



Erasmus School of Economics

**Master's Thesis**

To obtain the academic degree of  
Master of Science in Economics and Business  
(Major in Marketing)

**Afraid of Wearing Red and Casual?**

**The Influence of Clothing Color and Formality on Success of Innovation Project Selection**

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## **ABSTRACT**

With the increasing phenomenon of startups, entrepreneurs are struggling to have their project selected for funding. Coming to the pitch to present the project is like grasping at straws, because having a good project content *ipso facto* does not mean that an investment deal is in the pocket. A large number of researchers have investigated the important factors governing project selection evaluation. It turns out that the verbal cues or the ability to influence the investors, by presenting appealing and promising information about the projects, are still the most important evaluation criteria that help investors to determine which startup project to fund. However, the influence of non-verbal cues when pitching remains unclear. This poses difficulties, because there are no empirical studies in this startups context, which offer directions to entrepreneurs about what to wear when attending the pitching session, while in fact, such so-called trivial factors do matter. This study investigates the effect of clothing color and clothing formality on the investment selection decision. Further, with a diverse group of venture capitalists of both the sexes having a distinctly different motivational orientation, this study provides an in-depth examination of how specific clothing color and clothing formality style might affect the investment decision differently in agentic or communal investors. By using an experimental design in the form of an online survey, I tested the effect of two categories of clothing color (warm and cool) and clothing formality (formal and casual) on investment decision, and how gender, as a proxy for agency-communion orientation, would help or hinder the main relationship. The results show evidence that a specific clothing color and clothing formality increase the likelihood of investing in the project. Further, the results reveal the important role of gender in influencing the impact of clothing color and formality on investment decision. The theoretical contributions and practical implications, along with limitations, are further discussed.

**Keywords:** *agency, blue, clothing color, clothing formality, communion, entrepreneurship, entrepreneur, gender, investment decision, investors, non-verbal cues, pitching, red, startups*

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## 1. INTRODUCTION

Innovation and startups are a modern phenomenon. With an increasingly significant number of entrepreneurs each year (Reedy, 2016), innovative projects have become a new culture. Startups have been drivers of economic dynamism, contributing to increased productivity, job growth and economic growth in general, not only in developed countries but in developing ones too (Decker, Haltiwanger, Jarmin & Miranda, 2014).

The increasing growth rate of startups is strongly influenced by the presence of investors and venture capitals (Davila, Foster & Gupta, 2000). Therefore, entrepreneurs are actively looking for funding for various activities, tapping sources ranging from finding the local business incubator, joining the online crowdfunding and hiring the business capital broker. In any case, the typical process of getting funding involves a pitch to investors, just as visualized in Shark Tank TV shows aired in the US, which invites entrepreneurs to pitch their innovative business projects to the investors (known as “the sharks”) and convince them to invest. Various innovative ideas have figured on these shows, most were accepted, but many were rejected, even though the projects sounded promising. This gives rise to the million-dollar question: what is the evaluation criteria that investors use to offer funding? A growing body of scientific research tries to break the mystery. Entrepreneur’s experience (Macmillan et al., 1985), expected returns (Robinson, 1987) and expected market growth (Hall & Hofer, 1993) are identified as important factors. Besides, pitching is another important determinant that influences the likelihood of success in raising funding from investors.

During the pitching, entrepreneurs are not yet selling the product, but persuading investors to invest resources in their company (Cremades, 2016). Thus, knowing what the pitching should be is important for entrepreneurs to meet the investor’s expectation. Apart from outstanding, innovative ideas, research in entrepreneurial process suggested entrepreneur’s passion as another important point of evaluation (Smilor, 1997). Chen et al. (2009) categorized passion into affective and cognitive: affective is more towards the feeling and chemistry, while cognitive, on the other hand, concerns the project content and materials. It is argued in their study that the investor’s decision-making is based not only on the cognitive or rational elements, but also on affective or emotional elements. Unfortunately, while parts of literature, indicating how the cognitive aspect leads to more successful funding, are conclusive, studies regarding the effectiveness of affective aspects on investor’s likelihood to invest remain largely unclear.

Affective aspect is defined as feelings, emotions or moods that individuals experience, which could be shifted based on external events (Baron, 2008). It is highly influenced by the non-verbal cues (Yuksel, 2008) such as facial expression, gesture, and clothing style (Edinger & Patterson, 1983). Non-verbal cue is an inference to provide useful information about something that could not be expressed verbally (Schenkler,

1980). Non-verbal cues are confirmed to be critical in management fields due to the effectiveness of the cue in altering the judgment and decision (Kraut, 1978). For instance, a non-verbal cue is a form of personal branding during the job interview in HR field, as also in the advertising campaign in the Marketing field. However, there exists relatively little research about non-verbal cues in the context of startup pitching. While several studies have investigated the factors determining the investor's likelihood of funding the project, non-verbal cues in entrepreneurs' pitching seem to be another important factor worth investigating. Therefore, this study aims to extend the research in non-verbal cues in the context of innovative project selection (startup).

This study will particularly study *clothing color* and *clothing formality* as two different forms of non-verbal cues. Colors primarily serve as functional tools, which is extended to being aesthetic tools in recent years. In marketing, color is projected as a brand identity used in product packaging design (Garber, Burke & Jones, 2000), advertisement theme (Lohse & Rosen, 2001) as well as store atmospheric theme (Kotler, 1973). As a crucial part of product or service branding in which the color is used to be a distinctive criterion, in the form of clothing color, it could also be used as a tool for personal branding; examples are Steve Jobs with his black turtle-neck and long sleeves, Mark Zuckerberg with the grey t-shirt and Simon Cowell with his black, white or grey T-shirt while judging in the singing contests. The specific color used by the product, service and person happens for a reason. The research on the psychology of color indicates the meaning and implication of color. Black, white and grey, the basic colors that have been highly worn by famous entrepreneurs, are respectively associated with power and professionalism, less arousing and less-dominance inducing (Valdez & Mehrabian, 1994). Although somewhat irrelevant to the product they offer, entrepreneur's choice of clothing color when pitching could influence the audience's unconscious mind to pay more attention or to recall the things associated with the product easily. Therefore, the choice of color of the clothing the entrepreneur wears could influence the innovative project selection decision in funding or other investor-seeking events, as will be argued in this study.

Clothing formality is another form of non-verbal cues. According to the Oxford dictionary, formality means *a thing that is done simply to comply with convention, regulations, or custom* ("Formality", n.d.). In this study, formal clothing is defined as clothing suitable for an official or important occasion, such as formal dress for women and business dress (suit and tie) for men. Clothing formality is a means to follow the norms and is strongly associated with professionalism. Clothing offers a basis to form a perception about the wearer, when information about the wearer is limited (Secord & Backman, 1964). In the specific context of a job interview, for instance, appearance is a critical input that the interviewer assesses, since information about the applicant is fairly limited (Forsythe et al., 1985). With many positive inferences, clothing formality is more valued in the business context, as it reduces status barriers between employees

and increases the feeling of work competency (Peluchette & Karl, 2007). However, as the concept of openness and creativity becomes a trend, casual clothing is increasingly gaining attention and acceptance. Casual attire is found to influence a significant friendly and creative feeling in the company that accepts casual clothing in the office (Peluchette & Karl, 2007). Nonetheless, the use of casual clothing in the business context is not common yet. More offices, particularly in the developed countries, are trying to break the wall of formality by allowing casual attire (e.g., jeans). On the other hand, formality is still highly respected in the Board Meeting and other top-level events, implying that formal clothing is more desirable for business. Because pitching is one-time opportunity to create an impression for further business relations with the investors, formal clothing will be argued to be more preferred by investors, so much so that entrepreneurs who wear formal clothing have a higher likelihood to have their startup project selected and funded.

In addition, this study also includes Agency-Communion Orientation (Bakan, 1966) from the investor side as a moderating variable. The categorization of the orientation is derived from the typical tendency of individuals' action for the self (agency) and for the others (communion). The use of this orientation is taken as a further step to measuring the differences between gender (male-female) and gender identity (masculinity-femininity) that have been extensively used in many contexts as a moderator (Tait et al., 1989; Randel, 2002; Nysveen et al., 2005). Each orientation with its distinct characteristics plays a crucial role in determining how the cause might influence the effect. However, agency-communion orientation in startup context has not been widely examined yet, might be because the topic itself is still in a nascent stage. It is just recently, in early 2018, that the organizational aims to increase female participation in the venture capitalist world have emerged. All Raise, a US-based organization, is actively holding numerous community events to accelerate the success of female funders, who now account for only 9% of decision-makers at US-based venture capital firms (All Raise, 2018). Even though the number is relatively small, gender influences in VC are argued to have a better capacity compared to male VCs, in evaluating and nurturing the female-led startups to have a greater performance (Raina, 2017). Thus, the existence of females on the investor side might influence the project selection decision differently. With such an emerging movement to increase the female role in a high-rank VCs, it is important to have an empirical study, which identifies the different impacts that female and male investors make in the startup-funding process. Therefore, this study provides an investigation of how the distinct motivational value between female and male investors would affect the main relationship of clothing color and formality on investment decision.

## **Research Contribution and Research Questions**

This study will contribute to both theory and practice. While the research about color and clothing formality in the management and marketing context are considered as a mature topic, the investigation of the two variables in the startup context is relatively unexplored. By applying theoretical supports like Impression Formation Theory (Asch, 1946) this study will extend the scope of non-verbal cues research. From a theoretical standpoint, this study will fill the gap in literature about the influence of clothing color choices and clothing attire in some business-related effects which are currently still centered on specific occupations. From a practical standpoint, this study will provide an answer to the entrepreneur's dilemma relating to choice of what to wear before pitching. Further, as a takeaway for investors, this study will provide empirical support to the question of whether clothing color and formality might bias the investment decision in innovative project selection. Most importantly, this study will be a pioneer in discussing the influence of small (supposedly irrelevant) aspects, in this case, clothing color and formality, in the startup context.

The goal of this study is to assess the influence of color and clothing formality on project selection decision, and to investigate the role of gender in promoting or hindering the relationship between color and clothing formality and project selection decision. This leads to the following research question:

*Do the type of color and clothing formality influence the project selection decision? And does the gender of the investor fortify or obstruct the main relationships?*

## **Structure of the Thesis**

This study would be structured as follows: first, the research contribution and research question are presented. Second, the theoretical background and literature review will be provided, to form the basis of the hypothesis that is argued in this study, followed by the conceptual model to sum up the variables to be tested. Next, the data and methodology part would explain further about the research procedure. The fourth chapter would be dedicated to the results and conclusion section, to analyze the findings based on empirical analysis. The conclusion will be in three main sections, where I will discuss the theoretical contributions, practical implications and limitations that will provide an avenue for future research.



## 2. THEORETICAL BACKGROUND

In the practice of entrepreneurship, successful entrepreneurs commonly experience the same systematic process. In this sense, when they come up with innovative ideas, they will try to expand the business by seeking support from external sources in terms of money or investment. Therefore, it is important for the entrepreneur to clearly understand the evaluation criteria adopted by the investor. In the entrepreneurial funding process, the key assumption I make is that when an investor evaluates a pitch presentation to decide whether or not to fund the startup, he or she focuses on two aspects of the pitch that signal how worthy the entrepreneur and his/her startup are: a pure affective aspect (so-called *passion*), a cognitive aspect (so-called *preparedness*).

### Passion

*Passion* is defined as “an intense affective state that bears cognitive and behavioral manifestations of high personal value” (Chen, Yao & Jotha, 2009, p.199). Originally discussed in the social and psychology literatures, passion has become one of the top, highly observed phenomena of the entrepreneurial process (Smilor, 1997). In this regard, it is concluded that a successful business comes from the strong passion that the founder has. For instance, Howard Schultz, the founder of Starbucks, began his entrepreneurial journey from his love for coffee (Ouchi, 2004). Moreover, Anita Roddick, the founder of Bodyshop, emphasized the role of passion in her business thus: “to succeed you have to believe in something with such a passion that it becomes a reality”<sup>1</sup>. In order to distinguish the passion in the entrepreneurial context that will be discussed in this study, I will use the term *entrepreneurial passion* to refer to passion about the business that the entrepreneur possesses.

The process of how passion influences entrepreneurial outcomes might be explained by the *Self-Regulation of Action and Affect Theory* (Scheier & Carver, 1988). In general, this theory explains the mechanism of self-corrective adjustments in terms of changing behavior to stay on track and keep moving toward the goals (Vohs & Baumeister, 2016). In an entrepreneurial context, the *entrepreneurial passion* activates the self-regulation process, so that one becomes more engaged in pursuing the entrepreneurial goal (e.g., an investment, a business expansion), and therefore, has this goal-oriented mindset. This kind of mindset, as Cardon et al. (2009) asserted, further enhances the entrepreneur’s cognitive and behavioral engagement. In this sense, the goal-related cognition leads to creative and novel propositions and actions (Woodman, Sawyer, & Griffin, 1993), persistence (Gimeno, Folta, Cooper, & Woo, 1997), and absorption (Schindehutte, Morris, & Allen, 2006).

