

THE COMPOSITION OF STUDENT BOARDS: THE RESULT OF STEREOTYPES?

Christa van der Wiel

ERASMUS UNIVERSITY ROTTERDAM 346425

Supervisor: Ted Welten

Abstract

This study examines whether stereotypes could influence the hiring decision of new board members of study and student associations of the Erasmus University Rotterdam. Stereotyping can influence the hiring decision with two variables, namely gender stereotypes and board stereotypes. This relation is studied by performing a logistic regression analyses. The probability of a positive hiring decision was estimated with stereotypes as predictor variable. This probability wasn't significantly influenced by the stereotypes. When the board stereotype wasn't comparable to the gender stereotype a lack of fit occurred. This lack of fit was a significant predictor of the probability of a positive hiring decision. This lack of fit predictor was not interacted by the gender of the evaluator.

Table of Contents

Abstract.....	1
1. Introduction	5
1.1 Research Question	6
1.2 Contribution	7
1.3 Contents	7
2 Literature Overview	8
2.1 Gender and Social Role Theory	8
2.2 Stereotypes	9
2.2.1 Gender stereotypes	9
2.3.2 Board stereotypes	10
2.3 Stereotype mismatch	10
2.3.1 Lack of Fit Theory	10
2.3.2 Role Congruity Theory	11
2.4 Hiring Bias of student association boards	11
2.5 Conclusion	12
3 Literature Review	12
3.1 Relation stereotypes and the hiring decision	12
3.2 Men and women as evaluators	14
3.4 Stereotypes among students	15
3.5 Conclusion	15
4. Hypotheses	18
5. Methods	19
5.1 Research methods and procedures	19
5.2 Variable measurements	20
5.2.1 Dependent Variable	20
5.2.2 Independent variables	21
5.2.3 Interacting Variable	22
5.2.4 Control Variables	22
5.2.5 Summery of variables	24
5.3 Research design	26
6. Results	27
6.1 Preliminary analyses	27

6.2.1 Analysis of the board stereotype construct.....	27
6.2.2 Analysis of the gender stereotype constructs	28
6.2 Descriptive statistics and correlations	30
6.2.1 Descriptive statistics	30
6.2.2 Correlations.....	31
6.3 Assumption tests.....	34
6.3.1 Linearity	34
6.3.2 Multicollinearity.....	34
6.3.3 Unique logistic regression problems.....	35
6.3.4 Conclusion.....	35
6.4 Hypothesis testing.....	36
6.4.1 First hypothesis	36
6.4.2 Second Hypothesis.....	38
6.4.3 Third hypothesis.....	38
6.4.4 Conclusion.....	40
7. Conclusion.....	41
7.1 Answer research question	41
7.2 Limitations of the study	42
7.3 Suggestions for further research	43
Bibliography	44
Appendix	47

Table of Tables

Table 1: Articles used in Literature Review	15
Table 2. Summary of variables	24
Table 3: Correlations of variables in first regression	31
Table 4: Correlations of variables of the second and third regression	32
Table 5: Logistic regression first hypothesis	36
Table 6: Logistic regression analysis second and third hypotheses	38
Table A1 Overall Kaiser Meyer Olkin Measure and Bartlett's Test of Sphericity of the Board Stereotype constructs	46
Table A2 Reliability Analyses for the Board Stereotype constructs	46
Table A3 Rotated Component Matrix for the 10-item scale used to measure the Board Stereotype constructs	47
Table A4 Overall Kaiser Meyer Olkin Measure and Bartlett's Test of Sphericity of the Male gender stereotype constructs	47
Table A5 Overall Kaiser Meyer Olkin Measure and Bartlett's Test of Sphericity of the Female gender stereotype constructs	47
Table A6 Reliability Analyses for the Gender Stereotype constructs	48
Table A7 Rotated Component Matrix for the 16-item scale used to measure the Male Gender Stereotype constructs	49
Table A8 Rotated Component Matrix for the 16-item scale used to measure the Male Gender Stereotype constructs	49
Table A9 Model Summary Continuous Variables with interaction for linearity	50
Table A10 Model Summary Logistic regression analysis with Continuous Variables	50
Table A11 Multicollinearity analysis of the first regression	50
Table A12 Multicollinearity analysis of the second regression	50
Table A13 Cross tabulation of Gender Applicant, Hiring Decision and the Independent Variables	51
Table A14: Female Male Ratio of student/study associations of the Erasmus University Rotterdam	52

