident in the environment of entrepreneurship. For example, Gupta et al. (2008) demonstrated that masculine stereotypes about entrepreneurship are activated both implicitly and explicitly. The authors also found that activation of gender stereotypes may be nullified when presentations are gender neutral. Furthermore, Eddleston and colleagues (2014) found that capital providers reward business characteristics of male and female entrepreneurs differently to the disadvantage of women. The persistence of gender stereotypes and their subconscious influence in financing and career selection may highlight why and how stereotypes influence the lack of feminine identity engagement in entrepreneurial endeavors and communities. Since the current study focuses on interest in entrepreneurial clubs among students of entrepreneurship and business, the next section applies the concepts of self-efficacy, perseverance, and entrepreneurial environment to students. Special attention is paid to the importance of entrepreneurship clubs, which form a focal point of the current research.

### 2.1.3 Entrepreneurship Interest among Students

Men greatly outnumber women students enrolled in undergraduate entrepreneurship courses nine to one for those that had declared a concentration and nine to three for those who expressed an intention regarding their future choice for entrepreneurship concentration (Menzies & Tatroff, 2006). Various reasons have been suggested for this gap, such as girls being socialized differently than boys, which leads to different career aspirations (Engle et al., 2011). Women are also more likely to say entrepreneurship does not fit their personality (Menzies & Tatroff, 2006). Entrepreneurship education seems to fall short of filling this gender gap (Bae et al., 2014). For example, DoPaco et al. (2015) compared the entrepreneurial intentions of a girls' business school where the entrepreneurship curriculum was shared with a neighboring boys' sports school. The study showed that the boys tended to have greater intentions of starting a business than the girls, further illustrating that factors other than education or sex may be influencing entrepreneurship involvement.

Students' self-efficacy beliefs and intentions have been shown to increase in practically oriented coursework and decrease in theoretically oriented courses within the entrepreneurship discipline (Piperopoulos & Dimov, 2015). This research provides impetus to the value that entrepreneurship clubs provide at universities, since they allow students to engage in forms of learning that may not be available in the curriculum (Pittaway et al., 2015). Entrepreneurship clubs and societies have been shown to provide real learning benefits for students on a practical level and have proliferated at universities (Pittaway et al., 2015). Entrepreneurship clubs have been shown to enhance students'

self-confidence (McCorkle et al., 2003). Considering self-confidence is self-efficacy, a gender difference variable considered critical to entrepreneurship (Wilson et al., 2007), an increase in this type of practically oriented learning could help close the gender gap in entrepreneurship. Research further shows that this type of extracurricular activity is important for entrepreneur development with implications for increasing the recruitment of active students, particularly if they have taken on club leadership roles (Pittaway et al., 2015).

Outside of social-environmental influence, individual perceptions have been considered the primary explanation for the gender gap in the entrepreneurial involvement (Neergaard et al., 2005; Santos et al., 2016). Because individual perception of the self and anticipated outcomes leads to career interest and eventual choice (Sheu et al., 2010), it is appropriate to look further into the academic subjects students choose or avoid. In relation to the current study, entrepreneurship clubs or societies could provide a relevant environment, gendered or not gendered in nature, that could create a stimulus for entrepreneurial vocation attraction. Relevant course content is when students' perception of personal needs in instructional activities are geared towards personal or career goals (Frymier, 2002). Better understanding students, including their gender identity and motivations, could be valuable for future customization of entrepreneurial course development and other programs.

## 2.2 Gender Identity

The previous sections considered the research topic through an entrepreneurship lens. The current section discusses gender and gender identity as they relate to entrepreneurship.

Biological sex has traditionally been used as a simplistic way to categorize research participants into male or female (West & Zimmerman, 1987). As discussed above, Section 1.1, this approach has historically conflated other gender relevant variables potentially associated not only with biological sex, but with the effects of sex and gender identity alike. Untangling these concepts is imperative for a better understanding of how social environments shape identity and the self, and how culturally imposed constraints may decrease entrepreneurial activity (Bird & Brush, 2002; Goktan & Gupta, 2015).

Researchers in entrepreneurship have begun to realize that the individuated mindsets reflected in identities, behaviors, and cognitive structures of men and women are not so easily classified into two neat categories based on sex (Eddleston, Veiga, & Powell, 2006; Goktan & Gupta, 2015). Various streams of literature on gender within other disciplines have differentiated sex from gender to further the debate. For instance, within sociology, gender is considered to be a sense of identity developed through social categorization processes and is measured as gender identity (Ashforth & Mael, 1989; Eddleston & Powell, 2008). To understand gender identity, it is first necessary to understand social identity.

Social identity, a type of social cognition (Tajfel & Turner, 1979), is derived from the statuses or categories that individuals consider themselves to be part of (Rosenberg, 1997). Social identity theory asserts that individuals categorize themselves and others based on salient and visible attributes such as race or gender (Triandis, Kurowski, & Gelfand, 1994). One's social identities reflect the individual's sense of self and encapsulate beliefs, feelings, values, and actions in social contexts (e.g., entrepreneurship; Hogg & Terry, 2000). Similarly, the identities one holds lead to activities congruent with particular group identities (Ashforth & Mael, 1989).

The concept of gender identity stems from the literature on social identity (Joshi et al., 2015; Powell & Eddleston, 2013). Gender identity is a sociological concept, referring to social categorization by gender (Sherif, 1982). Gender identity reflects one's "fundamental location in the gendered social space" (Ely, 1995, p. 591), an individual's self-concept of their traits, whether they be masculine or feminine in nature (Bem, 1974; 1993). Tendencies such as assertiveness, confident behavior, competitiveness, and a strong desire to be more successful than others have traditionally been considered masculine. Conversely, tendencies such as nurturance, compassion, and cooperation have been considered feminine (Eddleston et al., 2006; Eddleston & Powell, 2008).

Instead of being assigned to men and women based on biology, these masculine and feminine characterizations are based on the complex developmental mix of past experiences and social exposure people have had over time (Bussey & Bandura, 1999). As such, gender identities are socially constructed and self-assigned categorizations (Gupta et al., 2009). While gender refers to the psychosocial implications of being female

or male (Powell & Greenhaus, 2010), gender identity is the individual's belief in their tendencies associated with traditional gender stereotypes (Bem, 1974). In addition to genetic influences, differential treatments during early gender development like cognitions and social influences (Martin et al., 2002) affect a large number of subsequent gender conceptions. The developmental differentiation determines to a large extent which talents are cultivated, one's self- and social consciousness, and even occupational paths pursued (Bussey & Bandura, 1999). Central to gender cognition is the idea that basic gender identity guides behavior that is organized and motivated by gender stereotypes (Fiske & Taylor, 1991; Sorrentino et al., 2007). This gender stereotype knowledge is considered a factor likely affecting gender developmental decisions about what tendencies children develop and what behaviors they chose to engage in (Martin et al., 2002). The end product of these developmental years of influences and tendencies embraced becomes the individual's gender identity (Eagly & Wood, 2013; Wood & Eagly, 2015).

Although men tend to have more masculine gender identities and women tend to have more feminine gender identities (Eagly & Wood, 2013; Eddleston & Powell, 2008), this is not universally true, and variance exists both within and between the genders (Eddleston & Powell, 2008). This is a more complex view of gender than that based on mere biological sex (Powell & Greenhaus, 2010). The current study intends to use this more complex view of gender to provide a richer and more precise predictor of entrepreneurship interest. For example, in recent research, Eddleston (in press) has provided empirical evidence that women are not disadvantaged due to their sex when

investors evaluated their pitches, as historically predicted. Instead, the findings revealed that investors were biased against the display of feminine-stereotyped behaviors by entrepreneurs, men and women alike. This would suggest that a masculine environment may best be perceived as fitting with similar qualities of the individual.

### 2.2.1 Gender Stereotypes

Gender stereotyping is believed to act as a powerful social force that justifies and maintains sex the segregation of various occupations (Cejka & Eagly, 1999; Marlow & Carter, 2005). Visible cues, such as sex, present problems when they lead to a person's stigmatization. Stigmatized attributes convey a social identity that is devalued in certain social contexts (Crocker, Major, & Steele, 1998). Becoming stigmatized can be quite damaging to targeted individuals, since it leads to stereotyping and discrimination (Link & Phelan, 2001). Individuals who accept a stigma, regardless of its truth or merit, evaluate similar environments thereafter negatively, in essence creating an avoidance perspective away from such environments or associated social groups.

Related to the effects of institutional systems are social stereotypes of what is considered men's work and women's work. Social stereotyping also associates masculinity with having authority over others (Lewis, 2006). Such stereotyping is not based on a matter of individual performance but rather inscribed into social institutions such as entrepreneurship, occupation, or industry (Elson, 1999). This environmental setting often exhibits the pre-molded established social systems where individuals are never quite free from the normative context imposed by society (Baker et al., 1997;

Pringle, 2008). The normative context often consists of institutional predispositions demanding alignment of individual behavior.

For example, institutional and social norms within the environment influence entrepreneurs' beliefs about their capability to exploit opportunities (Davidsson, 2015; Short, Ketchen, Shook, & Ireland, 2010). Research has found that these norms serve as contextual factors within the environment that determine how opportunities are perceived by individuals (Davidsson, 2015; Shepherd et al., 2007). Contextual characteristics thus play a key role in determining whether an opportunity is recognized on an individualized basis. A variety of contextual influences can affect the individual's perception of favorability, and thus impact their intent to pursue a given opportunity (Short et al., 2010). For instance, normative institutions (informal institutions) which are embedded deeply within a society provide an indirect influence on entrepreneurship involvement. In particular, they define acceptable gendered roles for individuals in a society, effectually impacting the desirability of interest into entrepreneurship (Welter et al., 2014).

Gender stereotypes are common, culture-wide beliefs about how men and women differ in personal qualities and characteristics (Haslett, Geis, & Carter, 1992). Unfortunately, these beliefs are assigned to an individual sex to the extent that often institutions become gendered in nature and indirectly sex-typed. Despite major changes in recent decades, gender stereotypes still remain largely unchanged (Gupta et al., 2009; 2013; Heilman, Block, Martell, & Simon, 1989) and are generally less favorable towards women than towards men. The male stereotype has been characterized with high agentic or masculine traits such as assertiveness, aggressiveness, confidence, and independence.

Conversely, women have been characterized with high communal or feminine traits such as nurturing, emotionality, considerateness, indecisiveness, and submissiveness (Hosoda & Stone, 2000).

Women within society encounter bias at two different levels. First, women are perceived as having less ability than men, because they are assumed to have fewer of those masculine traits that are considered vital for successful entrepreneurs (Eagly & Karau, 1991; Kuratko, 2007). Second, women who do display masculine traits are seen as unlikeable or threatening because of a cultural mismatch prejudice (Heilman et al., 2004). Agentic leadership behavior (e.g. competitiveness or assertiveness) is valued in men, but women engaging in the same behavior receive less favorable evaluation (Koenig et al., 2011). This state of cognitive threat is brought about when self-concept and expectation for success conflict with gender stereotypes that would suggest lesser ability (Schmader et al., 2008).

These gender stereotypes are both *descriptive* (defining what women and men are like) and *prescriptive* (defining what women and men should be like). This further accentuates the power of gender stereotyping with evaluative judgment bias towards women, even after they have demonstrated their competence (Rudman, Moss-Racusin, Phelan, & Nauts, 2012). Interestingly, these negative reactions occur only when a woman is successful in an arena that is considered to be male in character, such as in positions of leadership (Heilman et al., 2004). The willingness or unwillingness to pursue opportunities in environments like entrepreneurship may have much to do with individual perception of fit into this perceived masculine environment (Markman & Baron, 2003).

### 2.2.2 Gender in Entrepreneurship

It is now recognized that entrepreneurship is a “gendered phenomenon”, meaning that the practice of entrepreneurship is likely to interact with gender in a number of meaningful ways (Jennings & Brush, 2013, p. 681). For instance, most empirical studies show that individuals typically associate entrepreneurship with masculine traits such as self-efficacy, assertiveness, and self-reliance (e.g. Baron et al., 2001; Gupta et al., 2008; 2009). Additionally, some studies have revealed that entrepreneurs themselves contribute to the perpetuation of gender stereotypes (Verheul et al., 2005), as women entrepreneurs value similar business accomplishments differently than men do (Eddleston & Powell, 2008; Eddleston et al., 2006). Because opportunity recognition and entrepreneurial intentions are influenced by personal perception, the supportiveness of the cultural environment and one’s own abilities interact to create a perceived opportunity or barrier closely linked to person-environment fit (DeBruin et al., 2007). In particular, Zhao and colleagues (2010) provided a strong empirical case where certain personality traits were shown to be strong predictors for the demands of entrepreneurship. In other words, certain personality dimensions fit best into the demands of the entrepreneurial environment. Indeed, there is a rich body of literature exploring the relationship between gender and various entrepreneurship-related variables (DeBruin, Brush & Welter, 2006). There is also evidence there are numerous differences between the experiences of women and men entrepreneurs (Marlow & Patton, 2005; Wilson et al., 2007). Most of these differences exist at the interactional nexus of self-perception of the individual and the socially constructed business environment where fit or misfit is accessed. For example,

research has demonstrated that the perception of gender stereotypes helps explain the tendency that women evaluate business opportunities as less favorable, possess lower levels of entrepreneurial self-efficacy, and convey less intentions of entering entrepreneurship (Gupta et al., 2008; 2013). In general, subjective perceptual variables exert crucial influences on an individual's entrepreneurial propensity. These variables have also accounted for much of the past differences in entrepreneurial activity between the sexes (Langowitz & Minniti, 2007).