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<sup>1</sup> The quote is taken from <https://succeedfeed.com>

As an affective aspect, passion is a stimulus the entrepreneur passes to the investors. Displaying passion refers to displaying positive feelings (Baron, 2008). In the context of entrepreneurial pitching, Chen et al. (2009) described a passionate entrepreneur as one who displayed verbal (e.g., statement of excitement) and non-verbal (e.g., smile) expressions simultaneously during the pitch. The studies by Chen et al., (2009) and Cardon et al. (2009), commented on the effectiveness of passion in capturing the attention of investors through several emotional processes. The displayed passion is found to be emotionally contagious (Cardon, 2008), in the sense that when the entrepreneur is highly passionate about the topic related to his/her business, others could not resist being infected with the same level of positivity as a reaction. Further, a positive affect derived from a displayed passion is argued to help the entrepreneur to become more persuasive and sociable (Baron, 2008), completing the social-related aspects needed for expanding the network.

Even though passion is an affective component that belongs to the entrepreneur, investors know the importance of it for startup success. As such, investors know that they need to be attentive to verbal and non-verbal cues – both in the pitch and in the entrepreneur – that can signal the entrepreneur’s level of passion. It is therefore such a rational process in the entrepreneurial funding stage that other things being equal, higher passion is related to higher investment.

### **Preparedness**

As a cognitive dimension, preparedness refers to the content-related characteristics in a project presentation. It could represent how much effort, related to thinking and actions, that the entrepreneur has taken about the business (Galbraith et al., 2014).

Similar to passion, entrepreneurial preparedness primarily serves to capture the attention of the investor. It also helps to establish credibility and to preview the topic (Osborn & Osborn, 2012). One distinction between passion and preparedness is that no strong emotional function attached to preparedness is perceived by others. Preparedness helps the investor to form an attitude by giving exposure to the practical information related to the business (e.g., projected growth, expansion possibility). Therefore, in the screening and funding stage, preparedness facilitates narration of the compelling reasons the entrepreneur has, providing the investor information about the factual growth and long-term possibilities, to make their business more appealing than those of competitors.

Previous studies consistently identified business potential (i.e., revenue, market growth), barriers for entry and exit potential are the most important criteria being evaluated to measure the probability of success (Tyebjee & Bruno, 1984; MacMillan, Siegel, & Subbanarasimha, 1985; MacMillan, Zemann, & Subbanarasimha, 1987; Carter and Van Auken, 1992; Van Osnabrugge, 1998; Haar, Starr, and Macmillan,

1988; Sudek, 2006). The aforementioned criteria could be displayed exclusively when the entrepreneur has a high level of preparedness. As an example, Chen et al. (2009) mentioned a specific case about how preparedness is perceived by investors. In the context of a student's business case presentation, the judges, drawn from professionals and experts in their own field, make the evaluation based on the content of the presentation on the basis of whether it has met the criteria mentioned before.

Such consistent results confirming the effectiveness of preparedness during innovative project pitching stress the need to focus on preparedness, not only for entrepreneur but also for investors. For the entrepreneur, preparedness helps to have a more professional inferences and a promising and appealing project proposal. For the investors, knowing that preparedness is a crucial indication of startup success, paying attention to entrepreneurial preparedness will help them to identify future opportunities of the proposed project. It is therefore logical that other things being equal, a higher level of preparedness is strongly related to a higher level of investment.

### 3. HYPOTHESIS DEVELOPMENT

Given that the entrepreneur is cognizant about the importance of passion and preparedness for investors, such that having a higher passion and preparedness will increase the likelihood of getting the project funded, the entrepreneur may try to engage in impression management efforts to signal passion and preparedness.

#### 3.1. Impression Formation Theory

“A glance, a few spoken words are sufficient to tell us a story about a highly complex matter” (Asch, 1946, p. 258).” This statement highlights the significant role of initial impression in grabbing the attention and altering human’s behavior towards a specific object. According to the Dictionary of Social Sciences (Calhoun, 2014), *impression formation* is the process of formulating impressions of others and events, which deals primarily with the factors that influence initial impressions and longer term processes of judgments. This theory explains that perceiver’s response to an individual is based on the stereotypes, prejudices and behavioral tendencies associated with the assigned category (Hamilton & Trolie, 1986). The process of impression formation often starts with environmental cues such as noises, shapes, sizes, scents and colors (Belk, 1975), which serve as a signal function to form a perception. The perception of color will continue to the evaluative processes. Next, the evaluative processes induced by color stimuli will produce the motivated behavior (Hamilton & Huffman, 1971).

Ample research has identified the effect of color as a stimulus in impression formation, in altering psychological effects (Paul & Okan, 2011; Baghchi & Cheema, 2014; Elliot & Maier, 2014). Color stimuli are categorized based on the hue (i.e., wavelength), brightness (i.e., black-to-white) and saturation (i.e., vividness with lower saturation contains more gray) (Valdez & Mehrabian, 1994). Color is suggested to be not only an aesthetic function, but also a means of communication of specific information (Elliot et al., 2007). Most of the research context lies in marketing or human resource management fields, where perception plays a crucial role in forming an attitudinal response. In the atmospheric marketing context, building and store color are found to help engaging consumers and creating a higher level of shopping experience (Paul & Okan, 2011). In this sense, blue is the most likeable color for stores, as it gives a relaxing and trustworthy impression. Baghchi & Cheema (2014) shed further light on color influence on psychological effects in the web-advertising context. They suggested that different color backgrounds alter the consumer’s willingness-to-pay. Red background, relative to blue or gray, makes individuals to bid higher and negotiate the offers lower. The strong effect of red background is projected by the increase of aggression when consumers see red color. In the more extended context, Hill and Barton (2005) examined the effect of uniform color on achievement in sports competitions, where red is a dominant color for the

winning team in football, rugby, as well as combat sports. Red positively strengthens the team or individual's dominance and aggressiveness, which eventually trigger competitiveness.

Many positive associations with red color in various contexts has undoubtedly made red a highly functional color to form an impression. As a part of the functioning to stimulate a moderate state of arousal, red could activate analytical processing, which is strongly related to the quicker process of impression formation (Küller, Mikellides & Janssens, 2009). This makes red one of the mostly used colors to be used in building impression, especially in marketing and personal branding situations. On the other hand, extant literatures show the emerging function of other colors such as blue, green and achromatic color. As a color of the natural realm, blue and green are expected to link with a positive content such as openness and peace (Mehta & Zhu, 2009). Moreover, green is related to success in task performance in the real life context (Clarke & Costal, 2008). Further study on color also investigated the important effect that neutral colors entail. Black, an example of neutral colors, appears to induce more aggression (Lakens et al., 2012), at almost the same level with red. In addition, black increases the perceptions of fashionableness and attractiveness.

The literature to date has examined the color influence on psychological functioning in various situations. However, the specific context of color influence in startup project selection decision remains unclear; yet, research has identified that the way someone dresses in particular circumstances has an undoubtable influence on the way others perceive them. In this case, we could apply the Impression Formation Theory to examine the effect of entrepreneur's clothing color on investor's willingness-to-fund, by assessing how the color performs according to *arousal-inducing aggression* (Anderson & Bushman, 2002), or *Approach- and Avoidance-Motivated Behavior Theory* (Meier et al., 2012). In this sense, the fundamental question is about the kind of impression that is actually needed during the pitch. Does the investor want to see someone who looks *attractive*, looks *smart*, or looks *reliable*? The answers could be observed by referring back to entrepreneurial passion as one of many determinants in VC decision to contribute to a funding. Passion, in particular, is seen by how entrepreneurs show their openness to feedback (humility), their confidence in their capability and their knowledge of their own vulnerability (Parhankangas & Ehrlich, 2014).

The aforementioned characteristics could be slightly represented by the clothing color that entrepreneurs choose to wear. If one characteristic could be associated with one color, openness to feedback might contradict the characteristic of warm color, a part of short-wavelength hue, high saturations and low brightness (Valdez & Mehrabian, 1994), such as yellow and red which are more indicative of disagreeable and forceful behavior (Goldstein, 1942). Therefore, neutral (i.e., gray) or cool color (i.e., blue and green) with long-wavelength, low saturations and low brightness (Valdez & Mehrabian, 1994) might be more

suitable for indicating the openness to feedback. Next, with regard to the self-confidence in one's capability, cool or neutral color would again be a more suitable color to give a signal of wearer's intellectual capability, because warm color is related to avoidance behavior, which weakens the perceived intellectual performance (Elliot & Maier, 2014). The support for cool color becomes stronger with the positive implications for experience and performance (Moller et al., 2009; Clarke & Costal, 2008), providing a relevant justification for cool color to be more relevant in showing entrepreneur's passion than the warm color. In fact, warm color has been indicated to effectively facilitate formation of an attractive impression; red, for instance, provides higher emotional arousal to the perceiver (Elliot & Niesta, 2008; Bellizzi & Hite, 1992). However, being attractive might just affect the evaluation only during the early minutes. As soon as the pitching starts and the project is elaborated upon, investors usually look for more connection between them and the entrepreneur-self in a more professional way, leading to the following hypothesis:

*Hypothesis 1: All else being equal, an entrepreneur who wears a cool-colored clothing has a higher likelihood of having his/her project selected, than one who wears a warm-colored clothing.*

### **3.2. Impression Formation and Clothing Formality**

Clothing formality is another form of non-verbal cues. Since decades, the role of clothing as a tool to form the impression of the wearer's personal characteristics has been established (Hoult, 1954; Forsythe et al., 1985; Slepian et al., 2015). Rather than being an objective observation, the perception of personal characteristics is a subjective reaction (Forsythe et al., 1985). Therefore, appearing good with formal clothing does matter in many situations. In their study, Forsythe et al. (1985) assessed the applicant's appearance during an interview. They found that appearing more masculine with a formal suit would increase the hiring decision for a management position. Further, Yan, Yurchisin and Watchravesringkan (2011) presented the support for the role of clothing formality in the retail context, where formal clothing worn by employees in retail stores increases the consumer's perception of the store image.

A more developed research regarding clothing concluded a proactive use of clothing to be a *semiotic marker*, i.e., as a means to differentiate and to communicate personal and group identities (Schofield & Schmidt, 2005). Thus, clothing is specifically chosen to represent the wearer's affiliations. Clothing might also be adjusted just to change the perception of others. Peluchette and Karl (2007) suggested a strong belief in organization that "we dress to impress", implying that the function of clothing is to establish a good perception in the onlooker. Therefore, apart from interviews or performance reviews, clothing and appearance during the pitching will certainly matter to the success of project selection decision.

There are two main differentiations of clothing appearance, formal and non-formal. According to

Forsythe et al. (1985), clothing is considered *formal* when the design component is indicated with vertical lines, straight silhouettes, strong angular lines, large-scale details, heavy textures and dark colors (p. 375). Each category has its own inferences in the business context. Researchers have long established a specific theory to examine what happens behind a formal clothing. Construal level theory (Trope & Liberman, 2010) shed some lights on the psychological processing of clothing. It posits that there are abstract and concrete thinking, determined by psychological distance. A more psychologically distant event is processed in relatively abstract thinking, while a more psychologically near event is processed in relatively concrete thinking. Slepian et al. (2015) explains in detail about this processing; abstract processing is categorized by a super-ordinate, holistic and broad mental representation. In contrast, concrete processing is more towards subordinate and narrow mental representations. In their research, an individual who wears a formal clothing was found to demonstrate an abstract processing, indicated by higher identification levels, category inclusiveness and a greater power, which become a sign for the perceiver that the wearer is a long-term thinker (associated with high action identification levels), preferring future gains over immediate gains (Fujita et al., 2006) and has a good leader material (associated with category inclusiveness and power).

The study about abstract processing confirmed a strong association of the processing with further management-related capabilities. Wakslak and Trope (2009) found that individuals with abstract processing would have greater conceptual and perceptual coherence that could influence the decision making process, information search and probability estimates. This further supports the good inferences from clothing formality. Moreover, clothing formality is associated with positive affect, enhancing problem-solving and decision-making, which is beneficial when facing organizational challenges (Isen, 2001). Therefore, extrapolating these findings to the context of startup pitches, one can expect that formal clothing worn by the entrepreneur might demonstrate the wearer's sufficient capability and within-self resources to develop the new venture. It would give a sign to the investor about the good potential, with higher probability of achieving success, with ability to articulate the firm's vision and mission to current and future employees, to be able to influence, persuade and lead people in growing the venture (Vallerand et al., 2003), all of make investment worthwhile.