1. Introduction

A leader should be representative of the group they are leading. In their research, Hais, Hogg and Duck (1997) already showed that there should be a preference for leadership candidates who are prototypical of their group, or a leadership candidate that is representative of the group they want to lead (Hais, Hogg, & Duck, 1997). Hence, a corporate board should be representative of the population of the organization. However, this is not the case for companies listed on the Dutch trade market, the AEX. The Female Board Index 2015 indicates that none of the 85 AEX listed companies have a board that consists of 30% female members (Lückerath-Rovers, 2015). The student and study associations of the Erasmus University Rotterdam follow this trend. There are 18 student- or study associations in Rotterdam where the members are both male and female. Of the 18 student- or study associations only 5 have a board that is representative of the population of their members.

Possible explanations of the underrepresentation of women in corporate boards are well documented, as well as the possible challenges women face. A metaphor that is widely used is the glass ceiling. The glass ceiling represents an invisible barrier that prevents women from reaching higher level positions in business organizations. This metaphor originated in the popular media, and then quickly spread among management literature (Hymowitz & Schellhardt, 1986). Twenty years later, the glass ceiling is still used to discuss the status of women in management (Zimmer, 2015). Sex discrimination was one of the first explanations of the glass ceiling (Marshall, 1984). Studies on sex discrimination showed that the applicant's sex influenced promotion decisions for top management directly (Powell & Butterfield, 1994; Larwood & Rose, 1988). The study of Powell and Butterfield (1994) is widely cited, and used as an example of a prior glass ceiling study. A more recent study of Powell & Butterfield (2015) suggests that the findings of their 1994 study are still applicable to today's organizations (Powell & Butterfield, 2015). This suggests that sex discrimination can still be present in the hiring process of corporate boards. The study of Eagly & Karau (2002) examined if the prejudice against female leaders is caused by conscious sex discrimination. The results of this study showed that prejudice against female leaders arises when the stereotype of a leader does not correspond with the stereotype of a female. Therefore, the prejudice against female leaders could be unconscious (Eagly & Karau, 2002). When the stereotype of a job is not equal to the stereotype of the applicant gender, there is more prejudice against the applicant (Heilman, 1983). This is the phenomenon that is expressed in the concept Lack-of-Fit. The performance expectation is determined by the fit between the characterization an individual has, and the characterization that is needed for the job. If the fit is a good one, success can be expected. If the fit is poor, failure can be expected (Heilman, 2012).

Stereotyping has been done for as long as we know. Aristotle said: “if women are expected to do the same work as men, we must teach them the same things”. Aristotle, the famous Greek philosopher, stereotyped men and women differently. And even today the female and male gender are social categories in which we perceive others and define ourselves. Men and women are seen as different people with different traits. These traits are often stereotyped. Meaning that members of a certain group, in this case males or females, are associated with the same traits. We construct a stereotype for men and women and build these stereotypes for jobs, the same as for gender. The stereotypical woman is caring, passionate and interpersonal where the stereotypical man is rational, independent and assertive. The latter are characteristics that are seen as leadership qualities. Since the stereotypical woman is not associated with stereotypical leadership qualities, there could be a correlation between the low levels of women that are at the very top level of an organization.

Recent events, concerning student and study associations, suggests that Dutch students could still have some role dividing ideas that could influence their views of women and men. For example, the “banga list” of the student association Vindicat Groningen. This list consisted of pictures of, according to the male members of the association, the most beautiful women, and they were evaluated, on specific characteristics, on a five-star ranking system. This list was the basis of a discussion about possible sexist views of student associations. Ex members of the student associations indicate that such sexist behavior has existed for years (Remie, 2016). This could indicate that members of study and or student association could still have stereotypical views of male and female traits.