There is thus a significant amount of evidence that entrepreneurship is perceived as a masculine field of work (Gupta, Turban, & Bhawe, 2008) and that people tend to view entrepreneurs as having more masculine traits such as self-reliance, assertiveness, and attributes of confidence within one's surroundings (Baron et al., 2001; Gupta, Turban, & Bhawe, 2008; Gupta, Turban, Wasti, & Sikdar, 2009). In terms of individual characteristics, men and women have different intentions to engage in entrepreneurship (Langowitz & Minniti, 2007). For example, Zhao et al. (2005) found that women did not differ from men in terms of entrepreneurial self-efficacy or their actual ability to perform the job tasks, yet their intentions to become an entrepreneur were lower. These findings suggest there are theoretical mechanisms at play other than individual differences. These mechanisms represent the cognitive appraisal of other anticipated environments, such as outcome expectations and perceived social support or barriers (DeMartino et al., 2006; Zhao et al., 2005). Researchers have found significant barriers to women's entry into entrepreneurship, such as lack of support (Heilman & Chen, 2003), fear of failure (Langowitz & Minniti, 2007), and lack of perceived competency (Thebaud, 2010) as

compared to men. These additional underlying causal links are embedded within the cultural environment and guide an individual's opportunity confidence perception. This environmental perception is intertwined with individual beliefs and self-perceived assessment of one's abilities to perform the demands required within the entrepreneurial domain (Dimov, 2010). Langowitz and Minniti (2007) found that women tend to perceive themselves and their surrounding entrepreneurial environments in a less favorable way compared to men. Their results showed that subjective perceptual variables play a crucial role in influencing women's propensity of considering the entrepreneurial vocation, more specifically, this subjective perception accounts for much of entrepreneurial activity difference between the sexes.

Furthermore, within entrepreneurship men and women tend to be segregated into various forms or sectors of entrepreneurial activity (Anna et al., 2000; Klyver, Nielsen, & Evald, 2012; Weeden & Sorensen, 2004). For instance, firms led by women tend to be over-represented in the retail and personal service sectors and under-represented in the manufacturing, construction, and transportation sectors (Allen, Elam, Langowitz, & Dean, 2008; Fairlie & Robb, 2009; Kelley, Brush, Greene, & Litovsky, 2011; Lim & Envick, 2013; Zhao, Seibert, & Hills, 2005). Prior research has provided some explanations for this gender segregation, such as the lack of acceptance of women within certain industries (Germain et al., 2012), and women's concerns about balancing demanding careers with family (Frome et al., 2006). Additionally, other explanations would include differences in self-assessed ability (Anna et al., 2000; Thebaud, 2010), and lack of social support (Germain et al., 2012). Also, stereotyping (discussed above,

Section 2.2.1, see also Gupta et al., 2009), and strong perceived gender norms within various industries have been identified as well (Klyver, Nielsen, & Ewald, 2012; Weeden & Sorensen, 2004).

There is research suggesting that businesses led by women tend to be smaller and generate lower levels of profits and revenues than those led by men (Chaganti & Parasuraman, 1996; Collins-Dobb, Gordon, & Smart, 2004; Fairlie & Robb, 2009; Green, Hart, Gatewood, Brush, & Carter, 2003; Orser, Riding, & Manley, 2006). However, when proper controls were used for industry sector or age of business, no significant differences between male and female businesses were found (Watson, 2002). These findings suggest that these differences claimed to exist between men and women may not be sex related (Robb & Watson, 2012). A more precise independent variable that may better predict entrepreneurial interest and intent may be gender identity (Eddleston & Powell, 2008).

One of the reasons for the simplistic, biological-sex related explanations for differences between men and women entrepreneurs may be that financial outcomes of entrepreneurship dominate the literature. Financial outcomes do appear to show male-female performance differences (Eddleston & Powell, 2008), but recent research has shown that different entrepreneurs may have different metrics of success. Moreover, there may be sex differences in which metrics of success are considered most important to the individual (Davis & Shaver, 2012; Eddleston & Powell, 2008; Joshi et al., 2015; Powell & Eddleston, 2013). Research suggests that compared to their male counterparts, female entrepreneurs tend to put greater emphasis on socio-emotional metrics of success,

such as positive relationships with customers and employees, work-life balance, autonomy, and positive contributions to society (DeMartino & Barbato, 2003; Powell & Eddleston, 2008; Walker & Brown, 2004). Recent research has further demonstrated that when men and women entrepreneurs are compared across a range of indices, both financial and nonfinancial, women do not underperform (Robb & Watson, 2012). These results would suggest that something other than sex alone should be looked into as a predictor of entrepreneurial outcomes or interest.

As mentioned previously, within entrepreneurship studies, biological sex has often been used as a proxy for male-female differences or it is typically assumed that gender and sex are the same (Baron et al., 2001). More recently, the social constructionist perspective (Gupta et al., 2013), focusing on masculine and feminine tendency qualities rather than sex alone, has gained increasing attention from scholars. Through the social constructivist process, an individual's senses are shaped as to one's location on the gendered social spectrum by accepting or rejecting certain gender tendencies (Ely, 1995). Masculine gender tendencies have been shown to exhibit a strong fit into the environment of entrepreneurship (Kickul et al., 2008; Lewis 2006). The next section discusses the theoretical basis of my proposed gender-entrepreneurship fit model.

### 2.3 Person-Environment Fit

The nexus or interplay between the environmental context and the individual is of critical importance in entrepreneurship because this interaction determines the vocational choice of entrepreneurship. The interplay between individuals and their working context has been the subject of substantial research and theorizing. Specifically, a broad stream of

literature within organizational behavior, career psychology, and human resource management has focused on the concept of person-environment fit (Eccles et al., 1993; Kristof-Brown et al., 2005; Saks & Ashforth, 1997; Tinsley, 2000). Originally, the concept of person-environment fit (PE-fit) was proposed by Parsons (1909) who developed the idea of matching personal talent, skills, and personality with careers. He is considered the founder of the vocational guidance movement (Savickas, 2009). Murray (1938) followed by proposing a needs-supply conceptualization where a match is achieved when there is congruence between what the person needs, desires, or prefers and what is provided in the work environment. Much of the trait-oriented research in entrepreneurship is based on the assumption that entrepreneurship provides opportunities for behaviors (supplies) that are different from the behaviors required in non-entrepreneurial work environments (Chen et al., 1998; Zhao et al., 2010). Person-environment fit theory has been used quite extensively in the career literature (Betz & Hackett, 1981; 1983) and is further defined as congruence between an individual's needs and preferences in a situation and its associated rewards and benefits (Tinsley, 2000).

Different PE-fit frameworks of study have been proposed, focusing on various foci of fit, but all share one core assumption: that individuals will tend to move towards and be better rewarded by environments that are congruent with their individual needs, values, and capabilities (Prottas, 2011). Various studies suggest that PE-fit is related to selection decisions, occupational choice, performance, and well-being (Spokane et al., 2000; Verquer et al., 2003). This further substantiates the essential acknowledgement of environmental shaping and societal influence towards outcome expectation of potential

fit into various career options (Eccles, 1994). Career choice is directly linked to individual expectations for success and the perceived value attached to the various options available (Eccles, 1994). Expectations and values are individuated beliefs shaped by cultural norms, past socialization patterns, and societal expectations (Cook et al., 2002). Gender concepts influence career choice, as gender stereotypic vocations provide directional markers for future aspirations (Fouad, 2007).

According to the career literature, when a person and an occupation possess similar or matching characteristics, a supplementary fit occurs (Cable & Edwards, 2004). Supplementary fit research examines value congruence between the individual and the particular environments they may operate in, whether that be an occupation such as an entrepreneur. The occupational choice literature has provided empirical evidence suggesting women have lower expectations for success when compared to men in a wide range of occupations (Eccles, 1994; Lent et al., 1994).

This needs-supply conceptualization has dominated much of the past trait-oriented entrepreneurial research (Prottas, 2011), according to which distinct psychological traits of the individual (needs) are attempted to be satisfied by finding the appropriate fitting opportunities (supplies) in vocation or elsewhere. Trait-oriented entrepreneurial research assumes that entrepreneurship provides opportunities for behaviors (supplies) that are different from non-entrepreneurial work behaviors (Baron & Markman, 1999; Busenitz & Barney, 1997). Consequently, individuals with certain psychological needs would be expected to pursue entrepreneurship, as this would satisfy the demands and requirements of the individual (Prottas, 2011). For example, McClelland

(1961) argued that compared to traditional employment, entrepreneurial careers provide greater opportunities for an individual to achieve more through their individual efforts. Therefore, individuals with a high need for achievement are more likely to pursue entrepreneurship, because this offers greater potential to satisfy this need. Similarly, an individual may also seek a proper environmental fit for the need satisfaction of their gender identity. In other words, an individual seeks environmental fit based on their gender identity, so that her or his desire for need satisfaction is best met. There is a large body of evidence indicating that behavioral norms within different social and organizational contexts can be gendered in nature, dictating where men and women perceive that they will “fit” within society (Markman & Baron, 2003; Thomas & Mueller, 2000; Zahra et al., 1999). In sum, when masculinity is viewed as the only or most appropriate set of tendencies, people who tend to be more feminine feel less of a sense of “fit” and therefore become less attracted and/or committed to that place and vice versa (Hamilton, 2013; Marlow & Patton, 2005).

### 2.3.1 Person-Entrepreneurship Fit

The person-environment fit between the values of an individual and the context in which he or she works is linked to important outcomes such as performance and satisfaction (Gregarus & Deifendorff, 2009). Person-environment fit has been extended to the entrepreneurship domain, where distinct individual-difference dimensions are linked to a greater likelihood of success in the entrepreneurial environment (cf. Section 2.1.1 and subsections above). Markman and Baron (2003a; 2003b) established a framework called *Person-Entrepreneurship Fit* based on the major tenets of PE fit. Based on the

nature of the entrepreneurial context, they identified five dimensions underlying person-entrepreneurship fit: opportunity recognition (Kirzner, 1997), human and social capital (Honig, 1998), social skills, self-efficacy (Chen et al., 1998), and the capacity to persevere in the face of adversity (Baron & Markman, 2003). The latter two are of special importance to the current research.

The current study uses an existing framework of person-entrepreneurship fit that focused on the convergence of individual dimensions and the environmental aspects similar to the social and societal factors within entrepreneurship (Markman & Baron, 2003). In the current study, the individual's gender-relevant psychological dimensions of self-efficacy and perseverance, considered imperative to the entrepreneurship domain, will be the focus of this study. Although many individual factors (abilities, skills, and traits) may play a role in the interest to participate in entrepreneurial communities, this study only considers those factors that are both relevant to gender identity and have been empirically shown to be important for entrepreneurship. Entrepreneurial success is most likely achieved where the person-entrepreneurship fit factors are most favorable.

In addition to the individual psychological characteristics identified, environmental factors such as cultural values, support, and societal factors interact to produce either perceived barriers or supportive environments (Wilson et al., 2007 and cf. Section 2.1.2 above). To date, empirical results have identified certain perceived environmental climates as antecedents to entrepreneurial involvement. It is in the identification and study of the interplay between these relevant variables with gender identity that this study will contribute to the existing literature.

This study will use moderators of a psychological nature that represent personal effort rather than talent or intelligence. Research to date has shown little or no individual differences between the sexes on intelligence (Voyer & Voyer, 2014), while various psychological variables have been empirically shown to be different between men and women (Buser et al., 2012; Charness & Gneezy, 2012; Su et al., 2009; VanVugt et al., 2007; Wilson et al., 2007). These individual difference variables are also considered gender relevant and will be measured via behavioral scales in this study. Thus, this study will consider individual and contextual variables that are related to gender identity differences, as described in detail in Section 3.3 below. Given the past research, it appears that both individual and contextual factors are important in the prediction of entrepreneurial involvement. While there is solid research on the aspects determining entrepreneurial interest and success, and while the research on sex and gender in entrepreneurship is not insignificant, there is a clear gap in the assessment of how gender identity differences relate to entrepreneurial engagement. Using a PE fit models, the current study will fill this gap in the research.

### 2.3.2 Gender-Entrepreneurship Fit

Person-environment fit theory states that individuals tend to move toward environments that are congruent with their individual needs, values, or capabilities and that the best outcomes occur when there is a fit between individual characteristics or needs and the environment (Ostroff, 2012). The PE fit paradigm predicts that the best attitudes, behaviors, and results occur from the congruence between perceptions of the individual and how they see their potential fit into social environments (Cable &

Edwards, 2004; Ostroff, 2012; Schneider, 1987). Similarly, optimal outcomes occur when people fill roles where their individual interest fits with the career they are pursuing (Eagley, 1997; Eagley et al., 1992).