On the other hand, non-formal clothing has its own characteristics. In the business context, Rafaeli et al. (1994) presented that casual dress is helpful when the employee needs to develop the connection with others. Casual dress is also suggested to boost employee morale (Peluchette & Karl, 2007) because it increases employees' self-perception of job effort. Further, employees feel friendlier and able to socialize in a workplace in a less tense mood when wearing casual dress. In the startup context, a notable implication about non-formal clothing to disruptiveness and creativity was found. Referring to the study of Rafaeli et al. (1994), casual clothing is used to create a distinctive identity, implying "I am not a member" or "I am

different”. It might imply that when using casual attire, the wearer represents themselves as an out-of-the-box individual who are disruptive enough to establish something new, and closely related to innovation and vision which are the typical characteristics in entrepreneurship (Nga & Shamuganathan, 2010). Applying these findings to the startup pitches context, it can be expected that casual clothing would also give a signal to the investors that the wearer has good potential, demonstrated by the within-self creativity and dynamic behavior, which will in turn impact the firm-level innovation and future growth.

However, most of the research about clothing in the management context does not prefer the casual workplace attire, because it might be somewhat related to casual work ethic (Peluchette & Karl, 2007). The amount of empirical studies discussing non-formal clothing is rather limited, thus leading the theoretical explanation to be based on assumptions based on the supports from available studies.

Abundant support is available for the use of clothing formality to represent the managerial capability of the wearer. Yet, theoretical support for the effect of non-formal clothing in business context is limited. Even though non-formal clothing might represent creativity and the disruptive self that the wearer might have, taking into account the importance of the entrepreneur being well-planned, long term-oriented and flexible with unfavorable circumstances, formal clothing is posited to outperform non-formal clothing in forming a good perceiver’s impression towards the entrepreneur when pitching. It leads to the following hypothesis:

*Hypothesis 2: All else being equal, an entrepreneur who wears formal clothing has a higher likelihood of having his/her project selected than one who wears non-formal clothing.*

### **3.3. Agency-Communion Orientation Theory**

Agency-Communion Orientation Theory (Bakan, 1966) explained the notions of two fundamental characteristics in individuals. Agency defines the focuses on the self, self-efficacy and self-assertion, which are characterized by assertiveness, control and in the extreme situation, dominance. On the other hand, Communion defines the emphasis on social relationships, affiliations and harmony with surroundings. This theory becomes a basic element of social judgments, influenced by social situations and plays a role in affecting behavior and decision.

### **3.4. Agency-Communion Orientation, Gender and Gender Identity**

The concept of Agency-Communion has been long established by extensive studies in social psychology. The characteristics of Agency and Communion Orientation have been used to establish the measures of masculinity and femininity (Bem, 1974). Besides, the concept of Agency-Communion is also



often used as a sounder proxy for orientation that further explains the differences that lie in gender (Bakan, 1966). Glick et al. (2004) stated the positive support for the view of women's traits being more associated with the emphasis on others demonstrated in communal-oriented individuals, whereas men's traits, characterized by power and status, are more compatible for agentic-oriented individuals. Guimond et al. (2006) verified the categorization of males and females to agency and communion orientation, by the way each group defines the self in the stereotype of the group. Additional study identifying the interchangeable role of gender and agency-communion orientation was conducted by Kurt et al. (2011), which supported the use of gender as a proxy for agency-communion. A deep interest in this concept is further explored due to each orientation serving as moral identifiers that distinguish women and men; women is have more emotional affection than men, who are known to be logical, with a high-cognitive behavior. Winterich, Mittal and Ross (2009) identified the concept of Agency-Communion Orientation in donation behavior. They found that communal individuals tend to be more charitable than agentic ones, because of the emphasis on welfare of out-group being as important as in-group. In this case, communal-individuals are indicated as high moral identifiers.

### **3.5. Moderating Effect of Agency-Communion Orientation**

In this study, agency-communion orientation is used as a moderating variable, influencing the effect of clothing color and formality on the project selection decision. Specifically, I propose that the effect of clothing color and formality on project selection decision is higher in the communal-oriented investor than the agentic-oriented one. Research on gender – which in this study is specified as agency-communion orientation – has demonstrated the effect of different orientations on decoding non-verbal cues. In this sense, communal individuals are said to have a better ability in decoding non-verbal cues. Embodying the considerations of others, communion-oriented goal is substantial in evaluating individual or group (Leach et al., 2007), even for the distant peers. Moreover, communion is found to influence liking behavior (Wojciszke, Abele & Baryla, 2009). Past research also extended support for better decoding ability of communal individuals. One foremost reason lies in a socially adaptive trait of communal individuals being more non-verbally sensitive (Hall, 1978), even for the smallest details shown by the cue sender. Further, communal individuals are considered to have a better judging ability based on the high accuracy in capturing the emotional meaning behind non-verbal cues. Supporting such a traditional paradigm, Maccoby and Jacklin (1974) found that communal individuals are better able to empathize in the social situation, leading them to be more aware towards the thoughts and feelings of others. Those traits could be explained by following the mechanism of Recognition of Affect (Hoffman, 1977) while observing the surroundings.

Recognition of Affect is described as “subject’s judgments about how people in different situations

feel” (p. 714). This theory purports to be a kind of affective perspective taking, such as capturing fear or happiness from others’ non-verbal cues (e.g., facial expression). Thus, after perceiving the stimuli, communal individuals tend to be easily aroused emphatically (Hoffman, 1977). The same study also found support for communal people being more responsive to situational cues, leading them to think from the shoes of others with a vicarious affective response (Hoffman, 1977). In contrast, rather than reliance on feeling and sensing the mood of others, agentic individuals are triggered to act and find alternatives for problem-solving. In consequence, higher Recognition of Affect level the communal individuals have leads them to draw the inference that the sender intends to communicate by demonstrating specific non-verbal cues. In the form of clothing color and formality as non-verbal cues of entrepreneurs, communal individuals might have more power to grab the implicit meaning and intention of the entrepreneur in choosing the clothing color and formality.

Abundant studies have supported the role of agency-communion orientation as a moderating variable. Relating back agency-communion to gender (male and female) and gender identity (masculinity-femininity), Macintosh and Krush (2014) found that job satisfaction for women is more related to professional networking, while men get the advantages for peer networking, which supports the finding that communal people are better engaged to out-group people, more than the agentic. Additionally, in the context of decision-making, masculinity is found to be associated with unethical behavior (Lu, Rose & Blodgett, 1999).

Applying the literature review discussed above to the startup context, I propose that communal people would have superiority over agentic people in decoding the clothing color and formality, two forms of non-verbal cues proposed in this study. With a higher Recognition of Affect level that communal individuals arguably possess, they can capture and value the sign from the clothing color and formality that entrepreneur consciously decides to wear. When wearing red, for instance, the entrepreneur wants to arouse the investors’ emotion by presenting a dominant and competitive image. As a reaction to the stimuli, communal individuals, who are way more affiliated to the situations (Bakan, 1966) compared to the agentic investors, would capture the cues better. In case the project could not meet the assessment criteria, entrepreneur’s non-verbal cues captured by the communal individual might lead to alternative actions such as asking question or personal discussion after the pitching session, to understand the whole picture of the project. On the other hand, agentic people would view everything based on the cognitive reasoning (Kurt et al., 2011) without taking into account non-verbal or other cues. Thus, they would reject the proposal as failing to meet the criteria, supporting a relationship between agentic individuals and an unethical behavior in decision making (Lu, Rose & Blodgett, 1999). In the clothing formality context, when the entrepreneur wears a formal clothing, the communal investor would view it as positive inferences of the wearer’s

leadership potential. Therefore, in addition to the project content, I expect that the communal-oriented investor has a greater power to translate the non-verbal cues and take them into account when making an investment decision, leading to the following hypothesis:

*Hypothesis 3: Agency-Communion Orientation moderates the impact of clothing color and formality on project selection decision, such that clothing color and formality will be perceived higher by the communal (female) investor than the agentic (male) investor. Specifically,*

*3a. The positive effect of cool color on the likelihood of investing is higher for communal (female) investors than for agentic (male) investors*

*3b. The positive effect of formal clothing on the likelihood of investing is higher for communal (female) investors than for agentic (male) investors*

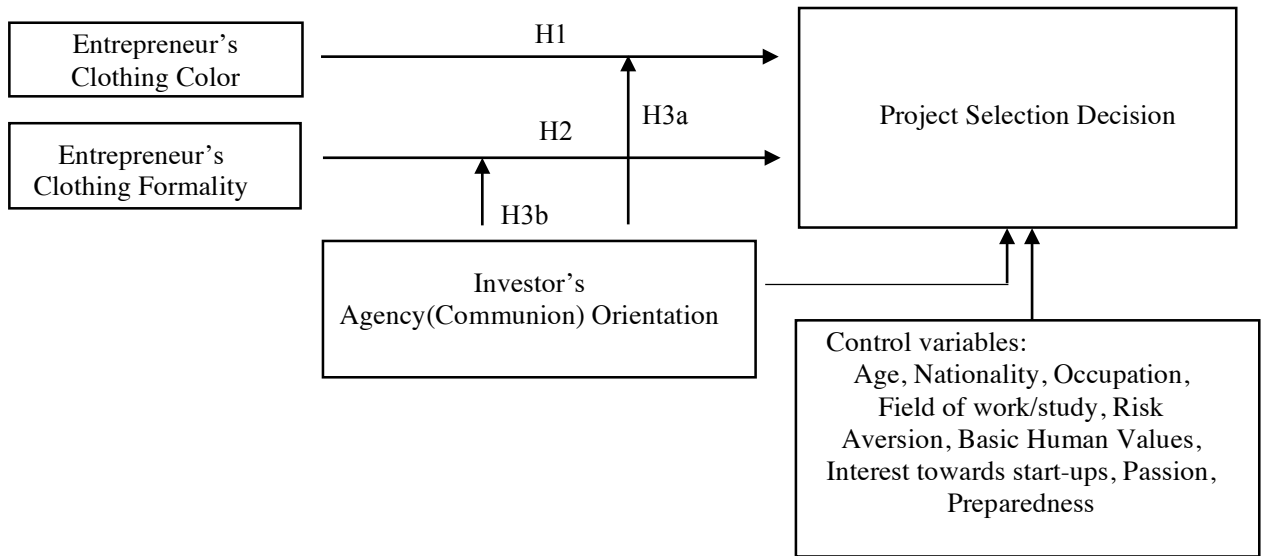
### **3.6. Summary of Hypotheses**

The following table provides a summary of the hypotheses that I propose in this study:

*Table 1.  
Summary of Hypotheses*

<u>Hypotheses</u>	
<i>H1</i>	All else being equal, an entrepreneur who wears cool-colored clothing has a higher likelihood of having his/her project selected than one who wears warm-colored clothing.
<i>H2</i>	All else being equal, an entrepreneur who wear formal clothing has a higher likelihood of having his/her project selected than one who wears casual clothing.
<i>H3</i>	Agency-Communion Orientation moderates the impact of clothing color and formality on project selection decision, such that clothing color and formality will be perceived higher by the communal (female) investor than the agentic (male) investor.
<i>H3a</i>	The positive effect of cool color on the likelihood of investing is higher for communal (female) investors than for agentic (male) investors
<i>H3b</i>	The positive effect of formal clothing on the likelihood of investing is higher for communal (female) investors than for agentic (male) investors

### 3.7. Conceptual Framework



## 4. RESEARCH METHODOLOGY

### 4.1. Research Design

The study was conducted in English. For this experimental study, I used a 2 (clothing formality: formal vs. non-formal clothing) x 2 (clothing color: warm color vs cool color) between-subjects design, where I manipulated the key treatment variables using experimental videos of an entrepreneur pitching a new idea. I also included project slides and voice only pitch control treatment. I opted for a between-subjects design because it has several key advantages such as simplicity, lower chance of fatigue effects, cost efficiency and usefulness when an individual is unable to participate in all experimental conditions (Field & Hole, 2002) as this study assessed the orientation (agency or communion) of the respondents. Specifically, participants were randomly allocated to one of the treatment conditions and asked to fill out an online questionnaire. In the four focal experimental treatments, subjects had to view a video with a purported entrepreneur pitching an idea for getting a 200000-dollar funding, in exchange for a 15% stake in the company. In the beginning, I gave the scenario that the subjects will act as an investor in the whole survey, and they were led to believe that the pitch was a real one. Subjects then had to answer some questions about the content of the pitch, their funding decision as well as some questions measuring several dimensions of their individual views toward specific subjects. More details about the stimuli and video on the section 3.4, below.

### 4.2. Research Procedure

I conducted my experiment online. Specifically, I programmed an online survey experiment using the online tool *Qualtrics*. I then distributed this link to my target sample and kept the experiment live, online, for two weeks (please see the next section for more details of my sampling procedure). Thereafter, subjects' responses were analyzed with SPSS, using linear regression analysis. For checking the moderating variables, I conducted the analysis of interaction terms in linear regression equation.

*Table 2.*  
*2x2 for Between-subjects Design*

	(Color) Warm	(Color) Cool
Formality (Formal)	Warm x Formal	Cool x Formal
Formality (Casual)	Warm x Casual	Cool x Casual

### **4.3. Participants and Sample**

#### **4.3.1. Participants**

The participants were selected based on a non-probability sampling technique (i.e., a combination of convenience and snowball sampling). More specifically, I distributed the link to my online experiment via social network and email to a group of 30 acquaintances and friends who served as my “seed” respondents. In respect to the use of English language in the study, I explained the language requirement on the questionnaire’s introduction section. Apart from that, I included a short explanation about the experiment, the research purpose, length of time to complete the survey, and information about the confidentiality in the study.