1.1 Research Question

The underrepresentation of women in student boards of the Erasmus University Rotterdam is very similar to the underrepresentation of women in corporate boards. Because research suggests that underrepresentation of women in corporate boards could be a product of stereotyping, the question arises whether stereotyping could influence the underrepresentation of women in student boards of the Erasmus University Rotterdam. Recent events amplify the expectation of stereotypes among students. The applicants for a new board member position of a study or student association are evaluated during the hiring process. The evaluators during this process are the current board members. The underrepresentation of women in boards of study and student association is a product of the final hiring decision. To examine the influence of stereotypes on the evaluation process, and thus the hiring decision, the following research question is formulated:

Is the evaluator of a new student board member influenced by stereotypes when making the hiring decision?

To answer the main research question, some of its elements should be defined. The definition of stereotypes is inspired by existing literature; therefore, this concept is defined. Stereotypes are expected to influence the evaluator, and the influence of stereotypes on the hiring decision is expected to be different when there is a lack of fit, compared to when there is no lack of fit. Also, the gender of the evaluator could play a role in the magnitude of the influence of stereotypes.

1.2 Contribution

The answer of the research question contributes to the literature of the glass ceiling in the following manner. Because most studies, which contribute to the glass ceiling literature, are focusing on corporate boards, this study can contribute by focusing on student boards. There is an underrepresentation of women in student boards that might be the result of gender bias in the hiring decision of student evaluators. Because students will eventually progress to corporate organizations, their actions in student life might predict their future actions. Because students are the future workforce, their behavioral actions might be a good predictor of the influence of stereotypes in their future hiring decision.

This research will help better understand the behavioral problems that can unconsciously occur when the evaluator makes a hiring decision. Concluding, knowing whether stereotyping at the age of students occurs, can help to better understand the glass ceiling problem.

1.3 Contents

The remainder of this study is structured as follows. Chapters 2, 3 and 4 are part of the theoretical framework. This theoretical framework consists of a literature overview, a literature review and the development of the hypotheses. The literature overview can be found in chapter 2. The stereotype literature, and hiring decision literature is examined in the literature overview. Two types of stereotypes are found, namely gender stereotypes and board stereotypes. The literature review is given in chapter 3. The relation between the stereotypes, the possible lack of fit of these stereotypes, and the hiring decision is examined in the literature review. Based on both the literature overview and the literature review, the hypotheses are developed and described. To operationalize the hypotheses, a methodological framework is described in chapter 5. This chapter includes the research method, the measures of the variables and the sample. The actual research is described in chapter 6. This chapter

contains the results of the statistical test. Finally, in chapter 7, a conclusion of the results is drawn. This chapter also mentions the limitation of this study and mentions potential follow-up studies.

2 Literature Overview

To answer the research question, a theoretical framework is created. In this section the relevant theory behind the concepts used in this study will be discussed. First the gender concept will be explained, using social role theory. Then the stereotype concept will be explained. The stereotype concept consists of two parts, namely gender stereotypes, and board stereotypes. When these stereotypes do not match, a lack of fit could occur. This lack of fit is explained with the lack of fit theory and role congruity theory. The theoretical framework will link the stereotypes, and lack of fit to the hiring decision.

2.1 Gender and Social Role Theory

Gender is a social category and a lens through which we perceive others and define ourselves. Gender is the earliest social group distinctions that young children can make. When children develop into adults, they will associate different traits and attitudes with men and women (Davies, Spencer, & Steele, 2005). Gender is a concept that is widely discussed in anthropological, sociological and psychological literature. For a better understanding of the concept of gender, gender will be explained according to social role theory. Gender encompasses the distinction between women and men, female and male. The distinction between male and female is a basic organizing principle for every human culture (Bem, 1981). These binary categories have its own characteristic content. Gender gives meaning and substance to everyday actions, interactions and subjective interpretations (Haig, 2004). Because gender has two binary categories, the male or female gender are perceived differently. According to Social role theory, certain traits belong to either the male or the female gender (Eagly & Steffen, 1984). Social role theory states that men and women occupy different roles in society. These roles require different training, and therefore men and women will learn different skills and beliefs. The behavior that is associated with the role is influenced by the social norm, the expectations of the role and the social sanctions if the behavior does not fit. Because of the different roles in society, men and women are subject to different normative expectations for their behavior. Men are expected to be more agentic, and women are expected to be more communal (Eagly & Steffen, 1984). Examples of agentic characteristics are: assertive, controlling, and independent. Examples of communal characteristics are: concerned for the welfare of others, interpersonally sensitive, and emotionally expressive. These expectations of behavior lead to stereotyping men and women. This will be further explained in the section below.