Subjective perceptions about one's environment, as well as the individual's relative position in that environment, have been shown to be important within entrepreneurship (Jack & Anderson, 2002). The intention to enter into entrepreneurship is related to personal perceptions of the supportiveness of a given socio-cultural environment (Bird, 1988). Therefore, it is predicted that perceptions of either support or barriers in the entrepreneurial environment will be associated with perceived alignment with the gender identity of the individual. Given the malleability of stereotypes, I intend to manipulate perceptions of the masculine or feminine aspects of the entrepreneurial community (environment). In the next section, I discuss my proposed model. The model applies the theory of PE fit and connects them to individual difference factors, the entrepreneurial environment (person-entrepreneurship fit), and gender identity (gender-entrepreneurship fit).

#### 2.4 Proposed Research Model

In this section, I develop a set of hypotheses based on gender-entrepreneurship fit as briefly discussed in Section 2.3.2 above. The hypotheses link gender-related variables pertaining to the characteristics that have been shown to be required in the entrepreneurial domain (see Section 2.1.1). The current study assesses how these tendencies intersect with gender identity with potential entrepreneurship involvement among students. Figure 1 shows the conceptual model of gender-entrepreneurship fit.

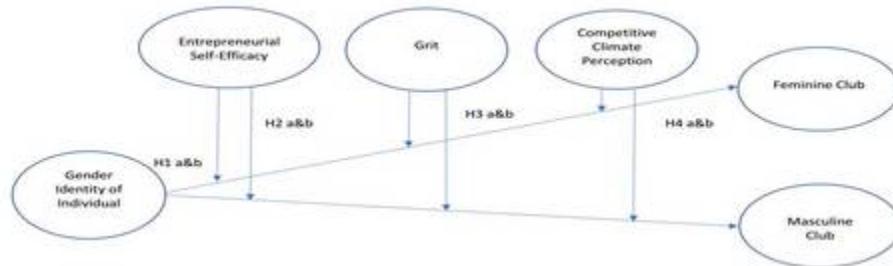


Figure 1: Conceptual model

The model's primary focus is on the individual. The model's independent variable is gender identity, one of the most influential personality markers. The gender identity of the individual is the primary predictor of the environments they choose to engage in. Based on the theoretical tenets of person-environment fit theory, a certain environmental match is anticipated. To test the predictive power of gender identity in this study, three entrepreneurial clubs will be proposed within business schools of universities. The depiction of and social language used to promote these clubs will be gendered masculine, feminine, or neutral, respectively. Additionally, gender-relevant moderators to either increase or decrease attraction to the gendered or neutral club will be incorporated. These moderators are in particular those of a psychological nature or group

dynamic that will affect attraction. The following sections elaborate on the constructs of interest and how they are anticipated to interact with one another.

#### 2.4.1 The Gender Identity Variable

The need for social connectedness is considered a basic human motivation and social fit leads to decisions to enter and continue pursuits (Walton & Cohen, 2007). In this regard, self-identity gravitates towards similar group identity to achieve social fit. Social identity pursuit offers a motivational interpretation rooted in self-esteem and the importance of sustaining positive self-regard (Tajfel & Turner, 1979). Given this core concept, researchers need to fully assess the relationship between gender identity and entrepreneurial interest. Gender identity encompasses an individual's actual behaviors and values, relevant to gender, rather than simply dichotomizing people based on physical characteristics (Eddleston & Powell, 2008). As such, gender identity (in terms of masculinity and femininity) will be the independent variable of the entire model. As previously mentioned, the environmental context of entrepreneurship is considered a masculine domain (Lewis, 2006). This masculine environmental nature of entrepreneurship would appear to run counter to the feminine identity developed by gender stereotypes. Social comparison consequences produce dramatic effects that are all related to the same basic mechanisms of similarity attraction or dissimilarity avoidance (Mussweiler, 2003). This research intends to replicate gendered environments by using social linguistics and gender tendency language in the promotion of entrepreneurship clubs. Social linguistics has shown that in the expression of complex social meanings, language contains markers of e.g. class, race, and gender by way of phonological variants

and stylistic ranges. It can thus serve as a gender identity marker (Holmes, 1997). Given the theoretical basis of PE fit theory and the empirical results from the career choice literature, the following hypotheses are proposed:

H1a – Individuals higher in masculinity will be more likely to participate in an entrepreneurship club advertised in a masculine manner.

H1b – Individuals higher in femininity will be more likely to participate in an entrepreneurship club advertised in a feminine manner.

In all empirical findings, the common theme has been that higher self-efficacy causes higher self-confidence and perceptual fit within the entrepreneurial domain (Wilson et al., 2007). The individual's self-perception reflects their deeply held beliefs that they can (or cannot) convert their skills and abilities into an environmental fit. Additionally, the career psychology literature has provided substantial empirical evidence suggesting that women have significantly lower levels of self-efficacy in careers historically perceived as "non-traditional" for women, such as entrepreneurship (Betz & Hackett, 1981). While women may generally have lower self-efficacy than men, given a non-traditional or masculine domain such as entrepreneurship, it may be expected that masculine gender identity would be increased by the moderating effects of self-efficacy, regardless of sex. Hence, the present research proposes that participants higher in entrepreneurial self-efficacy will also exhibit higher fit confidence into a masculine domain or environment. Similarly, it may be expected that feminine gender identity would decrease the moderating effects of self-efficacy. Based on the above theoretical and empirical rationale, it is predicted that:

H2a – Self-efficacy will moderate the relationship between the gender identity of the individual and particular club participation such that individual higher in masculinity and higher in self-efficacy will be more likely to participate in the entrepreneurial club advertised in a masculine manner than individuals higher in masculinity and relatively lower in self-efficacy.

H2b – Self-efficacy will moderate the relationship between the gender identity of the individual and particular club participation such that individuals higher in femininity and lower in self-efficacy will be more likely to participate in the entrepreneurial club advertised in a feminine manner than individuals higher in femininity and relatively higher in self-efficacy.

The uncertain environment of entrepreneurship has been empirically shown to benefit from the psychological strength of perseverance (Duckworth et al., 2007; Mueller et al., 2017;). Therefore, it is expected that the pathway between interest shaped by one's gender identity and the choice to enter into environments like entrepreneurship will be moderated by the perseverance level of the individual, leading to the following hypotheses:

H3a – Perseverance will moderate the relationship between the gender identity of the individual and particular club participation such that individuals higher in masculinity and higher in perseverance will be more likely to participate in the entrepreneurial club advertised in a masculine manner than individuals higher in masculinity and relatively lower in perseverance.

H3b – Perseverance will moderate the relationship between gender identity of the individual and particular club participation such that individuals higher in femininity and lower in perseverance will be more likely to participate in the entrepreneurial club advertised in a feminine manner than individuals higher in femininity and relatively higher in perseverance.

#### 2.4.2 Competitive Climate Perceptions

The past gender gap in entrepreneurial involvement has primarily been considered to be related to differences in individual self-perceptions of the socioeconomic contexts of entrepreneurship (Santos et al., 2016). The environmental influences are often indirect and unnoticed even to the degree of gendered lexicon in communications. Social linguistics studies show that the language used in job advertisements further sustains gender inequality by perpetuating the social dominance of the masculine identity (Gaucher et al., 2011). Although past research findings have indicated men and women process information and evaluate opportunities differently (Aragon-Mendoza et al., 2016; DeTienne & Chandler, 2007), perceptions of individual capabilities within entrepreneurship have generated a large part of the past gender interest disparity (Aragon-Mendoza et al., 2016; Santos et al., 2016). Although recent research has indicated that efforts in gender equality policies have aided in leveling the socioeconomic playing field, cognitive ability beliefs shaped by gender identity and how it fits or misfits into masculine environments may better predict entrepreneurial participation and involvement (Aragon-Mendoza et al., 2016; Heckman & Kautz, 2012), leading to the following hypotheses:

H4a - A competitive climate perception will moderate the relationship between the gender identity of the individual and particular club participation such that individuals higher in masculinity and higher in competitive climate perception will be more likely to participate in the entrepreneurial club advertised in a masculine manner than individuals higher in masculinity and relatively lower in competitive climate perception.

H4b – A competitive climate perception will moderate the relationship between the gender identity of the individual and particular club participation such that individuals higher in femininity and lower in competitive climate perception will be more likely to participate in the entrepreneurial club advertised in a feminine manner than individuals higher in femininity and relatively higher in competitive climate perception.

Linguistic bias is evident in everyday communication when people use gender-exclusive language. Individuals have multiple social identities in terms of salience (Tajfel & Turner, 1985). Identity salience is the extent, in particular to this study, that a gender identity is activated in a given communicated presentation (Stryker, 1968). For instance, Ely (1995) showed that gender identity salience affects a women's propensity to endorse stereotypical feminine behavior (e.g. compassion or cooperation) versus masculine behavior (e.g. competitive or aggressive) at work.

The gendered lexicon proposed in this study would include using specific gender referents (e.g. an entrepreneur should set goals for *himself*). Additionally, indexicality which means to point to, will be used with masculine and feminine verbiage in order to point to stereotyped gendered groups (Irvine & Gal, 2000). Emotional or passionate terminology (sad, glad, excited, etc.) is also considered gender markers associated

exclusively with femininity (Bamman et al., 2014). Gender neutral language will be used in order to reduce cognitive bias typically evoked by exclusively masculine forms of linguistics (Stout & Dasgupta, 2011). Examples of gender fair lexicon include using nouns that have only one form for both sexes (e.g. person) and splitting pronouns or nouns (i.e. he/she). Additionally, using feminine instead of masculine as generic verbiage or alternate between the two (Koeser & Sczesney, 2014). In the next chapter, I will further elaborate on my proposed methodology to include sample group, experimental procedure, measurement operationalization, and statistical analysis of the data.

## CHAPTER 3: METHODOLOGY

This chapter discusses the methodology of the research. It is constructed as follows. First, the sample for data collection, and power analyses are described. Next, the study design, survey procedures, and operationalization for all constructs within the study are presented. Finally, the statistical analysis is discussed.

### 3.1 Sample

The hypotheses in this research were tested using data collected from graduate and undergraduate business students and entrepreneurship majors. Although often criticized within entrepreneurial research as a convenience sample with low generalizability (e.g., Kuckertz & Wagner, 2010; Sieger et al., 2011), graduate and undergraduate business majors and entrepreneurship students are a valid sample for this study for three main reasons. First, university students represent a good collegiate segment of potential future entrepreneurs. More specifically to this study, they are an ideal population to consider individuals' interests in becoming entrepreneurially engaged, and specifically, in joining an entrepreneurship club. Second, it is among university students that the reasons for the underrepresentation of women students in entrepreneurship clubs (Pittaway et al., 2015), and consequently entrepreneurship, can best be explored. Young and curious minds can provide fertile ground to plant and nurture the seeds of entrepreneurial opportunity. Third, typically, younger people are more willing to be self-employed (Blanchflower et al., 2001; Grilo & Irigoyen, 2005) and

the willingness to be risk-averse typically increases with age (Fernandez et al., 2009). The greatest proportion of potential entrepreneurs is thus likely to be found among university students.

To pursue the collection of the applicable data set, students most likely to have an interest in entrepreneurship clubs were identified as the target sample set. Data was collected from predominantly entrepreneurial and business students at two state universities located in the Southeastern United States and one located in the Northeast. In order to recruit participants, faculty from the Universities were requested to distribute a participation link to students enrolled in entrepreneurship and business classes at these Universities. In order to encourage student participation and to motivate them to engage fully with the study materials, the study was framed as an inquiry into exploring interest into potential entrepreneurship clubs (see Appendix A for the text of the advertisement email). The student sample and its demographic makeup will be further elaborated in Chapter 4, the results.

The first portion of the survey was a section describing three proposed entrepreneurial clubs and requesting interest levels. Using social dialect research in sociolinguistics (Eckert, 1992; Holmes, 1997), each club was framed using gendered language styles to describe a masculine entrepreneurial club, a feminine entrepreneurial club, and a third (control) neutral clubs with no gendered description. This control group (the neutral club) will be used as a baseline in order to differentiate between the feminine and masculine clubs. The use of stereotypical masculine or feminine language is widely accepted and embedded within western culture and often goes unnoticed and uncorrected

(Gaucher et al., 2011). Stout and Dasgupta (2011) empirically demonstrated that subtle linguistic cues can signal group-based ostracism and lead stigmatized members to self-select out of certain work environments. The career and organizational literature has used social linguistics for employee attraction and recruitment in order to increase women's recruitment (Born & Taris, 2010). In the current study, the students were asked to select the club that they would be most likely to join, as well as whether they would consider a leadership role in the chosen club as an additional manipulation check for engagement purposes.

In order to establish minimum sample size requirements, a power analysis was carried out to determine the approximate sample size needed in order to achieve a power level of .8 or 80% (Cohen, 1992; Hair, Hult, Ringle, & Sarstedt, 2014). The power analysis determined that a minimum of 150 observations were required. Based on this, I aimed for a sample size of 300 students in which 395 participated and 302 were retained to use. This participation rate is in line with common practices when using student populations, especially in cases where class credit or gift cards were used for incentives to participate (Hsu et al., 2017). At one of the Southeastern university, students were required to participate in the research for course participation. Starbucks gift cards were utilized to encourage participation at the Northeastern university and the other Southeastern university. Potential differences between these three university sub-populations will be discussed in limitations of the study. Data was collected electronically, and data collection ran for 30 days through the month of October 2017 at

which time thereafter a sufficient number of responses had been received. Differences between the three collegiate subgroups will be noted in limitations.