#### **4.3.2. Power Analysis and Sample Size**

To determine the minimum sample size for my experimental study, I conducted a statistical power analysis using g\*power software. Specifying the estimation with a 0.05 significance level ( $\alpha$ ), 0.80 expected power ( $\beta$ ), and 0.50 (medium to large) effect size ( $d_z$ ) (Field, 2013; Cohen, 1992), I found that my minimum sample size should be around 34 respondents per treatment. With a total of 5 treatments including the control, taking the upper limit of 35 subjects per treatment, I concluded that I needed at least 175 subjects for my experiment. Therefore, I aimed for a sample size of 200 in order to ensure sufficient statistical power to detect the effect of non-verbal cues, which may be smaller than the 0.50 medium effect size used in the calculations above.

### **4.4. Stimuli**

Four 38-seconds YouTube videos were shot and manipulated with respect to the independent variables (manipulations). I prepared 4 versions of the video with the pitch content and other factors influencing investment decision during the pitch (e.g., gestures, intonation, voice, energy, passion, preparedness) (Filion, 1991; Cardon et al., 2009; Chen et al., 2009) kept exactly the same in all versions. The only changes were clothing color and formality, as discussed below in the manipulations section. To present a project theme which is appealing to all type of participants, a neutral and hot topic about *Big Data Engagement Analytics* was presented. The project was inspired originally by an existing company named Snapcart in Indonesia and the Philippines, which provides real-time shopper and consumer insights for brands and retailers across the Southeast Asian market (Snapcart, 2018). In order to hide this identity, the project name will be changed into *snappie*. All information about the project and growth were derived from the company website and the news from trustworthy sources. The presentation slides, design and other things shown in the video were adjusted by the author.

#### 4.4.1. Manipulations of Clothing Color

Two spectrums of clothing color worn by a female entrepreneur were used as experimental treatments in this study. First, red represents the long-wavelength spectrum, i.e., a warm color. Dark blue was chosen as the color from the short-wavelength spectrum, i.e., a cool color. The use of these colors is adopted from the research of Elliot and Maier (2007; 2014).

#### 4.4.2. Manipulations of Clothing Formality

Two types of clothing formality worn by a female entrepreneur were manipulated in this study. First, in the formal clothing treatment, the actress portraying the entrepreneur in the video appeared wearing a formal long-sleeve blouse (top), formal black skirt (bottom) and black leather shoes. The level of formality used in this treatment is based on the typical definition of a *formal dress* that was used by previous studies (Furnham, Chan & Wilson, 2013; Swift, Zachariah & Casey, 2000). This definition is also in line with the conceptualization of formality presented by Forsythe et al. (1985), who equate formality with a more masculine dress with components of vertical lines, straight silhouettes, strong angular lines and heavy textures. Second, in the casual clothing treatment, the actor portraying the entrepreneur in the video appeared wearing a T-shirt (top), jeans (bottom). The level of casualty in this treatment is adapted from the definition of casual attire by Furnham et al. (2013).

Following is the summary table of treatment conditions in this study:

*Table 3.*  
*Summary of treatment conditions*

Condition	Number of participants within condition
1. Control treatment	No color and formality information (presentation slides and voice)
2. Warm-colored and formal	A red long-sleeve shirt with black formal skirt
3. Warm-colored and casual	A red T-shirt with dark blue jeans
4. Cool-colored and formal	A dark blue long-sleeve shirt with black formal skirt
5. Cool-colored and casual	A dark blue T-shirt with jeans

## **4.5. Measures**

### **4.5.1. Dependent Variable**

#### **Project Selection Decision**

The project selection decision was measured by the willingness of the participant to invest in the project. I measured such willingness to invest using one item 7-point Likert scale (*1= Strongly disagree; 7= Strongly agree*). The specific item used were “I would definitely want to sponsor this project”. This scale was adapted from the decision-making scale proposed by Pingitore, Dugoni, Tindale and Spring (1994) in the context of employment interview. See Appendix 8.2 for the full measures scale.

### **4.5.2. Moderating Variable**

#### **Agency-Communion Orientation**

The assessment of Agency-Communion Orientation was measured with the participant’s gender with 0 = Male and 1 = Female. The use of gender as a proxy for agency-communion orientation was adapted from Kurt, Inman and Argo (2011).

### **4.5.3. Control Variables**

#### **Risk Aversion**

To measure the risk aversion of participants in the context of innovative actions, I used a six-item scale Top Management Risk Aversion developed by Jaworski and Kohli (1993). While the original scale used a 5-point Likert scale, I used a 7-point Likert scale (1 = Strongly disagree; 5 = Strongly agree) because it is more accurate for observing small differences (Finstad, 2010). The example items are “I believe that higher financial risks are worth taking for higher rewards” and “I like to “play it safe” (reverse coded). The total scores were summed up to represent a mean score of each participant. The scores for items five and six, which contain a negatively-worded statement, were reversed. To check for the factorability of the modified scale, I performed Principal Component Analysis (PCA). The Kaiser-Meyer-Olkin value was .642, exceeding the recommended value of .6 and Bartlett’s Test of Sphericity reached statistical significance, which supports the factorability of the correlation matrix. The 5 items measure did not seem to load in the same construct, as two-component solution appeared to explain a total of 62.453% of the variance. Component 1 contributed 38.175% and Component 2 contributed 24.278%. Forcing the number of factors into one-factor solution seemed impossible, since items 5 and 6 have factor loadings below 0.5, and the communalities below 0.3. Therefore, to keep the scale into one-factor solution, I eliminated items 5 and 6. It is important to bear in mind that the reversed Likert scale items are known to be problematic for respondents, which led some scholars to recommend the avoidance of such items in survey research (Swain,



Weathers & Niedrich, 2008) The reliability test of adjusted scale revealed a moderately acceptable reliability  $\alpha = .715$  with no improvement if any item was deleted. The reliability is below the original reliability prescribed by Jaworski and Kohli (1993) with  $\alpha = .854$ .

### **The Basic Human Values**

The basic human values were measured by adjusting the Short Schwartz's Value Survey, consisting of 10 items with a 10-point scale. The values measured represent values from the universal requirement of human life (Lindeman & Verkasalo, 2005). The adjusted scale was composed of 5 motivationally distinct values (Power, Achievement, Tradition, Conformity and Security) with 5-point scale (*1 = Not at all important, 2= Slightly important, 3= Moderately important, 4= Important and 5= Extremely important*). The PCA revealed that the Kaiser-Meyer-Olkin value was .668 (>.6) and Bartlett's test of Sphericity was significant ( $p < 0.05$ ). Two-factor solution was confirmed in the scale, explaining 74.406% of total variance, with component 1 (power and achievement) accounting for 47.986% and component 2 (tradition, conformity and security) explaining 26.420% of the total variance. The result of PCA analysis is in line with prior studies, which categorized basic human values into four main divisions: *self-enhancement*, *conservation*, *self-transcendence* and *openness to change* (Lindeman & Verkasalo, 2005). Component 1 represents self-enhancement and component 2 represents conservation. The former was suggested to be the opposite of *self-transcendence*, while the latter was opposed to *openness to change*. Due to the scientific support that the two divisions are opposed to the other two, I averaged item *power* and *achievement* to obtain a measure of *self-enhancement* and I averaged item *tradition*, *conformity* and *security* to obtain the measure of *conservation*. I proceeded with my analysis with these two higher-level dimensions and assuming that, indeed, (i) *self-enhancement* and *self-transcendence* and (ii) *conservation* and *openness to change* are opposite poles of common higher-level values. The reliability for self-enhancement scale is 0.685, and for conservation, 0.797. Together, the scale's reliability was moderately acceptable ( $\alpha = .719$ ).

### **The interest towards start-up project**

Due to the possibility that the individuals who are interested in entrepreneurship idea in general would be more inclined to fund than others, I checked for the participants' interest by asking one question, viz., "Have you ever watched the TV show the Apprentice, Shark Tank or Dragon's Den?". The item is a binary variable, in which "Yes" is coded as 0 and "No" is coded 1.

### **Passion and Preparedness**

Passion and preparedness have been shown to influence the funding decision (Chen et al., 2009;

Cardon et al., 2009). Because of that, I also use these two variables as the control variables, to control the possible confounding effects from them. The scale Passion and Preparedness was adapted from the scale of Chen, Yao and Kotha (2009) to measure the participant's (as an investor) perception of entrepreneur's passion and preparedness. The original scale consisted of 11 items with 5-point Likert scale ( $1 = \textit{Strongly disagree}$ ;  $5 = \textit{Strongly agree}$ ). Because of the difference between the original study and this study, (in the sense that this study did not require participants to directly see the entrepreneur), I decided to omit five irrelevant items. As a result, six items remained to be further used in this study. Three of them measured the perceived passion (e.g., I could feel the entrepreneur 'lit up' when she talked) and other three items measured the perceived preparedness (e.g., the presentation was coherent and logical). The mean of the score was calculated for passion and preparedness scale, respectively.

**Passion:** The KMO value was .70, exceeding the threshold of 0.6 and the Bartlett's Test of Sphericity was statistically significant ( $p < 0.01$ ). All communalities were above 0.30. One-factor solution was found, explaining 78.594% of the total variance with high factor loadings ( $> 0.5$ ). The reliability is good ( $\alpha = .864$ ).

**Preparedness:** KMO value is .721, above the recommended value (0.6) with significant Bartlett's Test of Sphericity ( $p < 0.01$ ). The communalities were above 0.3, with one factor-solution explaining 73.680% of total variance. High factor loadings ( $> 0.5$ ) were found for all three items. The reliability of the scale is good with  $\alpha = .820$  and no improvement if items deleted.

### **Other control variables**

In addition, the following control variables were also used, to control for additional drivers of each subject's inclination to select a project to receive funding: *age*, *nationality*, *current occupation*, *highest obtained education*, and *field of work/study*. Age, nationality and occupation have been extensively used as control variables in previous studies. Particularly in the non-verbal cues context, decoding performance was found to be improved with age (Philippot & Feldman, 1990). In addition, nationality was included to reduce the different effects from different nationalities. The use of nationality as control variable was demonstrated by Gabbott and Hogg (2000), in which a support of different perception from different cultural group – western and eastern – was found. The field of work or study was included as a control variable to reduce bias of different images of formality that might pertain to the different fields the participant belonged to. Forsythe et al. (1985) suggested the importance of the variable due to the possibility of different perception of clothing conservativeness between, for instance, banking and advertising industries.

#### 4.5.4. Manipulation Checks and Control Questions

For the manipulation checks, I asked two questions with 7-point scale ( $1 = \textit{Strongly disagree}$ ;  $7 = \textit{Strongly Agree}$ ) for each treatment, in accordance with the type of clothing color and formality that the entrepreneur wears. The questions for clothing formality were “I believe that the entrepreneur was dressed formally” and “I believe that the entrepreneur was dressed casually”. For the clothing color, the questions were “I believe that the entrepreneur was using warm colors in her clothing” in the case of red-colored clothing and “I believe that the entrepreneur was using cool colors in her clothing” in the case of blue-colored clothing.

Further, there was one control question asked at the end of the survey (see Appendix I) to check whether the participants paid good attention to the project proposal. The control questions were: “what was the project theme”, measured with 7-point scale ( $1 = \textit{Strongly disagree}$ ;  $7 = \textit{Strongly Agree}$ ).

The following table provides a summary of variables in this study:

*Table 4.*  
*Variables for Measurement*

Variable Type	Measurement Level	Variable Name	Details
IV*	Nominal	Clothing color (experimentally manipulated)	1= warm, 0 =cool, -1=no color info
	Nominal	Clothing formality (experimentally manipulated)	1= formal, 0 =casual,-1=no formality info
	Ordinal	Passion	Likert scale (1-to-7)
	Ordinal	Preparedness	Likert scale (1-to-7)
MV*	Nominal	Gender (proxy of agency-communion)	1 = male 0 = female
DV*	Ordinal	Investment Decision	Likert scale (1-to-7)
CV*	Ordinal	Risk aversion, Basic human value	Likert scale (1-to-7)
	Nominal	Age, occupation, education, industry	Open-ended question

Notes: IV = Independent variable, MV= Moderating variable, DV= Dependent variable, CV= control variable

## 5. DATA ANALYSIS AND RESULTS

### 5.1. Manipulations Check and Attention Check

The manipulation checks revealed that for clothing color and formality in condition 1, 73.6% of the participants are aware that the entrepreneur wore warm-colored and formal clothing. 78.4% of participants in condition 2 are also aware of the manipulations. In conditions 3 and 4, 87.2% and 77.5% of the participants, respectively, are aware of the cool-colored and formal or casual clothing presented in the video. Based on the percentage, it could be concluded that the manipulation of clothing color and formality that I implemented is valid. Regarding the attention check, 67% of the participants furnished the project theme correctly, indicating that a large percentage of respondents made the decision based on sufficient understanding about the proposal.