2.2 Stereotypes

The definition of a stereotype is: a fixed image of members of a group with similar characteristics. This image contains expected behavior and expected characteristics. To fit all members of the group in one image, this image is often oversimplified and does not apply to every person in the group. Stereotyping is a tool to categorize. It can be a work-saving cognitive mechanism to simplify and organize the world. When a stereotype is overgeneralized, it can lead to faulty reasoning. This leads to biased feelings and actions (Heilman, 1997; Heilman, 2012). Stereotypes serve as energy-saving devices so you can form an impression quickly. One can form an impression in a complex situation quickly, and therefore respond faster. Stereotypes are widely shared, and very impactful because they could influence important issues such as evaluations. Some examples of groups that are stereotyped are: gender, race and jobs. Gender stereotypes is characterizing men and women as different social categories. The concept of gender stereotypes and board stereotypes (job stereotypes) are important for this study. Therefore, these concepts will be further explained in this section.

2.2.1 Gender stereotypes

Since stereotypes are a set of attributes and generalizations to describe a group, it can be applied to gender. The characterization of men and women are very consistent across culture, time and context. The characteristics used to describe men and the characteristics used to describe women, are the same, no matter the age, religion, social class, marital status, educational background, or mental status (Broverman, Vogel, Broverman, Clarkson, & Rosenkrantz, 1972). Gender stereotypes are generalizations about the characteristics of men and women. When you ask people to describe a typical man or typical woman, most people will be able to do so. The traits that can characterize men and women have been studied extensively (Abele, 2003). The traits of men and women seem to be different. Men and women are often described as opposites (Broverman, Vogel, Broverman, Clarkson, & Rosenkrantz, 1972). Women lack traits that are most prevalent in men, and men lack traits that are most prevalent in women.

There are many ways to distinguish men and women. One of the most popular distinctions is appointing masculine and feminine traits to men and women. To capture these masculine and feminine traits the terms agency and communality are derived (Bakan, 1966). Agency often refers to masculine traits, and is associated with characteristics that are rational and assertive. Agentic is mostly used to characterize men. Communality often refers to feminine traits, and is associated with characteristics that are emotional and interpersonal. Communality is mostly used to characterize women (Heilman, 2001)

2.3.2 Board stereotypes

Stereotyping can also be applied on the workplace. Stereotyping is a concept that not only occurs in daily life, but also in the organizational setting. The agentic and communal concepts are tools to stereotype organizational positions. Gender roles, as described in social role theory, can influence the stereotype of leadership functions in organizations (Gutek & Morasch, 1982). Because the leadership functions of an organization are mostly occupied by men, the leadership characteristics are mostly of agentic nature. Differences in men and women that hold a leadership position in an organization, are mostly in line with stereotypical expectations. These differences are between the agentic and communal stereotypes, women are more interpersonal and men more task oriented (Powell & Butterfield, Exploring the influence of decision makers' race and gender on actual promotions to top management, 2002). In recent years, more women have occupied leadership positions. A logical consequence would be that a leadership function is stereotyped as both agentic and communal. However, the leadership function still has descriptive norms for gender, that do not match the descriptive beliefs of a stereotypical woman (Rudman L. , 1998). Therefore, the board function is more likely to be stereotyped as agentic, but communal is also possible.

2.3 Stereotype mismatch

Stereotyping could be a barrier for women that apply for a leadership function. This does not stem from a negative stereotype of women. The “women are wonderful effect” of Langford & MacKinnon 2000, explains that women are the nicer cultural stereotype (Langford & MacKinnon, 2000). The barrier for women arises from a mismatch between what is perceived a woman characterizes, and what is perceived a leadership function is (Heilman, 1983) (Eagly & Karau, 2002).