### 3.2 Survey Procedures

The hypotheses of the study were tested using a two-part survey design. This design will provide me with the ability to control environmental factors while manipulating the variable of interest, making this an ideal choice for investigating causal relationships (Colquitt, 2008). Prior research, particularly with respect to causal mechanism differences between men and women, has recommended similar studies to better clarify variations in self-efficacy and entry confidence into entrepreneurship (Nicolau & Shane, 2009).

Since the research involved human subjects, the study was reviewed and approved by the Institutional Review Board (IRB) at all three universities prior to implementation. After clicking the participation link in the recruitment email, participants were presented with an online consent form that had previously been approved by the IRB (see Appendix B). Participants were asked to indicate their consent for participation by clicking a button at the bottom of the screen. This button took them to the first page of the study materials, which presented the advertisement exploring interest for the three different entrepreneurial clubs (see Appendix A). This is when survey manipulation occurred as the student was asked to select a club representing one of three gendered environments and thus indicate, indirectly, their perceived personal fit into a particular environment.

Following the club descriptions, participants were taken to the survey measures portion of the study, where they were asked to provide a variety of demographic

information to be used as control variables (discussed in detail below), as well as to respond to the survey measures. A manipulation check was incorporated after the dependent variable was measured. In order to provide a reliable assessment of experimental replication engagement of the subjects, manipulation checks are critical (Hsu et al., 2015; Patel & Fiet, 2010). Thus, I asked the subjects if they would consider a leadership role to ascertain the strength of their attraction to a particular club (engagement check).

### 3.3 Operationalization of Measures

#### 3.3.1 Gender Identity

The masculine and feminine dimensions of gender identity were assessed using the short version of the Bem sex-role inventory (Bem, 1974) (masculinity  $\alpha = 0.90$ ; femininity  $\alpha = 0.90$ ). Respondents rated the extent to which 10 masculine items (e.g., aggressive, assertive, and competitive) and 10 feminine items (e.g., compassionate, gentle, and sensitive to the needs of others) describe them utilizing a seven-point scale. The scale ranges from 1 (never or almost never true) to 7 (always or almost always true). The scale items for the gender identity construct and for the various other measures used in this study are provided in Appendix C. The gender identity measure used appeared to accurately reflect the two separate gender tendencies being measured.

#### 3.3.2 Perseverance

The level of perseverance for long-term goals was measured using the abbreviated Grit short scale (Duckworth & Quinn, 2009). This is an eight-item scale that measures the dispositional tendency to persevere ( $\alpha = 0.80$ ). The items are rated on a five-point

scale ranging from 1 (not at all like me) to 5 (very much like me). The scale has two dimensions: consistency of interests (e.g., “new ideas and projects sometimes distract me from previous ones”) and perseverance of effort (e.g. “I am diligent”).

### 3.3.3 Entrepreneurial Self-Efficacy

Entrepreneurial self-efficacy was measured by a six-item self-assessment scale. This is a reduced scale from an original 12-item scale (Marlino & Wilson, 2003) and is appropriate due to given the variation of the student population of the present research. This same scale was used previously with MBA respondents (Wilson et al., 2009) with an internal reliability of 0.82. The items are rated on a five-point scale ranging from 1 (a lot worse) to 5 (much better).

### 3.3.4 Competitive Group Perception

Students’ perception of the competitiveness of academic environment was measured with a six-item scale modified by Eddleston (2009). Eddleston’s (2009) modified scale incorporates various other scales of peer competition (Xenikou & Furnham, 1996), aggressive culture profile (O’Reilly et al., 1991), and competitive sales climate (Brown et al., 1998). Respondents were asked to focus on typical classmates within their major. The items were rated on a five-point scale ranging from 5 (strongly agree) to 1 (strongly disagree). Examples of scale items include “in my academic group only the most aggressive individuals succeed” and “most of the individuals in my academic group try to outperform each other on their class assignments.” The six items were previously averaged together creating a final group competitiveness perception score ( $\alpha = 0.90$ ).

### 3.3.5 Choice and Degree of Interest

Club choice was measured by the students' order of interest in each club. The question read, "For each club, a 100% scale will be provided where zero is no interest up to 100% representing most interest, please rate the likelihood with which you would participate in each of the three entrepreneurial clubs." Although this scale was provided for potential strength of interest, the top choice became an ordinal variable in the methodology. As part of a post-hoc analysis, individuals were asked in which club they would consider taking on a leadership role.

### 3.4 Control Variables

Some scholars believe that control variables are overly relied upon and improperly utilized (Brush et al., 2009; Marlow & McAdam, 2013). Therefore, the control variables used for this study were selective and relevant to this research and the most recent similar entrepreneurship literature. Controls for this study included age, sex, educational level, and major or minors enrolled in. Participants were also asked about the number and type of past and present club participation both within and outside of the university setting. These control variables were collected with the descriptive statistical data of the sample set.

### 3.5 Statistical Analysis

The primary analytical tool used in this research was partial least square structural equation modeling (PLS-SEM). PLS-SEM is a predication-oriented approach to structural equation modeling (SEM) that relaxes data demands and relationship specifics set by covariance-based SEM (Sarstedt et al., 2014, p. 104). PLS-SEM is employed in

both explanatory and predictive research (Hair et al., 2017). The primary focus of PLS-SEM is ‘maximizing the variance of the dependent variables explained by the independent ones’ and improving prediction quality of the constructs in exploratory studies (Haenlein & Kaplan, 2004, p. 290). Additionally, PLS-SEM allows for the handling of more advanced model elements such as moderators, hierarchical components, and ordinal dependent variables (Sarstedt et al., 2014, p. 107).

### 3.6 Minimizing Common Methods Variance

Common method variance (CMV) is variance due to the method of measurement that may also influence responses in behavioral research (Podsakoff et al., 2003) and may bias the estimates of the actual relationships between the different theoretical constructs. The techniques and procedures related to helping to eliminate ambiguous scale items and potential social desirability within the survey design were based on Podsakoff, MacKenzie, Lee, and Podsakoff (2003). Fortunately, the popular remedy of obtaining data from two different sources between predictor and criterion variables was not applicable, as this study’s predictor captured the participant’s perception. Therefore, this study’s susceptibility to data bias was controlled and reduced by utilizing the integration of survey design and statistical techniques. In particular, techniques like advance notification and a correct sampling population have not only reduced nonresponse error, but also minimized CMV (De Leeuw, 2005). The survey was also well constructed with clear survey items. Any ambiguous, unfamiliar term or vague concept was well defined or clarified. Survey items were concise, specific, and focused in

nature. Lastly, anchoring effects were minimized by using different scaled items between the independent and dependent variables of interest.

### 3.7 Final Study Sample

As mentioned in Section 3.1 above, a power analysis was used to establish a minimum sample size requirement of 150 observations. After analyzing each of the surveys, 333 of the 395 surveys were retained to conduct a confirmatory composite analysis (CCA). The respondents not used were primarily due to missing data.

Additionally, 31 outliers were eliminated due to straight-lining responses providing no variance. The final usable sample size was 302. The characteristics of the 302 respondents are provided in table 1 below consisting of the demographic make-up of the final sample.

Table 1: Sample Demographic Composition

<b>Sex</b>	<b>#</b>	<b>%</b>	<b>Education Level</b>	<b>#</b>	<b>%</b>
Male	166	55	Freshman or Sophomore	19	6.3
Female	136	45	Junior or Senior	283	93.7
<b>Age</b>			Graduate	8	2.6
20 and under	65	21.5	Majors		
21-23	176	58.3	Business Management	111	36.8
24-26	25	8.3	Accounting	28	9.3
27-29	17	5.6	Finance	35	11.6
30 and over	19	6.3	Marketing	46	15.2
			Entrepreneurship	27	8.9
<b>Past/Present Club Participation</b>			Undecided	1	0.3
Past Business Club	72	23.8	Other	54	17.9
	87	28.8	Minors		

Past Non-Business Club			Business Management	24	7.9
			Accounting	6	2
			Finance	9	3
No Past Club	143	47.4	Marketing	19	6.3
Current Business Club	50	16.6	Entrepreneurship	30	9.9
Current Non-Business Club	47	15.6	Undecided	164	54.3

No Current Club	206	68.2		Other	50	16.6
<b>Past/Present Business Ownership</b>				Entrepreneurial Parent		
Yes	43	14.2		Yes	156	51.7
No	259	85.8		No	146	48.3

The sample population was split between 55 percent male and 45 percent female. The age was predominantly young with nearly 80 percent being 23 years old and younger. 68.2 percent lacked any current club participation while lack of past club participation was 47.4 percent. Over 85 percent of the sample had never owned a business in the past while 93.7 percent of the sample were either juniors or seniors in their collegiate studies. The majority of the college majors were business related with business management being the predominant major at 36.8 percent and approximately 18 percent being majors other than business-related majors. Minors were similar in nature with a majority (54.9%) undecided. Finally, 51.7 percent had a parent with an entrepreneurial past.

## CHAPTER 4: RESULTS

This chapter presents the quantitative results of this study. Section 4.1 discusses the initial pilot test that was carried out. Section 4.2 provides a demographic overview of the respondent population. The data evaluation and final analysis were conducted on a sample size of 302 respondents. Section 4.3 contains the measurement model analysis, in which reliability and validation were established and discussed. In section 4.4, the results of the structural model are analyzed and the results for the proposed hypotheses tests are presented. To complete the quantitative analysis, in Section 4.5 the model is assessed for explanatory power and predictive relevance. The demographic statistics of the study's sample were conducted in IBM SPSS version 23 while the balance of the quantitative results was generated using Smart PLS version 3.0.

### 4.1 Data Evaluation

A pilot test of the questionnaire was initially conducted on a sample of 30 students studying entrepreneurship at Florida Gulf Coast University with a fairly even split between men and women. The pilot test provided feedback to ensure that the final survey instrument was clear, understandable, and would provide accurate measures. This particular sample matched the end sample population. Insights were gathered relative to the experimental portion of the survey as respondents questioned the lack of ability to be able to go back after answering their interest level on the three entrepreneurship clubs. Adjustment was made asking the respondent to read carefully all three club offerings and

then go back ranking each according to their interest level.

#### 4.2 Model Assessment

To operationalize and test the conceptual model (shown in Figure 1), several adjustments were necessary in alignment with the extant literature (see also chapter 3.3 Operationalization of Measures). First, the gender identity construct of the original proposed model could not be operationalized as a single construct, conflicting with my proposed hypotheses. Consistent with the extant literature (Bem, 1974; Eddleston & Powell, 2008; Spence & Helmreich, 1978), gender identity was operationalized as two independent dimensions of femininity and masculinity. Therefore, the empirical model changed from the original conceptual model (Figure 1) showing gender identity as a single construct to the two dimensions of masculine identity and feminine identity as shown in Figure 2 below. This change would also duplicate the number of hypothesis from eight to sixteen.

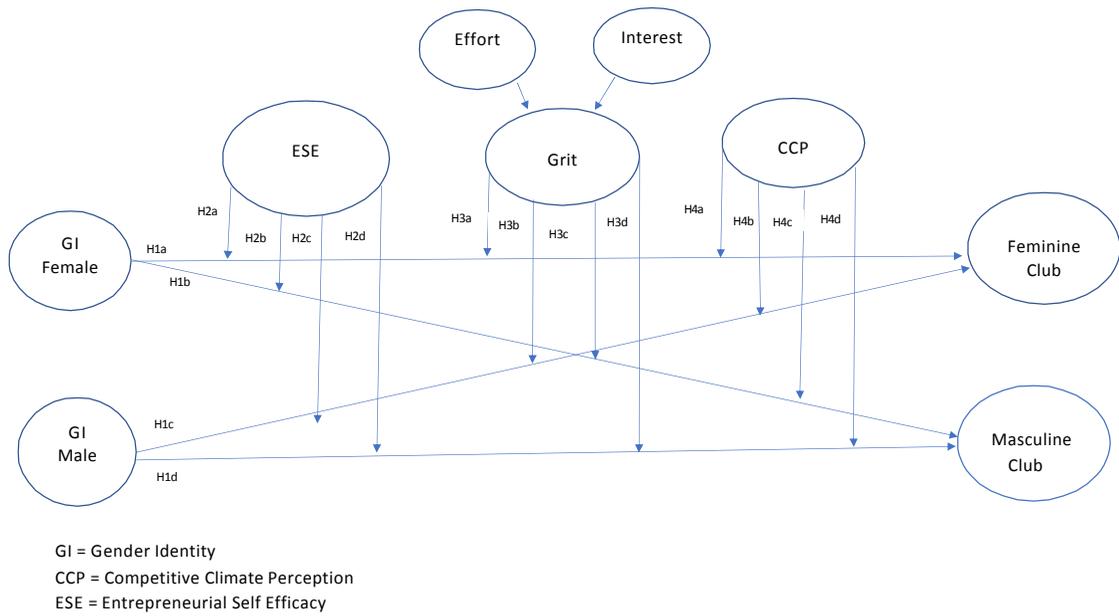


Figure 2: New Empirical Model

Furthermore, following established procedures (Crede et al., 2016; Duckworth & Quinn 2009; Mueller et al., 2017), the moderating construct of perseverance was operationalized using the abbreviated grit scale (Duckworth & Quinn, 2009). For the sake of consistency, perseverance was relabeled grit and the word grit will be used instead of perseverance from here onward. Consistent with the extant literature, the data indicated that grit was a higher-order construct, consisting of two lower-order constructs: perseverance of effort and consistency of interest (Duckworth & Quinn 2009; Mueller et al., 2017). This change was also incorporated into the empirical model as shown above. In an effort to create the necessary contrasting effects in the gendered clubs, the neutral club (the third club offered) was used to establish a baseline in order to differentiate the two gendered clubs. A correlation matrix between the study's primary variables was generated and is shown in Table 2 below. The means of the two independent variables as well as the three moderators appear skewed to the high side most likely reflecting a self-selection bias. The relatively high correlation between the independent variables (feminine identity and masculine identity) and the two gendered clubs (0.883 between feminine identity and feminine club and 0.851 between masculine identity and masculine club) potentially could call into question whether there is sufficient discriminant validity between the independent and dependent variables. This is a valid concern, although theory predicts a strong positive relationship between personal interest and environments that provide for that interest (Kristof-Brown et al., 2005; Lent et al., 1994). Furthermore, upon qualitative examination of the individual items of each variable (see Appendix A

for item wording), face validity suggests that the constructs are indeed measuring something different, which alleviates a potential concern regarding discriminant validity.