### 5.2. Descriptive Statistics and Correlation Matrix

A total of 203 valid responses were collected. The division of respondents across the treatment conditions was as follows: (1) N = 41 for warm color and formal clothing, (2) N = 38 for warm color and casual clothing, (3) N = 46 for cool color and formal clothing, (4) N = 40 for cool color and casual clothing, and (5) N = 38 for the control treatment (presentation slide and voice only, so no information about clothing color or formality). See Table 6 for the participant divisions into conditions. Of the valid responses, 105 are female (51.7%) and 98 males (48.3%). The mean age of respondents is 29.6 years. Most of the participants have Indonesian nationality (88.2%). The rest are from different countries such as Australia (1%), Germany (1%), Greece (1%), Japan (1%), the Netherlands (1%), United Kingdom (1%) and the US (1%). From the education background, more than half of the participants obtained a Bachelor's Degree (60.4%), followed by Master's Degree (29.6%). Full-time/part-time employee counted the most for the occupation (52.7%), followed by students (30.5%) and entrepreneurs (3.9%). The industry of work/study from which the respondent came is dominated by Professional and Technical Services (18.7%), Finance and Insurance (15.8%), Information (13.8%) and Management of companies or enterprises (13.3%).

Table 5 below shows the means, standard deviation, and the correlation coefficient of the variables. The correlation between control variables would not be discussed in detail. Investment decision has a positive and moderate correlation with passion ( $r=.34, p<.05$ ) and preparedness ( $r=.41, p<.05$ ). Investment decision is also positively correlated with risk aversion ( $r=.20, p<.05$ ), self-enhancement ( $r=.18, p<.01$ ), conservation ( $r=.26, p<.05$ ) and age ( $r=.18, p<.01$ ). The overall correlations are considerably moderate. However, as correlation does not provide causation, the regression analysis will still be the basis of hypothesis testing.

### 5.3. Assumptions Check

Before performing a linear regression, I checked for the assumption of normality, multicollinearity and homogeneity of variance. First, for the assumptions of normality distribution, the z-scores<sup>2</sup> for skewness and kurtosis from clothing color and formality conditions do not have any value exceeding the threshold of 3.29 (see Appendix 8.3), the acceptable threshold for large samples with more than 200 (Field, 2013). Therefore, the assumption of normality distribution for investment decision score is satisfied.

Next, regarding the multicollinearity, a variance inflation factor (VIF) analysis (see Appendix 8.3) indicated the factors less than 3.0 for the independent and control variables in regression models. It showed that multicollinearity assumption is not violated. When the interaction terms were entered, VIF scores of independent variables, moderator, and the interaction terms are greater than 3.0. However, since all VIF scores are less than the threshold of 10.0 (Pallant, 2005), the multicollinearity issue should not be a concern.

Last, the assumption of homogeneity of variance is identified by checking the Levene's test score. For both clothing color and formality conditions, the Levene's test shows a significance greater than .05, confirming that the variances are equal across groups.

*Table 5.*  
*Descriptive Statistics and Correlation Matrix (N=203)*

<b>Descriptive Statistics and Correlation Matrix</b>									
	<b>Mean</b>	<b>SD</b>	<b>(1)</b>	<b>(2)</b>	<b>(3)</b>	<b>(4)</b>	<b>(5)</b>	<b>(6)</b>	<b>(7)</b>
<b>(1) Investment decision</b>	4.46	1.328	1						
<b>(2) Passion</b>	4.069	1.365	0.338**	1					
<b>(3) Preparedness</b>	4.793	1.091	0.41**	0.525**	1				
<b>(4) Risk aversion</b>	4.956	0.962	0.195**	0.189**	0.264**	1			
<b>(5) Self enhancement</b>	3.931	0.709	0.179*	0.153*	0.171*	0.412**	1		
<b>(6) Conservation</b>	4.003	0.748	0.262**	0.201**	0.129	0.126	0.255**	1	
<b>(7) Age</b>	29.58	9.044	0.175*	0.051	0.113	0.176*	0.061	0.137	1

\*. Correlation is significant at the 0.01 level (2-tailed), \*\*. Correlation is significant at the 0.05 level (2-tailed).

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<sup>2</sup> Z-score =  $\frac{\text{level of skewness}}{\text{standard error}}$

Table 6.

*Participants division into conditions*

Condition	Number of participants within condition
1. Warm-colored and formal	41
2. Warm-colored and casual	38
3. Cool-colored and formal	46
4. Cool-colored and casual	40
5. Control (Presentation slide and voice only)	38

#### 5.4. Hypotheses Testing

Before checking the hypothesis using a multivariate regression that includes control variables, I first performed a preliminary check of the main effects of *clothing color* and *clothing formality* on project selection likelihood, using one-way ANOVA (i.e., ignoring the effect of control variables). Thereafter, I conducted formal hypotheses tests using multivariate linear regression, with clothing color and formality as the independent variables respectively and investment decision as the dependent variable, while controlling for other drivers of project selection decisions. Specifically, the control variables are as follows: risk aversion, self-enhancement, conservation, age, nationality, education, occupation, industry and interest in entrepreneurship. To test the third hypothesis, I added gender (proxy of agency-communion orientation) as a moderating variable and the interaction effects between gender and (i) clothing color and (ii) clothing formality.

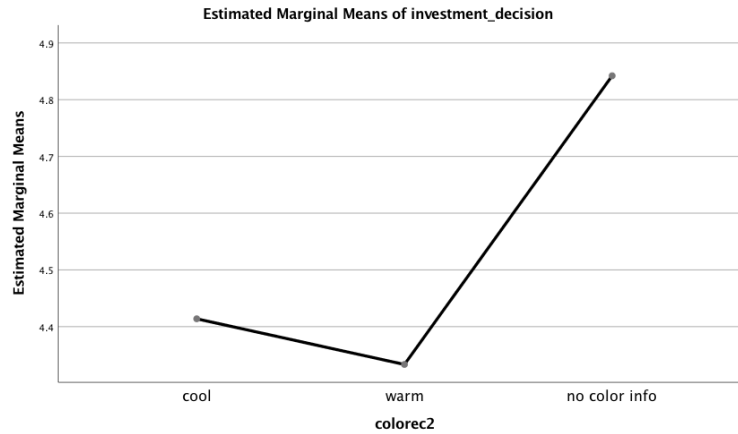
##### 5.4.1. The relationship between clothing color and investment decision

###### 5.4.1.1. Main Effects Only: One-way ANOVA

A one-way ANOVA analysis reveals the non-significant model ( $F=1.998, p=.138>.05$ ). It indicates that the means of investment decision between warm-colored clothing, cool-colored clothing and no color information (control treatment) are not significantly different from one another. It leads to a non-significant Bonferroni post-hoc test. The non-significant effects of clothing color on investment decision could be driven by the low statistical power that the clothing color contains on its own. There might be other factors that have an effect on the investment decision that could not be controlled by using one-way ANOVA analysis. This suggests performance of other statistical analysis that could control the confounding factors and will increase the statistical power.

Figure 1.

Means Plot of Clothing color on Investment Decision



### 5.4.1.2. Regression Analysis

Table 7 below depicts the results of the models I ran. Models 1 and 2 demonstrate the test for the relationship between clothing color and investment decision. Model 1 in the second column of Table 7 describes the relationship where I include clothing color as an independent variable. Model 2 is depicted in the third column in Table 7 where the IV clothing colors are entered together with the gender as moderator and the interaction effects. In each model, the no clothing color information serves as the reference group. It leads to the following equation, in which the constant represents the intercept of no color information group, when other variables set to zero.

$$ID_1 = B_0 + B_1X_{1i} + B_2X_{2i} + B_3X_{3i} + B_4X_{4i} + B_5X_{5i} + B_6X_{6i} + B_7X_{7i} + B_8X_{8i} + B_9X_{9i} + B_{10}X_{10i} + B_{11}X_{11i} + B_{12}X_{12i} + B_{13}X_{13i} + B_{14}X_{14i} + B_{15}X_{15i} + \varepsilon_i$$

- $ID_1$  = Investment Decision 1
- $X_{1i}$  = Warm-color
- $X_{2i}$  = Cool-color
- $X_{3i}$  = Passion
- $X_{4i}$  = Preparedness
- $X_{5i}$  = Gender
- $X_{6i}$  = (Warm-color\*gender)
- $X_{7i}$  = (Cool-color\*gender)
- $X_{8i}$  = Risk aversion

- $X_{9i}$  = Self-enhancement
- $X_{10i}$  = Conservation
- $X_{11i}$  = Age
- $X_{12i}$  = Nationality
- $X_{13i}$  = Occupation
- $X_{14i}$  = Industry
- $X_{15i}$  = Interest in entrepreneurship
- $\varepsilon_i$  = Error-term

In Model 2, the overall model is good with  $R^2 = 0.317$ ,  $F(16,186)=5.387$ ,  $p<.01$ . The regression results reveal a negative and significant effect of both warm colors ( $B=-1.014$ ,  $p=.004$ ) on investment decision, showing that when the entrepreneur wears warm-colored clothing, the effect of investment decision is 1.014 points lower than the no color information (control treatment). The effect of cool color on

investment decision is also negative and significant ( $B=-1.172, p=.001$ ), indicating that the effect of cool-color clothing on investment decision is 1.172 points lower than no color information. The control variables conservation ( $B=0.245, p=.038$ ) and age ( $B=0.019, p=.079$ ) are both significant on investment decision, implying that all else being equal, the high level of conservativeness leads to an increase in investment decision, and the higher the age of the investor, the higher the investment decision would be. Moreover, preparedness is also significant at 1% significance level ( $B=0.396$ ). From these results, the overall effect of both warm and cool color on investment decision are lower than the effect in the absence of color information. However, compared to no color information as a reference group, the effect of cool-colored clothing on probability of funding is slightly lower than the one of warm-colored clothing. With investment decision measured on 7-point Likert scale, it means that all else being equal, an entrepreneur who wears a warm-colored clothing has a higher likelihood of having his/her project selected than the one who wears a cool-colored clothing, after controlling for the conservation and age. **Thus, Hypothesis 1 is rejected.**

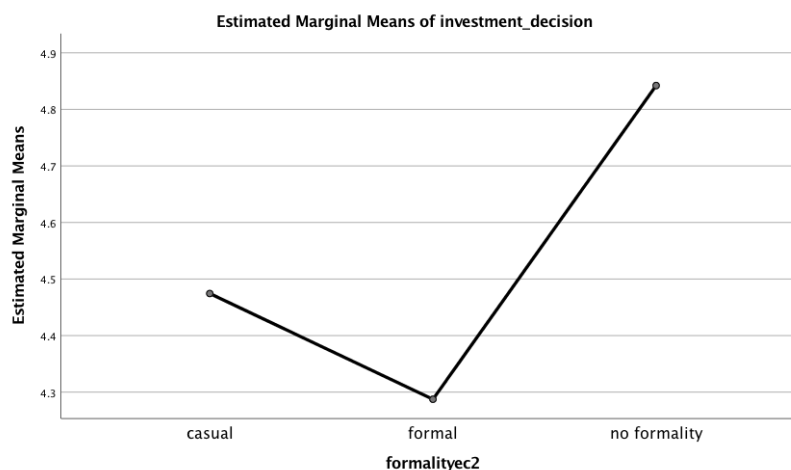
## 5.4.2. The relationship between clothing formality and investment decision

### 5.4.2.1. One-way ANOVA

A one-way ANOVA analysis shows a significant model ( $F=2.341, p=.099<.10$ ), indicating that there is a statistically significant difference in the mean of investment decision between different clothing formality treatments. Next, to see the mean comparison between the groups, I conducted Post-hoc analysis using Bonferroni method. The result reveals a mean difference of .55 between no formality information (control treatment) and formal clothing, which is marginally significant at the 10% level ( $Mdiff=.555, p=.095$ ). However, there are no differences between the groups exposed to the entrepreneur wearing formal clothing and casual clothing ( $p=ns$ ).

Figure 2.