2.3.1 Lack of Fit Theory

Lack of Fit Theory is a theory that is developed by Madeleine Heilman. Stereotyping can be a problem for women when there is a perceived “Lack of fit”. According to this theory, a Lack of Fit arises when there is a misfit between what is believed what characterizes a woman and which characterizations are needed to succeed in traditionally male occupations (Heilman, 1983). The characterization of women is often communal and the characterization of men is often agentic. The performance expectation is determined by the fit between the characterization an individual has, and the characterization that is needed for the job. If the fit is a good one, success can be expected. If the fit is poor, failure can be expected (Heilman, 2012). Because of these stereotypes, women could be target of prejudice against

them as leaders. Leadership functions are often fulfilled by men. Therefore, these functions are more agentic. Women seem less natural for a leadership role, since she is stereotyped as communal.

2.3.2 Role Congruity Theory

The Role congruity theory of Eagly and Karau, makes the same predictions as the Lack of Fit theory of Heilman. It also argues the possible reason why women face disadvantages in the workforce. According to the role congruity theory, these disadvantages arise from an incongruity between the stereotyped qualifications of a job and how those qualifications match stereotyped characteristics of women or men. These stereotypes are framed in agentic and communal stereotypes. Because men are often associated with agentic traits, and leadership is also associated with agentic traits, men are more similar to the leadership stereotype than women (Eagly & Karau, 2002) (Eagly, Makijani, & Klonsky, 1992).

Both Lack of fit theory and role congruity theory make a distinction between objective qualifications of a job, and what the social perceptions are of those qualifications. Both lack of fit and role congruity theory lead to the same prediction. Job applicants that have a gender stereotype consistent with the gender stereotype of the job have a better chance at being hired.

2.4 Hiring Bias of student association boards

As shown before, the population of the student/study association's board is not representative for the population of the study/student associations. A possible reason of this fact could be: hiring bias. Hiring bias arises when two persons, with the same curriculum but different genders, are not evaluated the same. Hence, one is hired and the other is not (Steinpreis, Anders, & Ritzke, 1999). The hiring decision is the outcome of the evaluation of the potential board member of a study/student association. Because a board position of a study or student association is a leadership function, agentic traits could be of influence when making the hiring decision. Male applicants are preferred over female applicants for positions requiring agentic traits (Davidson & Burke, 2000). Therefore, it is highly likely that more men will occupy a position within a student board than there are men in the population of the association.

Although enough is done by companies and universities to correct biases in the hiring decision, they still exist. Equality in leadership positions in corporate boards is not yet reached. This could imply a gender bias in the hiring decision of future board members (Abcarin, 2014). The possible explanation of the hiring bias is that women are subject to different measures than men. This can be caused by gender stereotypes. It is possible that gender stereotypes are activated with little awareness from the individual evaluating (Dasgupta & Asgari, 2004).

2.5 Conclusion

In summary, gender is a natural category to stereotype. According to social role theory, there is a difference between the traits that belong to either a man or a woman. This is due to the different roles that men and women have in society. Men are expected to be more agentic, where women are expected to be more communal. This stereotype image is applicable to gender and leadership functions. Stereotyping is a tool to capture all members of a group in one image. Gender stereotypes are based on the distinction between masculine and feminine traits. These traits are captured in the concepts of agency and communality. Leadership functions such as a board position can also be stereotyped. These stereotypes are based on male leaders in history. Because mostly men held a board position, the board position will be stereotyped as agentic. But in recent years, female leaders are more common. Therefore, an agentic, and/or communal board can be expected. When the stereotype of the gender does not match the stereotype of a board function in a situation of evaluation, the evaluation can be biased. According to Lack of Fit theory, prejudice against a gender that does not fit the job stereotype can be expected. In line with lack of fit theory, role congruity theory predicts that when the job stereotype and gender stereotype do not match, evaluation can be biased. An example of the outcome of an evaluation is a hiring decision. The hiring bias arises when two applicants, with the same curriculum but different genders, are not evaluated the same. A possible explanation of the hiring bias is stereotyping. There is a relation between stereotype and the hiring bias, and between the lack of fit and the hiring bias. This chapter is the basis of the relations that are examined in the literature review.