Table 2 Means, Standard Deviations, and Correlations among Study Variables

Variable	Mean	Standard Deviation	1	2	3	4	5	6	7
1. Feminine identity	5.333	1.091							
2. Masculine identity	5.489	1.007	0.462**						
3. ESE	3.872	0.619	0.188**	0.439**					
4. Grit	3.951	0.588	0.174**	0.254**	0.462**				
5. CCP	3.215	0.846	0.056	0.12	0.187**	0.101			
6. Feminine club	2.31	0.69	0.883**	0.324**	0.175**	0.167**	0.074		
7. Masculine club	2.35	0.55	0.354**	0.851**	0.437**	0.273**	0.105	0.248**	
** Correlation is significant at the 0.01 level (2-tailed).									

#### 4.2.1 Confirmatory Composite Analysis

Analysis with PLS-SEM involves a two-stage process, starting with the evaluation of the outer (measurement) model followed by the evaluation of the inner (structural) model (Hair et al., 2014). A confirmatory composite analysis was conducted to evaluate the outer model for 1) outer loadings, 2) composite reliability, 3) average variance extracted (AVE), and 4) discriminant validity (Hair et al., 2017). Assessment of the AVE scores of the present model determined the outer model had convergent validity. Table 3 below shows the final results for the confirmatory composite analysis (CCA) for the two independent variables (feminine and masculine gender identity).

Table 3 Confirmatory Composite Analysis Results

<b>Construct</b>	<b>AVE</b>	<b>Composite Reliability</b>	<b>Cronbach's Alpha</b>	<b>Indicators</b>	<b>Loadings</b>
<b>Masculine Gender Identity</b>	0.571	0.923	0.906	GI_1	0.707
				GI_3	0.723
				GI_5	0.746
				GI_7	0.747
				GI_9	0.817
				GI_11	0.807
				GI_13	0.697
				GI_15	0.753
<b>Feminine Gender Identity</b>	0.923	0.936	0.620	GI_17	0.795
				GI_2	0.774
				GI_4	0.793
				GI_8	0.754
				GI_10	0.843
				GI_12	0.731
				GI_14	0.816
				GI_16	0.772
GI_18	0.828				
GI_20	0.771				

All outer loadings exceeded the general threshold level of 0.708, with the exception of item GI\_13 which had a loading of 0.697. Given its proximity to the threshold level of acceptance, the item was retained for reasons of face validity (Hair et al., 2017). All AVEs exceeded 0.50 for both independent constructs, indicating convergent validity of the constructs. In addition, at levels of 0.923 for the masculine gender identity and 0.936 for the feminine gender identity, the composite reliability of both independent constructs far exceeded the required 0.70 threshold level and confirmed internal consistency.<sup>1</sup> The same confirmatory composite analysis was performed on the three moderators of the empirical model and the results are shown in Table 4 below.

Table 4 shows the results of each moderator variable before and after any weak indicators were eliminated. The first moderator analyzed was entrepreneurial self-efficacy (ESE) where one relatively weak indicator (ESE\_3 at 0.38) was removed, increasing the composite reliability from 0.832 to 0.852. In addition, the removal of this indicator increased the AVE of the entrepreneurial self-efficacy construct from 0.463 to 0.532. Although composite reliability values are generally interpreted in the same way as Cronbach's alpha, composite reliability values of 0.60 to 0.70 are acceptable in exploratory research (Hair et al., 2014).

<sup>1</sup> Please refer to *Appendix C* for the actual survey questions, whereby the odd numbered gender identity questions were relative to the masculine identity and the even numbered questions were relative to the feminine identity.

Table 4 Confirmatory Composite Analysis Results – Moderators

<b>Construct</b>	<b>AVE</b>	<b>Composite Reliability</b>	<b>Cronbach's Alpha</b>	<b>Indicators</b>	<b>Loadings</b>
<b>ESE Initial</b>	0.463	0.832	0.756	ESE_1	0.77
				ESE_2	0.71
				ESE_3	0.38
				ESE_4	0.63
				ESE_5	0.72
				ESE_6	0.79
<b>ESE Final</b>	0.532	0.852	0.782	ESE_1	0.77
				ESE_2	0.70
				ESE_3	--
				ESE_4	0.64
				ESE_5	0.74
				ESE_6	0.80
<b>Grit HOC Initial Interest LOC</b>	0.393	0.700	0.497	GRT_2	0.72
				GRT_3	0.66
				GRT_5	0.25
				GRT_6	0.74
<b>Grit HOC Initial Effort LOC</b>	0.520	0.803	0.673	GRT_1	0.41
				GRT_4	0.78
				GRT_7	0.75
				GRT_8	0.86
<b>Grit HOC Final Interest LOC</b>	0.505	0.753	0.512	GRT_2	0.73
				GRT_3	0.66
				GRT_5	--
				GRT_6	0.74
<b>Grit HOC Final Effort LOC</b>	0.659	0.853	0.739	GRT_1	--
				GRT_4	0.79
				GRT_7	0.76

				GRT_8	0.88
<b>CCP Initial and Final</b>	0.586	0.875	0.836	CCP_1	0.77
				CCP_2	0.89
				CCP_3	0.79
				CCP_4	0.71
				CCP_5	0.65

It is difficult to interpret the cascading influences of multiple moderators and their effects at once in PLS-SEM. Therefore, following established procedures (Hair et al., 2014), the additional moderators were introduced and evaluated one at a time. The second moderator analyzed in Table 4 was grit. As previously mentioned, during the development and validation of the short grit scale (GRIT-S), a confirmatory factor analysis supported a two-factor model for grit (Duckworth & Quinn, 2009). The two subscales of consistency of interest and perseverance of effort are second order latent factors that load on the first order factor of grit. For this reason, grit was modeled as a higher-order construct. Higher order models allow complex interactions to be operationalized at higher levels of abstraction (Hair et al., 2014). In Table 4 above, grit is modeled as a higher-order construct, consisting of two lower-order components of interest and effort and their associated loadings are itemized. Two items, GRT\_5 (under interest) with a loading of 0.25 and GRT\_1 (under effort) with a loading of 0.41 were removed given that they had relatively low loadings. After removing these indicators, the composite reliability increased from 0.700 to 0.753 for interest and from 0.803 to 0.853 for effort.

Additionally, the AVEs increased for interest and effort from 0.393 and 0.520 to 0.505 and 0.659 respectively.

The third and final moderator assessed by confirmatory composite analysis was competitive climate perception. As Table 4 shows, all outer loadings exceeded the threshold level of 0.60. Hence, all indicators were retained in the model. In summary, after adjusting the model by eliminating items with relatively low loadings, all outer loadings for the three moderators and the independent variable exceeded the threshold level of 0.60, thus meeting the recommended guidelines for item reliability (Hair et al., 2014). In addition, the AVEs exceeded the minimal level of 0.50 for all constructs, indicating convergent validity of the constructs.

#### 4.2.2 Discriminant Validity

After confirming reliability and convergent validity of the constructs, the Fornell-Larcker criterion and cross loadings were examined to evaluate discriminant validity (Fornell-Larcker, 1981). The results of the Fornell-Larcker test shown in Table 5 below indicate that each construct's AVE (highlighted for reference) was higher than its squared inter-construct correlations with other constructs within the model (Fornell-Larcker, 1981). This confirms the discriminant validity of all constructs in the model.

Table 5 Discriminant Validity – Moderators and Masculine/Feminine Identity

	<b>Entrepreneurial Self-Efficacy Moderator</b>			<b>Feminine Identity</b>
<b>Entrepreneurial Self-Efficacy Moderator</b>	0.732			
<b>Feminine Identity</b>	0.160			0.787
	<b>Entrepreneurial Self-Efficacy Moderator</b>			<b>Masculine Identity</b>

<b>Entrepreneurial Self-Efficacy Moderator</b>	0.732			
<b>Masculine Identity</b>	0.454			0.733
	<b>Grit Moderator</b>	<b>Interest</b>	<b>Effort</b>	<b>Feminine Identity</b>
<b>Grit Moderator</b>	0.586			
<b>Interest</b>	N/A	0.637		
<b>Effort</b>	N/A	0.519	0.720	
<b>Feminine Identity</b>	0.207	0.173	0.211	0.768
	<b>Grit Moderator</b>	<b>Interest</b>	<b>Effort</b>	<b>Masculine Identity</b>
<b>Grit Moderator</b>	0.652			
<b>Interest</b>	N/A	0.710		
<b>Effort</b>	N/A	0.448	0.812	
<b>Masculine Identity</b>	0.207	0.230	0.244	0.756
	<b>Competitive Climate Moderator</b>			<b>Feminine Identity</b>
<b>Competitive Climate Moderator</b>	0.766			
<b>Feminine Identity</b>	0.061			0.768
	<b>Competitive Climate Moderator</b>			<b>Masculine Identity</b>
<b>Competitive Climate Moderator</b>	0.766			
<b>Masculine Identity</b>	0.134			0.733

#### 4.3 The Structural Model

Once the measurement model had been validated, the structural model was tested for its predictive capabilities and construct relationships. When prediction is the focus of research, PLS-SEM is the preferred structural equation modeling method to assess the structural model (Hair et al., 2014). The direction, strength, and significance of the

relationships between constructs were evaluated in this assessment. More specifically, path coefficients, t-values, and p-values were initially used to appraise the results of the hypothesized relationships. Additionally, coefficients of determination ( $R^2$  values) were evaluated for the strength of the relationship as measured by variance explained. Shown below are the PLS-SEM models reflecting the relationships between the independent variables (feminine and masculine gender identity) and dependent variables (participation in a feminine or masculine club), with the variance explained shown inside each respective club circle.

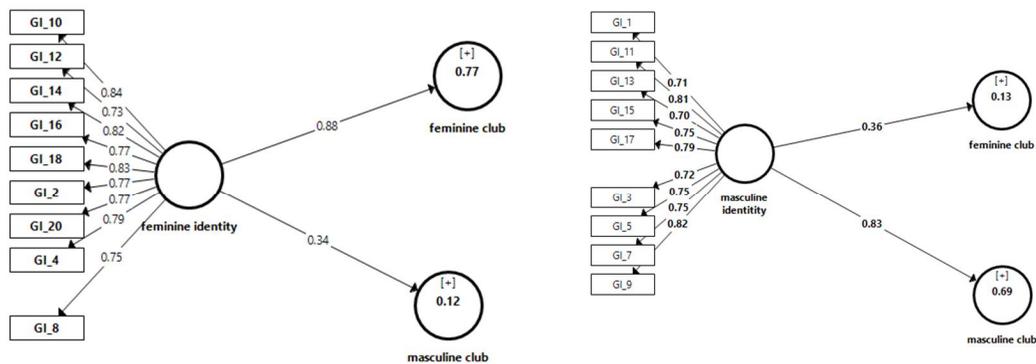


Figure 3: PLS Models

Bootstrapping was performed in order to determine the statistical significance of the model's relationships. Bootstrapping is the process of producing subsamples from the original sample (Hair et al., 2017). These subsamples are necessary to accurately calculate the significance of the hypothesized relationships (Hair et al., 2016). Table 5 provides a summary of the final assessment of the proposed hypothesized relationships.

The below hypothesized relationship summary depicts the individual's gender identity (masculine identity (ID) and feminine identity (ID)) and the associated interest

level to the two gendered clubs (masculine or feminine club). Path coefficients correspond to standardized betas in regression analysis and estimate the strength of the relationship between an independent and dependent variable in the structural model. Consequently, in the first four hypothesized relationships (H1a for each gender identity and H1b for each gender identity), the strength of the relationships when gender identity is aligned with club attraction (i.e., MAS ID → MAS club; FEM ID → FEM club) is reflected in the relative strength of the path relationship of 0.829 and 0.875 respectively. This is in sharp contrast to the opposite scenario when gender identity is misaligned with club attraction (MAS ID → FEM club; FEM ID → MAS club) where the path coefficients were relatively weaker at 0.362 and 0.339 respectively. This relationship is still representing good predictive quality, just not as strong as the gender aligned relationship.