Means Plot of Clothing formality on Investment Decision





### 5.4.2.2. Regression Analysis

Table 7 below demonstrates the results of the models I performed. Models 4 and 5 respectively demonstrate the regression result to identify the effect of clothing formality on investment decision. Model 4, depicted in the fourth column in Table 7, describes the regression when clothing formality was entered as the independent variable. Model 4 indicates the regression when the independent variable clothing formality is complemented by gender (proxy for agency-communion) as moderator and interaction effects between clothing formality and gender. In each model, the no clothing formality information serves as the reference group. Therefore, the constant represents the intercept of no clothing formality with other variables set to zero. It leads to the equation below:

$$ID_2 = B_0 + B_1X_{1i} + B_2X_{2i} + B_3X_{3i} + B_4X_{4i} + B_5X_{5i} + B_6X_{6i} + B_7X_{7i} + B_8X_{8i} + B_9X_{9i} + B_{10}X_{10i} + B_{11}X_{11i} + B_{12}X_{12i} + B_{13}X_{13i} + B_{14}X_{14i} + B_{15}X_{15i} + \varepsilon_i$$

$ID_2$	=	Investment Decision Option 2	$X_{9i}$	=	Self-enhancement
$X_{1i}$	=	Formal clothing	$X_{10i}$	=	Conservation
$X_{2i}$	=	Casual clothing	$X_{11i}$	=	Age
$X_{3i}$	=	Passion	$X_{12i}$	=	Nationality
$X_{4i}$	=	Preparedness	$X_{13i}$	=	Occupation
$X_{5i}$	=	Gender	$X_{14i}$	=	Industry
$X_{6i}$	=	(Formal-clothing*gender)	$X_{15i}$	=	Interest in entrepreneurship
$X_{7i}$	=	(Casual-clothing*gender)	$\varepsilon_i$	=	Error-term
$X_{8i}$	=	Risk aversion			

As can be seen from Table 7, there is a slight change in effect of formal and casual clothing across the Models. In Model 3, casual clothing has a marginally significant effect on investment decision, and its effect ( $B = -0.543, p < .10$ ) is comparably higher than the formal clothing ( $B = -0.722, p < .05$ ), using control treatment as the reference group. Turning to Model 4, located in the extreme right column in Table 7, the overall model is good with  $R^2 = 0.323$  and a significant F-test with  $F(16, 186) = 5.543, p < .01$ . Regarding the main effect, formal clothing has a negative and significant effect on investment decision ( $B = -1.055, p < .01$ ). It indicates that the effect of the pitch which showed the entrepreneur wearing a formal clothing has 1.055 points lower than the pitch which has no formality information shown (control treatment) on investment decision. The negative and significant effect of casual clothing on investment decision ( $B = -1.12, p < .01$ ) is also found, implying a 1.12 lower points that the casual clothing has on investment decision, compared to the no formality information condition. Control variables conservation ( $B = 0.256, p < .05$ ) and age ( $B = 0.019, p < .10$ ) are positive and significant on investment decision. It shows that all else being equal, increase of level of conservation leads to an increase of investment decision by 0.256 points. Further, other things being equal, an increase in age leads to an increase of investment decision for 0.019 points. Additionally, passion is not significant ( $B = 0.117, p = ns$ ) while preparedness is significant ( $B = 0.39, p < .01$ ). From this regression result, the highest effect in clothing formality is found in no clothing formality information condition,

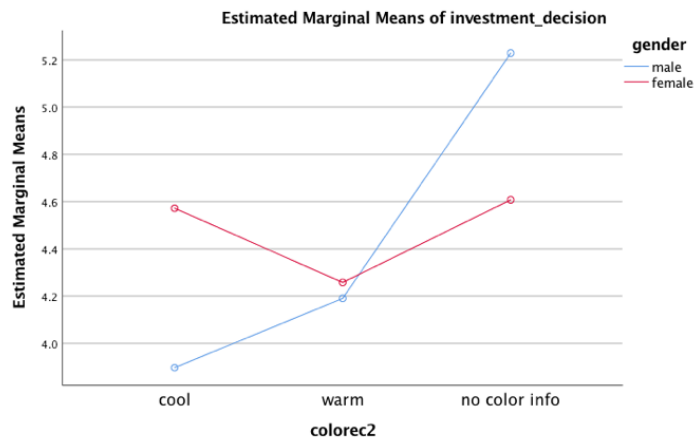
followed by the formal and casual clothing. With investment decision measured on a 7-point Likert scale, it indicates that all else being equal, the pitch showing the entrepreneur wearing a formal clothing has a higher likelihood of having the project selected, than the pitch with the entrepreneur wearing casual clothing. **Hence, I do not reject Hypothesis 2.**

### 5.4.3. The moderating relationship of gender (agency-communion orientation) in the relationship between clothing color, formality and investment decision

#### 5.4.3.1. Clothing Color Condition

In the first moderation analysis depicted in Model 2 in Table 7, investment decision is used as a dependent variable, clothing color as independent variable, and gender (proxy for agency-communion orientation) as a moderating variable with female = 1 and male = 0. The moderating variable gender (proxy for agency-communion orientation) is not significant on investment decision ( $B=-0.30, p=ns$ ). No significant effect is found for the interaction effect of warm-colored clothing and gender on investment decision. However, the interaction effect between cool-colored clothing and gender is marginally significant at the 10% level on investment decision ( $B=0.877, p<.10$ ). It indicates that entrepreneurs' usage of cool-colored clothing has a positive effect on investment decision, that is 0.877 points higher for female investors (coded 1) than for male investors (coded 0), a difference that is marginally but significantly different ( $p<.10$ ). Given the male gender proxies for an investor's agentic orientation, and female gender proxies for a communal investor, the result implies that all else being equal, the effect of clothing color - specifically cool-colored clothing - on investment decisions is stronger for communal (i.e., female) than for agentic (i.e., male) investors. **Therefore, I do not reject Hypothesis 3a.**

Figure 3.  
Interactions Plot between Clothing color and Gender (proxy of agency-communion)

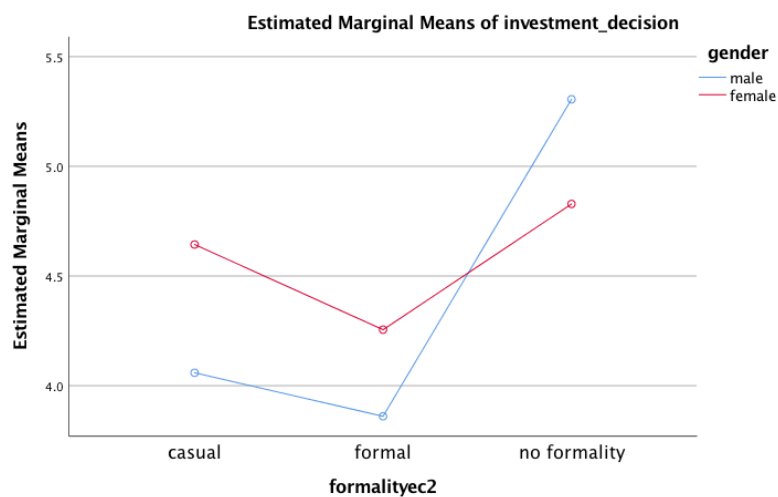


Covariates appearing in the model are evaluated at the following values: riskaversion = 4.9557, self\_enhancement = 3.9310, conservation = 4.0033, age = 29.58, nationality = 81.54, education = 2.22, occup = 2.18, industry = 12.24, entrep\_int = .46

### 5.4.3.2. Clothing Formality Condition

In the second moderation analysis in Model 4 in Table 7, the moderator gender (agency/communion) does not have any significant effect on investment decision ( $B=-0.28, p=ns$ ). The interaction effect of formal clothing and gender on investment decision is not significant ( $B=0.567, p=ns$ ), implying that the effect of formal clothing on investment decision is not significantly different between female (coded 1) investor and male (coded 0) investor. On the other hand, the effect of interaction between casual clothing and gender on investment decision is significant at 5% significance level with  $B=0.997$ , implying that the effect of casual clothing on investment decision in female group is 0.997 higher than in male group. **Hence, Hypothesis 3b is rejected**, implying that the effect of clothing formality, specifically casual clothing, on investment decision is higher for female (communal) investor than for male (agentic) investor.

Figure 4.  
Interactions Plot between Clothing formality and Gender (proxy of agency-communion)



Covariates appearing in the model are evaluated at the following values: riskaversion = 4.9557, self\_enhancement = 3.9310, conservation = 4.0033, age = 29.58, nationality = 81.54, education = 2.22, occup = 2.18, industry = 12.24, entrep\_int = .46

Table 7.

Results of Regression Analysis for Investment Decision (N=203)

DV: Investment Decision	Model 1	Model 2	Model 3	Model 4
<i>Control Variables</i>				
Risk Aversion	0.11	0.145	0.107	0.145
Self-enhancement	0.04	0.079	0.046	0.083
Conservation	0.264**	0.245**	0.269**	0.256**
Passion	0.117	0.114	0.121*	0.117*
Preparedness	0.387***	0.396***	0.379***	0.39***
Age	0.011	0.019*	0.012	0.019*
Nationality	0	0	0	0
Education	0.12	0.106	0.123	0.116
Occupation	0.038	0.034	0.035	0.044
Industry	0.017	0.02	0.017	0.019
Interest in entrepreneurship	0.198	0.177	0.182	0.156
<i>Independent Variables</i>				
C. Color: warm	-0.627***	-1.014***		
C. Color: cool	-0.648***	-1.172***		
C. Formality: formal			-0.722**	-1.055***
C. Formality: casual			-0.543*	-1.12***
<i>Moderating Variables</i>				
Gender <sup>1</sup> (Agency-Communion) <sup>2</sup>		-0.3		-0.28
<i>Interaction</i>				
Warm*gender		0.733		
Cool*gender		0.877*		
Formal*gender				0.567
Casual*gender				0.997**
Adjusted R <sup>2</sup>	0.24	0.258	0.244	0.265
Model R <sup>2</sup>	0.289	0.317	0.293	0.323
Model F	5.919***	5.387***	6.021***	5.543***

\*. Significant at the 0.1 level (2-tailed), \*\*. Significant at the 0.05 level (2-tailed), \*\*\*. Significant at the 0.01 level (2-tailed).

<sup>1</sup>. Gender: female is coded; male is coded 0

<sup>2</sup>. Female-gender refers to communion-oriented; Male-gender refers to agency-oriented

## 5.5. Additional Post-hoc Analysis: The Impact of Clothing Color and Formality on Passion and Preparedness

With regard to the role of perceived passion and preparedness in entrepreneurial success, I performed the additional analysis to check whether clothing color and formality have any impact on perceived passion and preparedness. Table 9 below shows the regression result for dependent variables passion and preparedness separately. In each regression, Model 1 refers to the analysis of clothing color impact, while Model 2 sums up the impact of clothing formality.

Table 8.  
Results of Regression Analysis for Passion and Preparedness (N=203)

	Passion		Preparedness	
	Model 1	Model 2	Model 1	Model 2
<i>Control Variables</i>				
Risk Aversion	0.212*	0.233**	0.228**	0.24***
Self-enhancement	0.062	0.069	0.071	0.082
Conservation	0.33**	0.317**	0.166	0.16
Age	-0.003	-0.001	0.006	0.008
Nationality	0.004	0.004	0.002	0.003
Education	0.006	-0.048	-0.078	-0.121
Occupation	0.029	0.037	0.022	0.025
Industry	-0.01	-0.009	0.002	0.004
Interest in entrepreneurship	0.103	0.106	-0.046	-0.059
<i>Independent Variables</i>				
C.Color: warm	0.219		0.622**	
C.Color: cool	0.162		0.599*	
C.Formality: formal		0.225		0.548*
C.Formality: casual		0.107		0.655**
<i>Moderating Variables</i>				
Gender <sup>1</sup> (Agency-Communion) <sup>2</sup>	0.326	0.332	0.549	0.553
<i>Interaction</i>				
Warm*gender	-0.764		-0.952**	
Cool*gender	0.005		-0.305	
Formal*gender		-0.31		-0.562
Casual*gender		-0.263		-0.554
Adjusted R <sup>2</sup>	0.039	0.012	0.083	0.051
Model R <sup>2</sup>	0.106	0.081	0.146	0.117
Model F	1.587*	1.176	2.298***	1.776**

\*. Significant at the 0.1 level (2-tailed), \*\*. Significant at the 0.05 level (2-tailed),

\*\*\*. Significant at the 0.01 level (2-tailed).

<sup>1</sup>. Gender: female is coded 1; male is coded 0

<sup>2</sup>. Female-gender refers to communion-oriented; Male-gender refers to agency-oriented

Regarding the main effect, as can be seen from Models 1 and 2 in Table 8, neither clothing color nor clothing formality has any significant impact on perceived passion. On the other hand, significant effect of clothing color and formality on perceived preparedness are found. In terms of clothing color, Preparedness Model 1 shows that the positive impact of warm-color on perceived preparedness is 0.622 higher than the impact of control treatment ( $p<.05$ ). Further, the marginally significant impact of cool color on perceived preparedness is 0.599 higher than the one of control treatment ( $p<.10$ ). The control variable risk aversion is found to be significant ( $B=0.228, p<.05$ ). In other words, relative to the control treatment, the general impact of warm color on perceived preparedness is higher than the cool color. For clothing formality condition, Model 2 located in the extreme right column demonstrates that formal clothing has a marginally significant impact on perceived preparedness with 0.548 points higher ( $p<.10$ ), while the impact of casual clothing is 0.655 higher ( $p<0.05$ ) than the control treatment after controlling for risk aversion ( $B=0.24, p<.01$ ). Thus, relative to the control treatment, it could be inferred that casual clothing influences perceived preparedness higher than formal clothing does.