3 Literature Review

This chapter will link the theoretical concepts that are explained in the literature overview. Two relations are examined. The relation of stereotypes to the hiring decision, and the relation of men and women as evaluator to the hiring decision. Studies that examined these relationships will be described. The description of the studies will include their methods, and results. This chapter will conclude with the direction and possible outcome of the relations.

3.1 Relation stereotypes and the hiring decision

Hiring bias is a concern in many work settings. The hiring decision will be treated as the outcome of the evaluation process. A factor that could influence a hiring decision is gender stereotypes. The following studies focused on gender stereotypes that influence the real or hypothetical hiring decision.

Rice & Barth examined how the gender stereotype characteristics of an evaluator could influence the hiring decision. Instead of examining a true hiring process and decision, they examined a hypothetical hiring decision. The activation of stereotypes was done by stereotype-congruent priming. After the activation men rated male applicants higher than female applicants. After stereotype-incongruent priming male applicants had a less negative evaluation in comparison with the stereotype congruent priming males. Female participants were far less affected by the priming. Stereotyping influences the hiring decision. Stereotyping however is not the same for males and females, and should maybe be treated separately when examining the relation between stereotyping and the hiring decision (Rice & Barth, 2016).

Kusterer, Lindholm & Montgomery 2013 examined the gender related management stereotypes, gender bias and evaluations of actual managers. They divided the gender and management stereotype via agency and communality. It was hypothesized that the management stereotypes are gender typed. Female managers will be rewarded more positively in their evaluation than males, when they possess communal attributes, where male managers will be rewarded more positively in their evaluation than females when they possess agentic attributes. They examined this by using a questionnaire, and compared this to actual situations. The researchers found that, in the questionnaire, men evaluated female managers more positively when they possess communal attributes, and the male managers more positively when they possess agentic attributes. Women evaluated female managers more positively for both agentic and communal attributes compared to the male managers. The actual evaluation of males and females was very similar. This does not correspond to the stereotype. However, the actual evaluation of male managers corresponded more with the male stereotype and the actual evaluation of female managers corresponded more to the female stereotype (Kusterer, Lindholm, & Montgomery, 2013)

Koch, D'Mello & Sackett did a Meta-Analysis of the relation between a lack of fit and the hiring decision. They hypothesized, among other things, that gender role congruity bias would be found. This means that men will be rated more favorable than women for male dominated jobs and women will be rated more favorably than men for female dominated jobs. Results showed that, although men did have a favorable position compared to women for male dominated jobs, women have a favorable position for female dominated jobs. Male decision makers exhibited a greater gender bias than female decision makers for male dominated jobs. When extra information was given about the applicants, decision makers tended to still rely more on stereotypes than individual information. The researchers concluded

that men were indeed preferred for male dominated jobs. However, there was no preference for the male or female gender for female dominated or integrated jobs. They also found that the male dominated jobs have the largest gender bias caused by gender stereotypes (Koch, D'Mello, & Sackett, 2015).

3.2 Men and women as evaluators

Rice & Barth are not the only studies that found a difference between male and female evaluators. Studies that focus on gender stereotypes influencing the hiring decision sometimes focus on the difference between male and female decision makers. Some of those studies will be discussed.

The study of Koch D'Mello & Sackett also examined the difference between male and female decision makers. They hypothesized that male decision makers would exhibit stronger gender role congruity bias than female decision makers. They found that male decision makers exhibited greater gender role congruity bias than female raters. This bias was found for male dominated jobs (Koch, D'Mello, & Sackett, 2015).

Massengill & DiMarco found that men are more likely to hold traditional stereotypes about women in comparison to women. They hypothesized that the stereotypes for men, women and successful managers are different. The stereotypes of men and managers had a moderately high degree of similarity for male respondents. Men stereotyped managers and other men the same. However, male respondents did not show a degree of similarity for men and women or a degree of similarity for women and managers. Female respondents had different stereotypes. Females showed a high similarity between the stereotypes of men and the stereotypes of managers. There was also a slight degree of similarity between the stereotypes of women and both men and managers (Massengill & DiMarco, 1979).