Table 6 Hypothesized Relationships

Hypothesis	Relationship	Path Coefficients	T Statistics	P Values	R <sup>2</sup> Values	Result
Primary relation						
H1a (M)	MAS ID → MAS Club	0.829	59.23	.000	0.69	Confirmed
H1a (F)	MAS ID → FEM Club	0.362	6.20	.000	0.13	Confirmed
H1b (M)	FEM ID → MAS Club	0.339	5.09	.000	0.12	Confirmed
H1b (F)	FEM ID → FEM Club	0.875	93.09	.000	0.77	Confirmed
With ESE moderation						
H2a (M)	MAS ID → MAS Club	0.087	4.27	.000	0.74	Confirmed
H2a (F)	MAS ID → FEM Club	-0.13	3.13	.000	0.12	Disconfirmed
H2b (M)	FEM ID → MAS Club	0.153	3.27	.001	0.31	Confirmed

H2b (F)	FEM ID → FEM Club	0.086	4.14	.000	0.78	Confirmed
With Grit moderation						
H3a (M)	MAS ID → MAS Club	0.04	1.23	0.11	0.76	Disconfirmed
H3a (F)	MAS ID → FEM Club	-0.16	3.81	0.00	0.15	Confirmed
H3b (M)	FEM ID → MAS Club	-0.18	4.25	0.00	0.21	Confirmed
H3b (F)	FEM ID → FEM Club	0.03	0.96	0.17	0.78	Disconfirmed
With CCP moderation						
H4a (M)	MAS ID → MAS Club	0.043	2.66	0.004	0.72	Confirmed
H4a (F)	MAS ID → FEM Club	-0.105	2.45	0.007	0.16	Confirmed
H4b (M)	FEM ID → MAS Club	-0.093	2.26	0.012	0.16	Confirmed
H4b (F)	FEM ID → FEM Club	0.079	4.05	0.000	0.78	Confirmed

Interestingly, even with the relatively weaker path coefficients, the relationship between these variables was still significant at significant P value levels of 0.000. Again, representing significant relationships just at different strengths.

All t-values were greater than 1.96 for all paths with the exception of the two highlighted paths under the grit moderator and the third under ESE moderation. The disconfirmed ESE moderation hypothesis was between masculine identity and feminine club where variance explained ( $R^2$ ) dropped from 0.13 before moderation to 0.12 after ESE moderation. The other two disconfirmed paths are where grit moderates between masculine identity of the individual and masculine club and between feminine identity of the individual and feminine club. All the relationships between the constructs were significant according to P values with the exception of the mentioned ESE and two grit paths. This validates all proposed hypotheses with the exception of these three identified relationships. Furthermore, it is important to note that all negative path coefficients were

where gender identity conflicted with an opposing gendered club. These were all moderating relationships where the moderator may aid or inhibit the direct relationship. The negative path coefficients may reflect a counter P-E fit scenario, which will be discussed in greater detail in the next section.

The coefficient of determination ( $R^2$ ) was examined for the aligned independent and dependent variables.  $R^2$  is a measure of the model's predictive power calculated as the squared correlation between a specific endogenous construct's actual and predicted value (Hair et al., 2017). It represents the amount of explained variance of the endogenous construct in the structural model. Table 7 below summarizes the impact of the various exogenous constructs on the endogenous constructs as measured by  $R^2$ . The impact of an individual's gender identity on gendered club selection, as assessed in this study, was significant and meaningful. More specifically, masculine identity explained 69% of the variance of the endogenous construct of masculine club attraction. Similarly, feminine identity explained 77% of the variance of the endogenous construct of feminine club attraction. Theoretically, a person's gender identity significantly explains the similar attraction to that same gendered environment providing a corresponding fit.

Table 7 Explanatory Power of Model ( $R^2$  Values)

	<b>MAS Club</b>	<b>FEM Club</b>
<b>Explanatory Power of Model (<math>R^2</math> Values)</b>		
MAS ID → MAS Club	69.0	N/A
FEM ID → FEM Club	N/A	77.0
<b>F<sup>2</sup> Effect Size</b>		
MAS ID	2.196	0.151
FEM ID	0.130	3.279
<b>Q<sup>2</sup> Values</b>		
MAS ID	0.671	N/A
FEM ID	N/A	0.750

Next, the  $F^2$  effect size was evaluated. The  $F^2$  is a measure of impact of a given predictor variable on an endogenous variable (Hair et al., 2017). More specifically, this measure indicates how much a predictor variable contributes to the  $R^2$  value of the endogenous construct (club selection) in the structural model. Table 7 summarizes the  $F^2$  effect sizes for the two predictor variables on each of the two endogenous variables. Based on the  $F^2$  effect size, an individual's masculine identity had a substantial effect (2.196) in producing the  $R^2$  on masculine club attraction, whereas it had only a moderate effect (0.151) in producing the  $R^2$  on feminine club attraction. An individual's feminine identity had an even stronger effect (3.279) in producing the  $R^2$  on feminine club attraction, whereas it had only a moderate effect (0.130) in producing the  $R^2$  on masculine club attraction. More specifically, this effect size determines how much an individual's gender identity contributes to the variance explained ( $R^2$ ) in their gendered club choice. This further substantiates the theoretical strength of gender-entrepreneurship fit. The final measure assessed in the evaluation of the structural model also shown in Table 7 was the  $Q^2$  value. The  $Q^2$  value is a measure of the model's predictive relevance (external validity/out-of-sample prediction) (Hair et al., 2014). A blindfolding procedure was used to estimate the  $Q^2$  value. This procedure is a resampling technique that systematically deletes and predicts every data point of the various indicators in the measurement model of the endogenous constructs (Hair et al., 2014).  $Q^2$  values larger than zero for a given endogenous construct indicate the path model's predictive relevance for a given construct (Hair et al., 2014). A  $Q^2$  value of zero or below signifies a lack of predictive relevance, 0.02 a weak effect, 0.15 a moderate effect, and a value greater than

0.35 a large effect (Hair et al., 2017). Table 7 indicates a relatively large predictive relevance for both the masculine club (0.671) and the feminine club (0.750).

As mentioned earlier in the methodology section, control variables take into account previously established factors that may affect the endogenous variables. The control variables for this study were selected based on theory and the extant gender and entrepreneurship literature. Past and present club participation, in both business and non-business-related clubs, showed no significant relationships with club choice with the exception of one particular relationship: Current business club participation was shown to have a significant relationship with the dependent variable of masculine club participation ( $P = 0.018$ ). Prior business ownership was also significantly related to masculine club attraction. Age had no significant effects on club choice. Prior business ownership showed a significant effect when an individual with a feminine gender identity choose a masculine club ( $P = 0.01$ ). This could be related to self-efficacy or confidence developed through prior business ownership and/or having a feminine identity while operating in a masculine environment. Future research questions for further consideration will be discussed in the next section.

#### 4.4 Post-Hoc Assessment

Upon completion of the primary evaluation of the structural model, several post-hoc analyses were performed in order to further solidify the empirical findings. The first assessment was to further examine the predictive strength of gender identity versus sex, which historically has been used frequently in similar studies in the entrepreneurship context (Collins et al., 2004; Fairlie & Robb, 2009; Green et al., 2003). Using the coefficient of determination ( $R^2$  value), which provides a percentage of variance explained between the predictor variable and this study's dependent variable, Table 8 summarizes the original and alternative predictor variable quality as measured by variance explained. For comparison purposes, I have added a fourth predictor variable called dominant gender identity. This variable was derived by dichomizing the gender identity variable after deleting all responses that were perfectly balanced between the two identities. The first two predictor variables are what this study used as the predictor or independent variables, masculine identity and feminine identity.

Table 8 Predictor Variable

Predictor Variable	$R^2$ of Dependent Variable	
	Feminine Club	Masculine Club
Masculine I.D.	0.13	0.69
Feminine I.D.	0.77	0.12
Sex	0.035	0.005
Dominant Gender I.D.	0.197	0.137

Hypothesis H1a which states, individuals higher in masculinity will be more likely to participate in an entrepreneurship club advertised in a masculine manner and

Hypothesis H1b which states, individuals higher in femininity will be more likely to participate in an entrepreneurship club advertised in a feminine manner, were both validated with high significance. Specifically, the variance explained ( $R^2$ ) between masculine identity and the masculine club was substantial at 69%. In addition, a moderate amount of variance was explained towards the feminine club at 13% such that in combination, 82% of the variance in this relationship was explained by the current model. Similarly, the variance explained between the feminine identity and the feminine club was 77% and when combined with the masculine club variance (0.12), 89% of the variance in this relationship was explained, further substantiating the robustness of this study.

On the other hand, when sex was used instead of gender identity as the predictor variable, only 3.5% of variance explained pertained to the feminine club relationship and only an additional 0.5% of variance explained pertained to the masculine club relationship. In other words, when sex was replaced as the predictor, it explained only 4% of the total variance in determining club choice. Hence, sex can be considered a relatively weak predictor as compared to gender identity in the context of the present study. Furthermore, when gender identity was dichotomized using only the respondent's dominant gender identity, where masculine or feminine identity had to be greater than the other, the results showed a variance explained of 0.197 in the feminine club relationship and 0.137 in the masculine club relationship. In combination, a dominant gender identity could help explain 33.4% of the variance in this particular relationship. In essence, when a dominant gender identity was identified it could explain variance as a predictor variable

eight times stronger than sex alone could. However, the strongest results were obtained when using feminine and masculine gender identity, thereby lending further support to the robustness and adequacy of the chosen approach for this study.

To further investigate the nature of the predictive quality of variables into the domain of entrepreneurship, Table 9 below highlights another interesting subject for future consideration. Of all the itemized predictive relationships indicating significance (P value <.05), only one was shown non-significant. Although the conventional conceptualization of entrepreneurship is considered a masculine career (Shinner et al., 2014), and how it was treated in the current research, the relationship between individual sex and a masculine club is shown non-significant. In other words, sex should be considered a poor predicting variable for gendered environments like entrepreneurship.

Table 9 Relationship between predictors and gendered clubs

<b>Relationship</b>	<b>Path Coefficients</b>	<b>T Statistics</b>	<b>P Values</b>
MAS ID → MAS Club	0.85	67.93	0.000
MAS ID → FEM Club	0.34	5.591	0.000
FEM ID → MAS Club	0.36	5.306	0.000
FEM ID → FEM Club	0.88	100.72	0.000
SEX → MAS Club	0.070	1.401	0.162
SEX → FEM Club	0.186	3.309	0.001
Dominate Gender → MAS Club	-.370	6.545	0.000
Dominate Gender → FEM Club	.443	8.798	0.000

Additionally, this study shows how the strength of certain moderators can increase the interest or attraction into gendered fields such as entrepreneurship. Both the earlier literature and the current study show that individual self-confidence, more specifically entrepreneurial self-efficacy in this study, is a critical and vital requirement in the entrepreneurial environment. The moderating effect of entrepreneurial self-efficacy was shown in this research to correlate with both feminine and masculine identities. Therefore, enhancing existing programs to better facilitate and develop this necessary character trait is imperative in preparing individuals for entrepreneurship futures.

The moderator of grit also offers significant and interesting results. Although grit was not significant when the gender identity of the individual aligned with the same gendered club, this finding can be explained. Grit would not seem to be required in an aligned relationship, such as a masculine identity in a masculine club or a feminine identity in a feminine club. However, running counter to one's gender identity would seem to necessitate the additional psychological strength of grit.

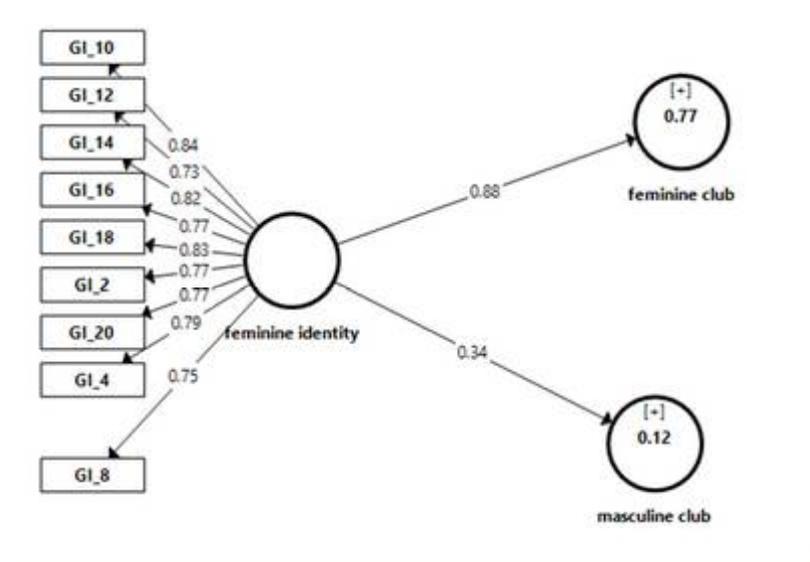


Figure 4: PLS Model

The above variance explained ( $R^2$ ) between the feminine identity towards the masculine club was 12% without moderation. Grit was shown to be significant for an individual considering joining a contrasting gendered club. Consider the relationship of a feminine identity towards a masculine environment. The PLS-SEM model in Figure 5 shows grit moderating this same relationship, indicating that grit increases the variance explained from 12% to 21%, a 75% increase when this moderating effect is present. This moderating effect further substantiates the importance of grit to overcome unaligned person-environment fit scenarios.