There is no significant interaction effect found for Passion. In contrast, Preparedness Model 1 indicates significant impact ( $B= -0.952$ ) found in interaction between warm-colored clothing and gender. It means that the warm-colored clothing has a positive impact on perceived preparedness of the entrepreneur, that is 0.952 higher for male investor than for female investor ( $p<.05$ ).

With regard to the findings of hypothesis testing, following is the summary for hypothesis predictions and results in this study:

*Table 9.*  
*Hypotheses Predictions and Results*

	Independent variable	Dependent variable	Predicted	Result	Supported/rejected
H1	Clothing color (cool-color > warm-color)	Investment decision	+	-	Rejected
H2	Clothing formality (formal clothing > casual clothing)	Investment decision	+	+	Supported
H3a	Interaction clothing color and agency-communion orientation (cool-color in communal > in agentic)	Investment decision	+	+	Supported
H3b	Interaction clothing formality and agency-communion orientation (formal clothing in communal > in agentic)	Investment decision	+	-	Rejected

## **6. CONCLUSION**

### **6.1. General Discussion**

The main goal of this study is to examine the role of non-verbal cues, specifically clothing color and formality, on project selection decisions during a pitch by an entrepreneur to investors. I proposed that two specific clothing dimensions – *clothing color* and *clothing formality* - would act as important non-verbal cues that, all else being equal, could help (or hinder) the entrepreneur’s likelihood of having the project funded by investors. In this sense, I argued that *cool-color* - rather than warm-color – clothing, and *formal* - rather than casual - clothing might have a better impact on investment decisions. Moreover, this study includes the role of the investor’s individual orientation, namely *Agency-Communion orientation*, as a critical intrinsic aspect that might play a role when making a funding decision. Using an experimental research design, showing a pitch video with several conditions manipulating clothing color and formality, I processed 203 valid observations for analysis.

Generally speaking, 2 out of 4 hypotheses are supported, given the result of linear regression analysis between clothing color, clothing formality, passion, preparedness, and investment decision as well as when gender (a proxy of agency-communion orientation) served as a moderating variable between clothing color, formality and investment decision. While the findings of main analysis of whether clothing color (warm or cool) and clothing formality (formal or casual) influence the investment decision provides both a support and a rejection to the hypotheses, the moderation analysis when gender serves as a moderator yields quite interesting findings. The following section will discuss the findings in-depth, by relating to the theoretical reasoning that I stated in the Hypotheses Development section.

### **6.2. Theoretical Contributions**

The major importance of this study is to provide empirical evidences about the role of clothing color and formality worn when pitching to influence investor’s likelihood of funding the innovative project selection. To my knowledge, this study is the first to investigate the relationship as mentioned earlier in the startup context. In the following paragraphs, I will discuss the theoretical contributions per hypothesis.

#### **6.2.1. Clothing color**

It is interesting to find that in both clothing color and formality condition, the control treatment in which the pitch is presented only with presentation slides and voice (without showing the entrepreneur) is the most effective condition on investment decision. A possible explanation could be that in the control treatment, a clear slide presentation with audio explanation provides the investors a more comprehensive understanding about the project. Whereas in the experimentally manipulated conditions, the entrepreneur became the primary focus, so the slide presentation standing beside her is not visible enough. Thus, the

proposed idea might not be understood at the same level as the one in the control treatment. It found the support that in making an investment decision, the content of the innovative ideas is the most prominent.

Next, regarding the effect of clothing color on investment decision, contrary to one of my hypotheses, warm-color clothing is in general found to have a higher impact on investment decision than cool-color clothing. This extends support to the implications of *Impression Formation Theory* (Asch, 1946), and also confirms the power of red color in the competition (Elliot & Niesta, 2008) as a signal of strong competitiveness and confidence, making red (warm-color) outperform blue (cool-color) in affecting investors' likelihood to invest after watching the pitching video. Further, this study provides an empirical approval of red-color function in *aggression-inducing arousal* (Anderson & Bushman, 2002). The active mechanism of arousal-inducing aggression cuts back a long-needed mechanism for investors to build a connection between them and the entrepreneur when evaluating the startup project (Chen et al., 2009). It might occur because the pitch lasted only around 40 seconds. In such a short time, the investor failed to evaluate the entrepreneur's openness to feedback and intellectual performance.

### **6.2.2. Clothing formality**

The support for formal clothing effect on investment decision confirms the Construal Level Theory (Trope & Liberman, 2002) that formal clothing represents abstract thinking (e.g., long-term thinking, well-planned, yet flexible management skills) which is a criteria of good leader. Another possible explanation for the formal clothing effect might lie in the connection between the theme of the project and the clothing style, with the proposal about Big Data Engagement Analytics which is more towards the intellectual startups, rather than creative startups. In this kind of startups, having the image of resourceful, capable, or a long-term thinker (higher identifications level) might be relatively more important than the image of being approachable or "I am different", which was arguably the image perception of casual clothing.

### **6.2.3. Moderation role of gender as proxy for agency-communion orientation**

#### **6.2.3.1. In clothing color influence on investment decision**

In line with the hypothesis, this study confirms that the effect of cool-colored clothing on investment decision is higher in the communal group than in the agentic group. It verifies the *Recognition of Affect* (Hoffman, 1977) theory, which argued that communal individuals, as the cue-perceivers, have a better decoding ability. The mechanism starts from cool-colored clothing worn by the entrepreneur as a signal of her humility and intellect. As perceivers, communal investors have a higher accuracy in capturing the emotional meaning communicated by the entrepreneur. On the other hand, agentic investors who focus on cognitive reasoning might concentrate only on the quality of the proposal. With such a short pitch, it was indeed too hard to give an appealing cognitive content, explaining why this group has a lower effect of how



clothing color influences their likelihood to invest. In addition, it is interesting to see that the effect of cool-color for male (agentic investor) is way too low compared to the communal investor, as can be seen in the interaction plot (Figure 3). In fact, contrary to the communal group, the effect of warm color is higher than the cool color for the agentic group, providing support to the finding of Elliot and Niesta (2008), about perceived attractiveness of red-color clothing wearer only to the male perceiver, when the wearer is female. While this study presented a female entrepreneur in the pitching video, the use of red color might give a signal to male investors that that she, as an entrepreneur, is dominant and ready to compete with other startups out there in the market.

#### **6.2.3.2. In clothing formality influence on investment decision**

The higher effect of casual clothing on investment decision in the female group than the male group is quite interesting here. As such, this confirms the effectiveness of *Construal-level Theory* (Trope & Liberman, 2002) where gender plays a moderating role on the main relationship. This phenomenon might occur due to the non-sensitivity of the communal group towards casual clothing, so that casual clothing worn by the female entrepreneur does not give an impact as negative as it does in the agentic group. What is interesting here is that while the overall analysis showed a higher effect of formal clothing than casual clothing on investment decision, the moderation of gender yields a different result. As shown in the interaction plot (Figure 4), casual clothing in both groups has a higher effect than the formal clothing on the likelihood to invest. The possible reasoning of this phenomenon is due to the culture-specific context that relatively determines the level of clothing appropriateness. With the majority of respondents being of Asian nationality, an above-the-knee length skirt in formal clothing condition is considered less appropriate, in comparison to long trousers. Moreover, the dark-blue jeans in the casual clothing condition in fact seems darker (almost like black) in the final pitching video, which therefore seems like a formal trouser. It thus leads to the projection that in comparison to the above-the-knee skirt, which is perceived as indecent, long trousers in casual clothing condition is preferred more in the pitching context.

#### **6.2.4. Post-hoc Analysis Results**

As an additional analysis, it is interesting to see that clothing color and formality do not have any impact on passion, but are quite impactful on perceived preparedness. This is in line with the study of Galbraith et al. (2016) about the visible factors in the pitching that increase the perceived preparedness. With the entrepreneur possibly being the first cue noticed by investors, clothing color and formality form a solid self-introductory part during the pitch that is beyond the words. It helps the entrepreneur to gain the investor's attention and listening ability, and to establish the entrepreneur's self-credibility (Gerritsen & Wannet, 2005). Moreover, similar to the effect of warm color on investment decision discussed in the

preceding section, the higher effect of warm color on perceived preparedness for the male group also contributes further support towards the effectiveness of red-color in attracting the male investor's attention more (Elliot & Niesta, 2008), so that the whole idea of the innovative project is perceived better.

### **6.3. Practical Implications**

The major implications of this study are categorized in a practical manner into two sections. First, for the entrepreneur, it is important to note that wearing red or casual clothing is not always bad. In general, the significant relationship of warm-colored clothing served as a proof that this kind of color could help the entrepreneurs look more confident and display their competitiveness, thus increasing the appeal of the project. Further, the significant effect of formal clothing supports the existing belief that looking formal and neat during the pitch is still highly preferred. In addition, taking into account the gender of the investor, the entrepreneur should be more careful about the choice of clothing color and formality. When there is a female investor, the entrepreneur should consider wearing a cool-colored and casual clothing, since this type of clothing matters more for female than the male investor, while making the investment decision. All in all, what the entrepreneur needs to bear in mind is, the choice of clothing color and formality should be aligned with the theme of the proposed project. Therefore, to increase the probability of funding when pitching the innovative project, it is necessary to find a clothing style that represents the theme and project identity perfectly.

Second, for the investors or Venture Capitalists, it is important to be aware of the clothing style that each entrepreneur wears, because this study found empirical support for clothing color and formality influencing the investment decision. Specifically, for the communal or female investor, it is highly recommended to focus more on the innovative project content and not to be distracted by the non-verbal cues (e.g., clothing style, clothing color, gesture, specific intonation). Non-verbal cues might unconsciously influence the investor's emotional and psychological functioning, which would create bias in the investment decision. Therefore, by paying more attention to the innovative project content, the investor would retain rationality and prevent themselves from making an unwise investment decision.

### **6.4. Limitations and Directions for Future Research**

The results of this study contain several limitations arising from the manipulation design, the environment of the experiment, and the participant sample. With regard to the limitations, I will discuss it point by point and use the limitations as the departure points to suggest directions for future research.

#### **6.4.1. Manipulation design**

The first limitation comes from the non-professional actress who played a role of the entrepreneur in

the pitching video. The entrepreneur lacked the ability to display precisely the same non-verbal cues (e.g., facial expression, hand gesture) in all manipulations. Additionally, the preliminary interview with the actress showed that she felt a slight change in her mood when changing the clothing color. *“I do not know why, but I feel like I am more energized when I wear the red color and feel sleepy when I wear the dark-blue one.”* This limitation would consequently impact the findings of the study. However, knowing the mood change in the entrepreneur, I selected the video which has the most similarity in the non-verbal cues for the final pitching video. Future research should consider using professional actresses, who would be able to avoid being influenced by different clothing colors and formality of her attire.

The second limitation comes from the project theme used and the investor sample that is not strict only to business people. Snappie, the proposed project, is a Business-to-Business (B2B) idea. Then, the investor sample is mostly an employee, mainly from Professional services and Finance industry, not from a general management field. With a B2B idea, making use of the participants with non-business background makes the participants less externally valid, compared a project theme with a B2C context. Therefore, future research should consider using professional managers or investors as the participants, to be able to measure the real factors that investors evaluate when making an investment decision.

#### **6.4.2. The environment of the experiment**

The pitching in the form of video might not be able to fully transfer the entrepreneur’s emotions as much as the pitching in a face-to-face situation. Though I recreated the video as much as possible to depict a realistic scenario where the investors can see the full clothing, the effectiveness of the manipulations in video format might be different from the that in a real pitching presentation. Future research should consider conducting the lab experiment, allowing the investors to meet and evaluate the project in a truly realistic scenario.

#### **6.4.3. Sample**

The combined sampling technique of convenience and snowball sampling that I used results in more than 80% of the participants being Indonesian. This might render the overall findings less generalizable, since specific color or clothing style might be perceived differently in different countries. Red, for instance, is associated with positivity such as passion, energy, and love in China and Turkey, while it has a mixed meaning such as love, anger, danger in India (Akçay, Dalgin & Bhatnagar, 2011). Since the nature of this study is to measure the perception of non-verbal cues, which is a highly subjective domain, the participants should be selected carefully to represent the various national cultures evenly. Therefore, future research should use random and more diverse sample groups representing nationality, to increase the generalizability of the study.

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## 8. APPENDIX

### 8.1. Manipulations Materials

#### 8.1.1. Manipulations Scenario

Imagine that you are one of the ‘sharks’ in a contest similar to The Shark Tank (TV show that presents aspiring entrepreneurs who make business presentation to a panel 'shark' investors) and have capital to invest in startups that pitch their ideas to you and other ‘sharks’.

On average, startups ask between \$ 100,000 and \$ 300,000 for a 15% stake at their company.

You typically fund 1 out of every 4 projects presented to you. To make your decision you evaluate (i) the upside potential of the project, (ii) the associated risk and (iii) the credibility of the entrepreneur. Hence, you need to put attention to both the objective content of the presentation and the way it is presented.