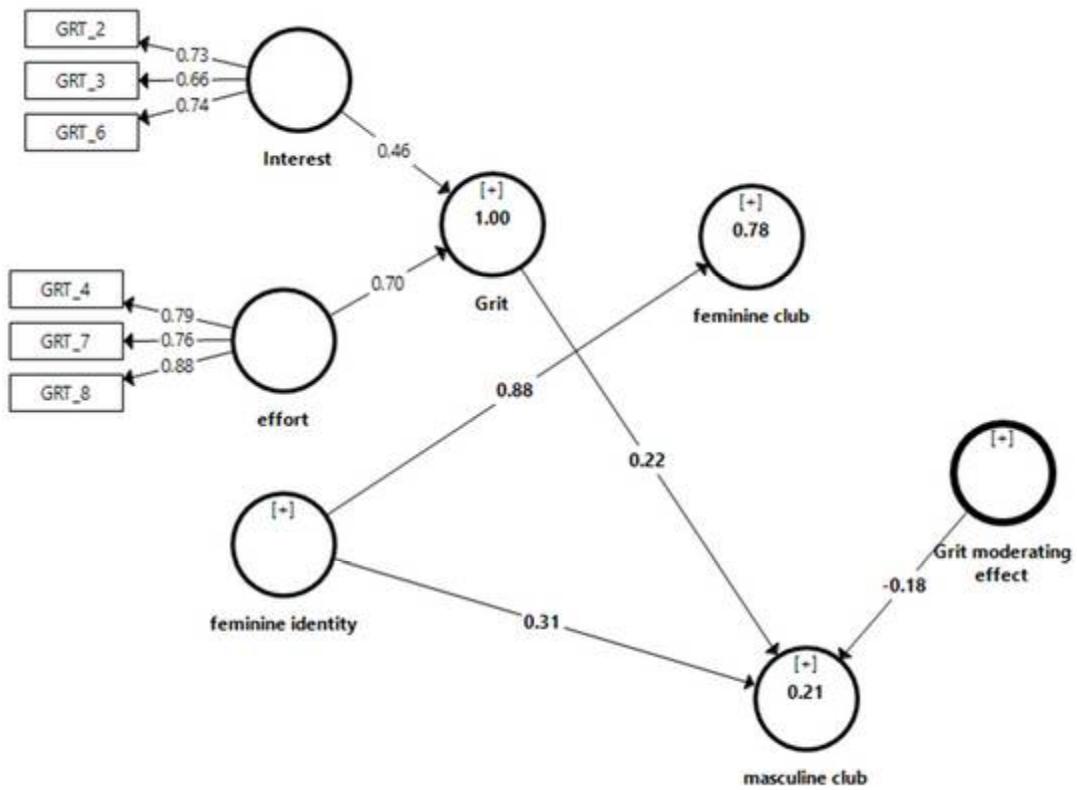


Figure 5: PLS Model with Grit Moderation

## CHAPTER 5: DISCUSSION

The purpose of this study was to investigate why women students do not exhibit similar interest as men students in college entrepreneurship clubs. I explored this question through the lens of gender identity and person-environment fit, instead of a more common but rather simplistic approach based on individuals' sex only. The theory of person-environment fit (Kristof-Brown et al., 2005; Prottas, 2011), which describes the congruence between an individual's needs or preferences to a situation and its associated rewards and benefits (Tinsley, 2000), has been widely used in various fields including psychology, sociology, and vocational guidance (Betz & Hackett, 1981; Kristof, 1996; Lent et al., 1994), and has recently been applied in gender (Eccles & Midgley, 1993; Gottfredson, 2002) and entrepreneurship research (Markman & Baron, 2003; Prottas, 2011). To this end, I examined one of the most personal identity factors, gender identity, and how it aligns with compatible gendered environments, in particular, individual perceived fit into gender-distinct entrepreneurship clubs.

Gender identity represents the extent to which an individual conforms to traditional gender stereotypes, which are societal shared beliefs about psychological tendencies assigned to each sex (Eagly & Steffen, 1984). In addition, I incorporated moderating variables of entrepreneurial self-efficacy, grit, and competitive climate perception in the research model to observe how these variables increase or decrease the interest level towards these gender-distinct entrepreneurship clubs. Earlier literature

typically assumed that differences between men and women were due to women's general perceptions of entrepreneurship not fitting their personality (Menzies & Tatroff, 2006; Santos et al., 2016). However, this perspective does not explain why there are quite many and highly accomplished women entrepreneurs. Hence, researchers have called for finer grained analyses beyond a simplistic binary (male-female) distinction (Ahl, 2006; Gupta et al., 2009; Gupta et al., 2013).

In line with these arguments, I proposed that this fit or mis-fit perception is based more on the effects of gender stereotyping and environmental climate fit than individuals' sex. To examine these perceived fit relationships, I designed a two part survey asking study participants (8 graduate and 294 undergraduate students predominately from the Southeastern United States) to indicate their likelihood of joining three fictive entrepreneurship clubs that were described using a gendered lexicon that has been shown to signal a particular gender preference (Gaucher et al., 2011) – female and male, and neutral. The experimental portion of the empirical investigation was followed by a survey employing validated scales to operationalize the study variables. I validated the research model using confirmatory composite analysis (CCA) and subsequently tested the hypotheses with PLS-SEM.

In this chapter, I provide a detailed discussion and explanation of the results presented in Chapter 4. First, a discussion of findings along with theoretical and practical implications is presented in Section 5.1. Second, contributions both on a theoretical and practical level are discussed. Third, the limitations of the study and future research

opportunities are considered in Section 5.3. Finally, concluding remarks are offered in Section 5.4 to complete the study.

### 5.1 Discussion of Results and Implications

The present research represents a novel leap toward theoretically integrating gender identity, an individual's most personal marker, with various moderating variables, to assess an individual's cognitive assessment of fit into a gendered environment (i.e., an entrepreneurship club). The insights from this study provide a better understanding of the factors that may direct and motivate individual interest to become entrepreneurially engaged. More specifically, the study investigated potential mechanisms underlying women's apparent reluctance to enter entrepreneurship clubs at universities. The findings show that students' gender identity is a strong predictor of interest into similarly aligned gendered environments. Specifically, the data show that students seek alignment between their individual gender identity and similar gendered environments, what I will refer to as gender alignment. Put simply, students high on female gender identity were more likely to choose an entrepreneurship club that was advertised using female vocabulary. On the other hand, students high on male gender identity were more likely to choose an entrepreneurship club that was advertised using male vocabulary.

This main effect between gender identity and gendered club environment was further moderated by the variables of entrepreneurial self-efficacy, grit, and competitive climate perception. In the case of entrepreneurial self-efficacy and competitive climate perception, the main effects were strengthened and significant 7 out of the 8 hypothesized

relationships, validating previous research on both of these gender relevant moderators (Croson & Gneezy, 2009; Decarolis & Saporito, 2006; Wilson et al., 2007) as variables effective at increasing or decreasing interest or choice. The one relationship not confirmed was the relationship between masculine identity and feminine club where the variance explained decreased from 0.13 to 0.12. The third moderator of grit produced mixed results, to my initial surprise, but thereafter provided for an interesting logic. I will further expound on this logic in the section discussing implications and future research suggestions.

Interestingly, even in the counter-relationship, where an individual's gender identity was used to predict interest in a counter-aligned club (i.e., female gender identity predicting participation in an entrepreneurship club described using male gendered vocabulary and vice versa), the relationship was shown to be still significant (although the variance explained was much weaker than in the aligned situations). Using sex as predictor variable, on the other hand, produced limited results, as the variance explained within the same model was minuscule. These findings support the general notion that gender identity, whether aligned or counter-aligned, is a more significant predictor for students' inclination to join an entrepreneurship club than sex alone.

Incorporating the moderator of entrepreneurial self-efficacy strengthened both the aligned relationship and one of the two counter-relationships. In other words, students high on female (male) gender identity and high on entrepreneurial self-efficacy were even more likely to choose an entrepreneurship club that was advertised using female (male) vocabulary than students high on female (male) gender identity but low on

entrepreneurial self-efficacy. The moderating effect of entrepreneurial self-efficacy in the counter-relationship offered rather interesting insights. While the effects were minimally decreased when entrepreneurial self-efficacy moderated between masculine identity and feminine club participation (with  $R^2$  going from 0.13 to 0.12), the other counter-relationship was found to be more substantial. When entrepreneurial self-efficacy was moderating between feminine identity and masculine club participation, the variance explained almost tripled, increasing from 0.12 to 0.31. This effect supports prior literature that identified self-efficacy as an important enhancing mechanism in the pursuit of entrepreneurial opportunities (Chen et al., 1998; Wilson et al., 2007) and a characteristic enabling individuals, especially those with a feminine identity, to overcome even adverse environmental influences (Pollack et al., 2012; Wilson et al., 2007).

The moderator of grit showed mixed results. I had hypothesized that grit moderation would strengthen the direct relationship between gender identity and likelihood of joining a particular entrepreneurship club, whether it be aligned with the individual's gender identity or not. Contrary to my conjecture, the findings show that grit was only significant in the misaligned relationship, but not in the aligned relationship (i.e., masculine identity  $\rightarrow$  masculine club participation or feminine identity  $\rightarrow$  feminine club participation). This finding provides for the argument that grit may only be needed and effective when the counter-relationship would require it. In other words, grit enables individuals to overcome mis-aligned or mis-fitting relationships. This finding will be further discussed in the future research section.

Finally, the moderator of competitive climate perception was shown to be significant in all relationships. Students high on female (male) gender identity and high on competitive climate perception were even more likely to choose an entrepreneurship club that was advertised using female (male) vocabulary than students high on female (male) gender identity but low on competitive climate perception. This was also the case when the gender identity and entrepreneurship club were misaligned. Competitive climate perceptions also affected the relationship between masculine identity and masculine club participation in significant ways, in that the moderating effect increased variance explained from 0.69 to 0.72; possibly further validating the desire for and interest of individuals with masculine identity in competitive environments. Even more interesting was the significant increase in variance explained between the feminine identity and masculine club participation, when moderated by competitive climate perception. The variance explained increased over 33 percent (from 0.12 to 0.16), further substantiating the effects and sensitivity of the feminine identity in competitive and masculine environments (DeCarolis & Saporito 2006; Verheul et al., 2011).

## 5.2 Contributions

The primary contribution of this study is an in-depth exploration into both sides of the person-environment equation within the domain of entrepreneurship societies, in this case, the gender identity of students and the gendered environment of entrepreneurship clubs. In particular, this research considered the interplay between individual “fit” perception towards gendered environments given the psychological traits and gender tendencies of the individual. For a long time, the entrepreneurship environment has been

considered a man's domain (Lewis, 2006). This general perception has carried over even into the vocabulary used and perpetuates a past perspective that continues to limit potential futures for many. This bias goes beyond gendered lexicon alone, as women have been shown to be more sensitive to presentations of gender typicality whether it be in words, pictures, or actions (Born & Taris, 2010). As mentioned earlier, remedies to any bias should start with awareness, followed by action. Hence, person-environment fit remedies should first include sensitivity to gender identities (rather than differences in sex alone), followed by providing climates that promote and celebrate the diversity of all.

The present research contributes to the person-environment fit, gender identity, and entrepreneurship literature in several ways. First, it provides support for the extension of the conceptualization of gender identity into the typical masculine domain of entrepreneurship (Hamilton, 2013; Lewis, 2006). Furthermore, it advocates for change in environments like entrepreneurship that are in need to modernize so vocational fit is available to both masculine and feminine identities. Second, it incorporates psychological variables that are pertinent to entrepreneurship that can provide increased adaptation into person-environment fit scenarios. Third, the results provide strong empirical validity for predictability of the relationship between individual gender identity and environments that share similar and aligned gender characteristics.

The answer to the question of why women are underrepresented as entrepreneurs has practical implications. It provides better understanding and knowledge of the mechanisms underlying women's reluctance to enter domains like entrepreneurial societies. Understanding what dictates and motivates individual interest is of critical

importance for the future expansion and tailoring of entrepreneurship programs. Therefore, based on the insights from this study, it would help increase the interest of women and those with a feminine identity if gender stereotyping was reduced (or even better, eliminated altogether) and replaced by more inclusive environments that go beyond competitive climates and include promoting cooperation to attract both masculine and feminine gender identities. Entrepreneurship clubs are just one of many incubators of tomorrow's entrepreneurial possibilities that, if done with fit alignment in mind, can help provide economic stimulus and generate new jobs. Looking deeper into gender tendencies, rather than sex alone, may also better explain why there are many successful women entrepreneurs in the market place (although proportionally far less than men).

Section 5.3 below expands on ways of moving forward with this new knowledge. The entrepreneurship domain may demand certain psychological traits that are considered masculine in nature, but these tendencies are in no way limited to the sex of an individual. The results of the present research indicate that gender identity is a more robust and significant predictor of fit into environments of a gendered nature than the past simplistic approach of sex.