You will now see a pitch in the form of video, please pay close attention to the entrepreneur’s pitch of her idea in order for you to make an informed decision

(Link video)

pitch 1: <https://youtu.be/raOEdHE2KvE>

pitch 2: <https://youtu.be/RHoLL6fdkP4>

pitch 3: <https://youtu.be/JXCQSCVftuM>

pitch 4: <https://youtu.be/4d5rNhxuP7w>

pitch 5: <https://youtu.be/7U-69iJf-bE>

#### 8.1.2. Manipulations Summary Table

Summary Table Snappie Inc. (each picture represents each condition)	
Investment Required	\$200,000 for 15% stake
Target Customers	FMCG Brands and Retailers
Problem Statement	Brand need insights on consumer behavior in the offline retail store
Solution	A system allowing shoppers to scan their grocery retail receipts. Our OCR and AI capabilities to offer data to help brands gather valuable customer intelligence.
Business Model	Brand partners offer discounts to consumers participating in the app. We collect the data and analyze it. Brand partners pay an annual subscription fee per sub-region to receive actionable shopper insights

### 8.1.3. Manipulations Pitching Slide Sorter

The image shows a sequence of six pitch deck slides for 'snappie', arranged in two rows and three columns. Each slide is numbered in the bottom left corner and has a star icon in the bottom right corner. A vertical line with a dot is present on the left side of each slide, indicating a scrollable navigation element.

- Slide 1:** Features the 'snappie' logo and the tagline 'the insights partner'.
- Slide 2:** Shows four receipt icons on a green background, with the word 'RECEIPT' written on each.
- Slide 3:** Titled 'WHO ARE WE?', it explains the company's mission to help brands grow by providing a points system for scanning receipts. It includes an image of a smartphone displaying the snappie app.
- Slide 4:** Titled 'OUR SOLUTIONS', it lists three key offerings: 'RETAIL AGNOSTIC' (processing over half a billion receipts), 'REAL TIME DATA' (providing data every single week), and 'SHOPPER RICH' (helping users know what, when, and why they buy).
- Slide 5:** Titled 'BUSINESS MODEL', it describes an annual subscription for brand partners. A diagram shows the flow: 'User' downloads the app and gets cashback; 'Brand Partners' offer discounts to users; 'snappie' analyzes and visualizes the user's data.
- Slide 6:** Repeats the 'snappie' logo and 'the insights partner' tagline.

## 8.2. Measures

Variable	Items	Reliability	Source
Investment Decision	Please indicate your agreement to each statement using the provided scale: “I would definitely want to sponsor this project” (1 = “strongly disagree”, 7= “strongly agree”)		(Pingitore, Dugoni, Tindale and Spring, 1994)
Passion	Please indicate your agreement to each statement using the provided scale: 1. The entrepreneur was quite energetic. (Passion) 2. I could feel the entrepreneur “lit up” when she talked. (Passion) 3. The entrepreneur talked with varied tone and pitch. (Passion) (1 = “strongly disagree”, 7= “strongly agree”)	0.864	(Chen et al., 2009)
Preparedness	1. The presentation content had substance. (Preparedness) 2. The presentation was coherent and logical. (Preparedness) 3. The presentation contained facts to support the arguments being made. (Preparedness) (1 = “strongly disagree”, 7= “strongly agree”)	0.820	
Risk Aversion	Please indicate your agreement to each statement using the provided scale: 1. I believe that higher financial risks are worth taking for higher rewards 2. I accept occasional new product failures as being normal 3. I like to take big financial risks 4. I encourage the development of innovative marketing strategies, knowing well that some will fail 5. I like to "play it safe." 6. I like to implement plans only if they are very certain that they will work (1 = “strongly disagree”, 7= “strongly agree”)	0.715	(Jaworski and Kolhi, 1993)
Basic Human Values	Please rate the importance of the following values as a life-guiding principle for you: 1. POWER (social power, authority, wealth) (self-enhancement) 2. ACHIEVEMENT (success, capability, ambition, influence on people and events) (self-enhancement) (1= “not at all important”, 5 = “extremely important”)	0.685	(Schwartz, 2012)

	<p>3. CONFORMITY (obedience, honoring parents and elders, self-discipline, politeness) (conservation)</p> <p>4. TRADITION (respect for tradition, humbleness, accepting one's portion in life, devotion, modesty) (conservation)</p> <p>5. SECURITY (national security, family security, social order, cleanliness, reciprocation of favors) (conservation)</p> <p>(1= "not at all important", 5 = "extremely important")</p>	0.797	
Manipulations Check	<p>Referring back to the pitching video, please indicate your agreement to each statement</p> <ol style="list-style-type: none"> <li>1. I believe that Marsha (the entrepreneur) was dressed casually/formally</li> <li>2. I believe that Marsha was using warm colors (e.g., red, yellow)/cool colors (e.g., dark blue, dark green) in her clothing</li> </ol> <p>(1 = "strongly disagree", 7= "strongly agree")</p>		
Attention Check	<p>"Referring back to the pitching video, what was the project theme?"</p> <p>(1= "Online marketplace", 2= "Big Data Engagement Analytics", 3= "Beauty Forum", 4= "Social Media")</p>		
Gender (proxy of agency-communion orientation)	<p>"What is your gender?"</p> <p>(Dummy 1= Female, and 0= Male)</p>		(Kurt, Inman & Argo, 2011)
Age	<p>"Please indicate your age in years"</p>		
Nationality	<p>"Please indicate your nationality"</p>		
Highest Obtained Education Level	<p>"Please indicate your highest obtained education level"</p> <p>(1= "High School", 2 = "Bachelor's Degree", 3= "Master's Degree", 4 = "Doctorate Degree")</p>		
Current Occupation	<p>"Please indicate your current occupation?"</p> <p>(1= "Full-time student", 2= "Full-time/Part-time employee", 3= "Entrepreneur", 4= "Others. Please specify")</p>		
Industry of Study/Work	<p>"Please indicate your industry of study/work"</p>		
Interest in Entrepreneurship	<p>"Have you ever watched TV show such as The Apprentice, Shark Tank, or Dragon's?"</p> <p>(Dummy: 1= Yes, 0 = No)</p>		

### 8.3. Normality Distribution Check

*Table 8.3.1.  
Skewness and Kurtosis Table*

DV= Investment Decision	Skewness			Kurtosis		
	Statistics	Std. Error	z-score	Statistics	Std. Error	z-score
Warm-color	-0.142	0.272	-0.522	-0.918	0.538	-1.706
Cool-color	-0.53	0.258	-2.054	-0.588	0.511	-1.151
No color information	-1.156	0.383	-3.018	1.597	0.75	2.129
Formal	-0.247	0.258	-0.957	-0.78	0.511	-1.526
Casual	-0.448	0.272	-1.647	-0.72	0.538	-1.338
No formality information	-1.156	0.383	-3.018	1.597	0.75	2.129

## 8.4. Multicollinearity Check

*Table 8.4.1.  
Results of Multicollinearity Check (IV = Clothing color)*

Variable	Unstandardized Coefficients		Standardized Coefficients	t	Sig.	Collinearity Statistics	
	B	Std. Error	Beta			Tolerance	VIF
(Constant)	-0.685	0.869		-0.788	0.432		
Warm-color	-0.599	0.235	-0.22	-2.547	0.012	0.498	2.006
Cool-color	-0.659	0.231	-0.246	-2.858	0.005	0.5	1.999
Passion	0.116	0.071	0.119	1.632	0.104	0.692	1.444
Preparedness	0.382	0.091	0.314	4.213	0	0.669	1.494
Risk aversion	0.15	0.102	0.109	1.473	0.142	0.683	1.465
Self-enhancement	0.059	0.132	0.032	0.45	0.654	0.748	1.337
Conservation	0.268	0.117	0.151	2.292	0.023	0.854	1.17
Gender	0.345	0.18	0.13	1.919	0.057	0.806	1.241
Age	0.017	0.011	0.113	1.514	0.132	0.671	1.49
Nationality	0	0.004	0.002	0.035	0.972	0.964	1.037
Education	0.11	0.144	0.051	0.761	0.448	0.824	1.214
Occupation	0.042	0.056	0.052	0.743	0.459	0.762	1.313
Industry	0.018	0.013	0.084	1.357	0.176	0.979	1.022
Interest in entrep.	0.175	0.167	0.066	1.046	0.297	0.936	1.069

*Table 8.4.2.  
Result of Multicollinearity Check (IV= Clothing formality)*

Variable	Unstandardized Coefficients		Standardized Coefficients	t	Sig.	Collinearity Statistics	
	B	Std. Error	Beta			Tolerance	VIF
(Constant)	-0.688	0.867		-0.793	0.428		
Formal-clothing	-0.707	0.23	-0.264	-3.077	0.002	0.502	1.991
Casual-clothing	-0.544	0.234	-0.2	-2.321	0.021	0.499	2.002
Passion	0.119	0.071	0.122	1.674	0.096	0.692	1.446
Preparedness	0.374	0.09	0.307	4.133	0	0.67	1.492
Risk aversion	0.147	0.102	0.106	1.442	0.151	0.682	1.467
Self-enhancement	0.064	0.132	0.034	0.489	0.625	0.747	1.339
Conservation	0.273	0.117	0.154	2.337	0.02	0.854	1.171
Gender	0.331	0.179	0.125	1.852	0.066	0.814	1.229
Age	0.017	0.011	0.113	1.529	0.128	0.673	1.486
Nationality	0	0.004	0.004	0.058	0.954	0.963	1.038
Education	0.115	0.144	0.054	0.803	0.423	0.826	1.21
Occupation	0.04	0.056	0.05	0.715	0.475	0.763	1.311
Industry	0.018	0.013	0.084	1.364	0.174	0.981	1.02
Interest in entrep.	0.162	0.168	0.061	0.966	0.335	0.928	1.078



*Table 8.4.3.*  
*Results of Multicollinearity Check with Interactions (IV = Clothing color)*

Variable	Unstandardized Coefficients		Standardized Coefficients	t	Sig.	Collinearity Statistics	
	B	Std. Error	Beta			Tolerance	VIF
(Constant)	-0.365	0.882		-0.414	0.679		
Warm-color	-1.014	0.348	-0.372	-2.914	0.004	0.225	4.438
Cool-color	-1.172	0.353	-0.438	-3.325	0.001	0.212	4.721
Passion	0.114	0.071	0.117	1.599	0.112	0.689	1.451
Preparedness	0.396	0.091	0.325	4.348	0	0.658	1.52
Risk aversion	0.145	0.101	0.105	1.424	0.156	0.681	1.469
Self-enhancement	0.079	0.132	0.042	0.602	0.548	0.742	1.347
Conservation	0.245	0.117	0.138	2.092	0.038	0.841	1.189
Gender	-0.3	0.385	-0.113	-0.778	0.437	0.174	5.748
Age	0.019	0.011	0.132	1.766	0.079	0.655	1.527
Nationality	0	0.004	-0.007	-0.119	0.905	0.955	1.047
Education	0.106	0.145	0.049	0.736	0.463	0.812	1.231
Occupation	0.034	0.056	0.042	0.603	0.547	0.753	1.328
Industry	0.02	0.013	0.095	1.547	0.124	0.968	1.034
Interest in entrep.	0.177	0.167	0.066	1.059	0.291	0.935	1.069
INT_warm*gender	0.733	0.478	0.206	1.533	0.127	0.202	4.941
INT_cool*gender	0.877	0.46	0.283	1.906	0.058	0.166	6.009

*Table 8.4.4.*  
*Results of Multicollinearity Check with Interactions (IV= Clothing formality)*

Variable	Unstandardized Coefficients		Standardized Coefficients	t	Sig.	Collinearity Statistics	
	B	Std. Error	Beta			Tolerance	VIF
(Constant)	-0.481	0.877		-0.548	0.584		
Formal-clothing	-1.055	0.343	-0.394	-3.077	0.002	0.222	4.504
Casual-clothing	-1.12	0.355	-0.411	-3.152	0.002	0.214	4.674
Passion	0.117	0.071	0.12	1.656	0.099	0.691	1.446
Preparedness	0.39	0.09	0.32	4.321	0	0.664	1.506
Risk aversion	0.145	0.101	0.105	1.44	0.152	0.682	1.467
Self-enhancement	0.083	0.131	0.044	0.631	0.529	0.741	1.349
Conservation	0.256	0.117	0.144	2.195	0.029	0.841	1.189
Gender	-0.28	0.384	-0.106	-0.731	0.466	0.174	5.751
Age	0.019	0.011	0.126	1.694	0.092	0.655	1.526
Nationality	0	0.004	0.006	0.101	0.92	0.94	1.064
Education	0.116	0.143	0.054	0.812	0.418	0.823	1.215
Occupation	0.044	0.056	0.054	0.777	0.438	0.749	1.335
Industry	0.019	0.013	0.089	1.453	0.148	0.965	1.036
Interest in entrep.	0.156	0.167	0.059	0.938	0.35	0.925	1.081
INT_formal*gender	0.567	0.465	0.172	1.221	0.224	0.183	5.45
INT_casual*gender	0.997	0.464	0.305	2.15	0.033	0.181	5.518