### 5.3 Limitations and Future Research

This study, as all research, is not without limitations. First, the sample used was limited to college students and the setting of gendered entrepreneurship clubs was used as a proxy for gendered environments overall. Additionally, while one university subgroup of student respondents (33 of the 302 respondents) represented a minority of the three university students surveyed, they showed a significant difference from the rest of the

sample. Interestingly, this small subgroup represented the one Northeastern located university while the other two universities were from the Southeastern United States. Potentially, cultural speculation between the regional locations could follow if not for the small subsample. Although using entrepreneurial student clubs fits the aims of this particular research and controls were put in place, the possibility for generalization to the wider population may be limited. However, it is important to keep in mind that gender identity is developed early in life through a complex mix of experiences and social influences that remain stable into adulthood (Bussey & Bandura, 1999; Martin et al., 2002). Therefore, the implications may nevertheless carry over – to a certain extent – to other individuals and to entrepreneurs in particular. A second limitation relates to the use of a gendered lexicon exclusively to depict a particular gendered environment (entrepreneurship club). However, it can be debated that linguistic bias is considered an everyday phenomenon that has been shown to affect choice. For instance, a women's propensity to endorse stereotypical feminine behavior (e.g., sensitivity or compassion) versus masculine behavior (e.g., assertiveness or competitiveness) at work has been shown to be affected empirically by gender identity salience (Ely, 1995). A final limitation could be assessed on the generalizability of the findings as the predominant portion of the data come from students at universities and colleges located in the Southeastern United States.

Future research could enhance and expand the findings of the current study in a variety of ways. For instance, additional studies could assess university students' interest (or lack thereof) in entrepreneurship clubs and programs – and also include other

individuals such current or former entrepreneurs, as well as working professionals in established firms – using signaling cues, such as visual effects, instead of gendered lexicon, to provide greater environmental fit perceptions given one’s gender identity. Although entrepreneurship was used in this study’s environmental fit framework, other environments should be considered in the gender-fit context, such as gendered industries like construction or transportation for the masculine environment and nursing or elementary education for the feminine environment.

More specific to the environment of entrepreneurship, the domain of social entrepreneurship could provide another interaction for gender identity. The underlying drive for social entrepreneurs is to create social value, rather than personal or shareholder value (Austin et al., 2006). Social entrepreneurship has been differentiated from commercial entrepreneurship (Austin et al., 2006), seemingly creating a different gendered domain of investigation. The literature on social entrepreneurship has identified several potentially important characteristics, such as creativity and compassion (Kedmenec et al., 2015), both considered feminine tendencies. It would be interesting to carry out a similar study with the environments of social and commercial entrepreneurship as two dependent variables, testing the assumption that social entrepreneurship represents a feminine environment whereas commercial entrepreneurship represents a masculine environment. Existing entrepreneurs of both domains could be surveyed for potential gender identity alignment. The insights from such a study would further recent calls for research by Wry and York (2017) asking for taking an identity-based approach to the competing logics of social and commercial

entrepreneurship. The findings might extend existing frameworks of opportunity recognition by teasing out the challenges between pursuing frequently conflicting goals. Instead of wealth creation, so often the objective of commercial entrepreneurship, social value creation might be an objective in a domain requiring more feminine identity tendencies of the entrepreneur.

The present research also further substantiates the necessity of grit when one's individual gender identity or "fit" runs counter to the gendered environment. The implications of this vital moderator within the domain of entrepreneurship can be expanded and applied to several other environments, especially those that are gendered in nature. When one's gender identity runs counter to the gendered environment, it appears that the psychological strength of grit enables the individual to overcome this mis-fit. Indeed, the presence of grit may explain the success of many women in the masculine domain of entrepreneurship.

Similarly, future research could consider whether grit aids the masculine identity in a feminine environment. The gender debate and past claims of a gender gap have also lead to much conflict in young men and their natural masculine nature (McCarthy & Holliday, 2004). Even the language to discuss their emotions is considered feminine and sensitive. Perhaps in the attempt for equality, along with the science of categorization, the concept of masculinity has become an outdated model in need of updating. As mentioned earlier, the environment of social entrepreneurship or the nonprofit sector could provide an environment demanding more feminine tendencies. Given an individual's masculine

identity, could grit moderate this counter-aligned relationship as it did in the present study? This is another question worthy of future research.

#### 5.4 Implications and Conclusions

This study's results and its methodology uncovered various outcomes and revealed the subtleness of people's social environments. Specifically, this study demonstrated that climates can exhibit a gendered environment by nothing more than the lexicon used. Because of perceived climate, many women and those with a feminine identity may avoid participating in the masculine domain of entrepreneurship. Before drawing wider conclusions, however, it is important to point out that entrepreneurship clubs act as training grounds for future entrepreneurial activity. As such, they should be considered a microcosm or a proxy for the actual entrepreneurship environment itself. If policy and institutional directives cannot attract the interest of women and those with a feminine identity in such entrepreneurial societies, it is questionable how society might expect the larger picture of actual entrepreneurship to change. This study demonstrates that gender alignment should be a prime objective in collegiate entrepreneurship programs and that pedagogical offerings should be tailored in such a way to enhance gender-aligned fit, given the particular environmental needs.

It is possible to speculate that findings from the controlled environmental context of entrepreneurship club participation might carry over into the larger picture of entrepreneurship as a whole. As with person-environment fit theory, both sides of the equation provide potential for fit adjustments. On the person-side, the present research

demonstrates that environmental fit has relatively little to do with sex, but far more with gender identity. Therefore, to attract both gender identities, entrepreneurial club environments should embrace the uniqueness of both gender tendencies, femininity as well as masculinity. Additionally, psychological characteristics like entrepreneurial self-efficacy and grit provide individuals with an internal drive that can propel them through the counter-aligned climates within gendered environments. Promoting critical antecedents to entrepreneurship like these is imperative to strengthening and overcoming environmental obstacles prevalent not only in academic club settings but throughout social environments. To attract greater interest among women and those with a feminine gender identity, the historical social climate of masculinity within entrepreneurial societies might start to change by promoting more feminine climate tendencies like cooperation, creativity, and supportiveness. Perhaps advocating for more feminine climates can provide inspiration to all gender identities. The primary gap exposed in this research is that past social practices have limited the interest and choice of many, to include perhaps potential entrepreneurs and thus economic activity. Moving forward, gender-entrepreneurship fit applies to all sexes and proper fit alignment, given the specific environmental demands, should be investigated and promoted accordingly.

With the rapid growth of entrepreneurship education worldwide, key educational pedagogy and didactic instruction remain to be refined by our institutions (Nabi et al., 2017; Wilson et al., 2007). Past perceived barriers to inclusion should be neutralized by the full embracement and realization of the unique benefits of both genders. Entrepreneurial societies and programs should deeply reflect on past practices, adopting

proactive roles against a too often “laissez-faire” position. Comparative research on extra-curricular activities like entrepreneurship clubs should be pursued and examined for actual impact and results (Nabi et al., 2017).

Changing the masculine face of entrepreneurship, its societies, and its programmatic efforts will be a long-term endeavor. Transformation of any kind requires breaking through the existing cocoon of the status quo in order to emerge with fresh perspectives and new opportunity. Therefore, the sooner this endeavor can start the better, and small steps within collegiate entrepreneurship clubs and societies at universities may facilitate change to happen in other areas as well. Given the importance of entrepreneurship for economic growth and societal prosperity, it is an effort worthwhile pursuing.

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APPENDIXES

APPENDIX A

**Entrepreneurial Clubs**

We are exploring the potential creation of an entrepreneurship club. Having researched other entrepreneurship clubs around the country, we would like your input on what these clubs could look like and the benefits you would desire. Below are the descriptions for three different types of entrepreneurship clubs. Please read these descriptions carefully and indicate which of the three clubs you would be most likely to join. Please rate the likelihood of your participation in each club. (No Interest = 0%, Most Interest = 100%).

I. Club A

This club will *inspire* and motivate entrepreneurial pursuit as various role models from entrepreneurship share with *us* their *exciting* journeys. From their original ideas, through persevering times, to final market acceptance and how *their* hopes stayed alive. Additionally, personal assessments, consulting, and networking opportunities will expand the offerings to the *person* desiring the *work-life balance* available to the entrepreneur. These *women and men* entrepreneurs will encourage and provide fresh perspective on a rewarding career field available to *all* of our *diverse* student make-up.

Low %	High %
0 10 20 30 40 50 60 70 80 90 100	

II. Club B

This club would focus on opportunity *discovery*, the *heart* of entrepreneurship. This would include specific *sensitivity* training in order to identify unfulfilled needs in the marketplace. Often solutions are found only by *creatively connecting* the dots outside the norm. Established entrepreneurs will be available to *collaborate* and mentor you in *understanding* that by *compassionately* considering the *needs* of others, we can uncover new opportunities of wealth creation.

Low %					High %					
0	10	20	30	40	50	60	70	80	90	100

### III. Club C

This club would be geared towards *ambitious* types desiring the *challenges* to *compete* and *win* big in the world of innovation. This club will focus on how best to *analyze* opportunities and *maximize* their potential. *Decisive* decision-making skills will be taught. You will learn about *strong* negotiating and *survival* skills in the *adventurous* world of *competitive* innovation. Actual start-up assistance will be provided for those willing to step out and *take the risk*.

Low %					High %					
0	10	20	30	40	50	60	70	80	90	100

Would you consider taking a leadership position in this club?

**yes**       **no**

The above gendered or gender-neutral climate environments have italicized words in order to depict the lexicon for the intended climate (Club A – Gender-Neutral, Club B – Feminine, Club C – Masculine).

## APPENDIX B

**Online Consent Form via Qualtrics**

You are being invited to take part in a research study conducted by Jerald Wallace of Kennesaw State University. You must be 18 years of age or older to participate in this study. By completing the survey, you are agreeing to participate in this research project. You will not be identified personally and email addresses will not be stored. Responses are confidential. Research at Kennesaw State University that involves human participants is carried out under the oversight of an Institutional Review Board. Questions or problems regarding these activities should be addressed to the Institutional Review Board, Kennesaw State University, 1000 Chastain Road, #0112, Kennesaw, GA 30144-5591, (470) 578-2268. Your time is sincerely appreciated. If you have any questions regarding this portion of the survey, please contact Jerald Wallace at (239) 333-1550 or through email [jwalla69@students.kennesaw.edu](mailto:jwalla69@students.kennesaw.edu).

## APPENDIX C

**Scales for Independent, Dependent and Moderator Variables****Gender Identity**

Bem sex-role inventory, short version (Bem, 1974, 1981)

Masculinity score ( $\alpha = .90$  and femininity score  $\alpha = .90$ )

In the following section, we are interested in your personality characteristics, in other words, how would you describe yourself. Please indicate to what extent the following characteristics describe your personality. (Never or Almost Never True = 1, Always or Almost Always True = 7)

- GI 1 - Defend my own beliefs
- GI 2 - Affectionate
- GI 3 - Independent
- GI 4 - Sympathetic
- GI 5 - Assertive
- GI 6 - Love children
- GI 7 - Strong personality
- GI 8 - Eager to soothe hurt feelings
- GI 9 - Ambitious
- GI 10 - Compassionate
- GI 11 - Have leadership abilities
- GI 12 - Understanding
- GI 13 - Willing to take risks
- GI 14 - Warm
- GI 15 - Dominant
- GI 16 - Tender
- GI 17 - Willing to take a stand
- GI 18 - Sensitive to the needs of others
- GI 19 - Aggressive
- GI 20 - Gentle

**Entrepreneurial Self-Efficacy**

(Wilson et al., 2009)

Respondents will be asked to compare themselves in certain entrepreneurial skill areas to others anticipating a potential entrepreneurship career.

(A Lot Worse = 1, Much Better = 5)

- Solve problems
- Making decisions
- Managing money
- Being creative
- Getting people to agree with you

- Being a leader

### **Grit (Short) Scale**

(Duckworth & Quinn, 2009)

Directions for taking the Grit Scale: Please respond to the following 8 items. Be honest – there are no right or wrong answers! (Not Like Me At All = 1, Very Much Like Me = 5)

- New ideas and projects usually do not distract me from previous ones.
- Setbacks (delays and obstacles) don't discourage me. I bounce back from disappointments faster than most people.
- I do not get obsessed with a certain idea or project without further investigating it to my satisfaction.
- I am a hard worker.
- I do not set a goal but later choose to pursue (follow) a different one.
- I do not have difficulty maintaining (keeping) my focus on projects that take more than a few months to complete.
- I finish whatever I begin.
- I am diligent (hard working and careful).

### **Competitive Climate Perception**

(Eddleston, 2009)

Respondents will be asked to rate their perception of competitiveness within their academic sphere. (Strongly Disagree = 1, Strongly Agree = 5)

- In my academic group only the most aggressive individuals succeed.
  - Individuals in my academic group fiercely compete for grades and class standing.
  - Most of the individuals in my academic group try to outperform each other on class assignments.
  - There is a very competitive atmosphere among those in my academic group in regard to attaining class standing.
  - In my academic group individuals compete for desirable standing or recognition.
- In general, our academic advisors and professors encourage individuals to compete for recognition and rewards.