Men view leadership positions as more masculine and less feminine according to Brenner, Tomkiewicz and Schein. They examined the relationship between gender stereotypes and management characteristics. They hypothesized that management characteristics of women and men would be different. Their results indicated that indeed male participants stereotype managers that corresponds to the male gender stereotype. However, female participants did not have a sex type for managerial jobs. This indicates that males indeed evaluate differently compared to females (Brenner, Tomkiewicz, & Schein, 1989).

Koenig, Eagly, Mitchell and Ristikari draw the same conclusion as Brenner Tomkiewicz and Schein. They did a meta-analysis to examine the extent to which stereotypes of leaders are culturally masculine. However, they found that masculinity in leadership has decreased over time. But males still stereotype leaders more masculine than females. Compared to women, men are more likely to hold traditional stereotypes about women. Also, men will view a leadership position as more masculine and less feminine (Koenig, Eagly, Mitchell, & Ristikari, 2011).

3.4 Stereotypes among students

Students are the new generation of workers. They will eventually enter the job market and some of them will play a significant role in the corporate world. Their current evaluation of male and female professors suggests that there is still a gender bias.

MacNell, Driscoll, and Hunt examined the student ratings of teaching. However, they could manipulate the gender of the teacher, because it was an online course. They could now compare the student ratings for a male and female professor, even though it was the same person. The male teacher was rated significantly higher than the female teacher. This demonstrates gender bias (MacNell, Discoll, & Hunt, 2015).

Bennet also examined the student evaluation of teachers. They found that the course evaluation was not gender biased. However, female faculty members are subject to culturally conditioned gender stereotypes. Female instructors are perceived as warmer and are required to give greater personal support. Female instructors are also judged more closely than their male colleagues in providing interpersonal support. This suggest that students can have certain male and female stereotypes (Bennet, 1982)

3.5 Conclusion

The literature review shows that the relations examined have one direction. Both stereotypes and the gender of the participant have an influence on the hiring decision. The research of Rice & Barth 2016 is comparable to the relation examined in this study. They examine the relation between stereotypes and the hypothetical hiring decision. Rice & Barth 2016 found that stereotyping indeed influences the hiring decision. But they also found that the stereotype for males is different compared to the stereotype for females. The actual evaluation is very similar compared to the evaluation made based on stereotypes (Kusterer, Lindholm, & Montgomery, 2013). This implies that the hypothetical hiring decision based on stereotypes is very similar to the actual hiring decision. Male dominated jobs, such as leadership

positions, have the largest gender bias caused by stereotypes (Koch, D'Mello, & Sackett, 2015). This bias caused by stereotypes was greater among male decision makers compared to female decision makers. The studies of Massengill & DiMarco (1979), Brenner, Tomkiewicz & Schein (1989) and Koenig, Eagly, Mitchell and Ristikari (2011) all confirm a different outcome for male evaluators compared to female evaluators. Macnell, Driscoll and Hunt (2015), and Bennet (1982) confirmed gender biases and stereotypes among students. The relation examined in this study is therefore applicable to students.

Table 1: Articles used in Literature Review

Authors	Relation Examined	Results	Conclusion
Rice & Barth (2016)	Stereotypes influencing the hiring decision & evaluator gender influencing the effect of stereotypes on the hiring decision	After activating stereotypes, the men rated male applicants higher than female applicants. Female participants were far less affected by the presence of stereotypes.	Stereotyping influences the hypothetical hiring decision, and the relation could be influenced by the gender of the evaluator.
Kusterer, Lindholm & Montgomery (2013)	Stereotypes influencing the hiring decision	Men evaluated female managers more positively when they possess communal attributes, compared to when they possess agentic attributes. Women evaluated female managers more positively for both agentic and communal attributes.	Stereotyping in terms of agentic and communal attributes influences the evaluation of female managers in hypothetical hiring decisions, however not in actual evaluations. During actual evaluations, females and males are evaluated the same. Their stereotype however corresponds to the evaluation.
Koch, D’Mello, Sackett (2015)	Stereotypes influencing the hiring decision & evaluator gender influencing the	Men have a favorable position for male dominated jobs and females have a favorable position for female dominated	Stereotypes could cause gender bias when the gender of the job applicant is not the same

	effect of stereotypes on the hiring decision	jobs. With the availability of extra information, evaluators still relied more on stereotypes. Male dominated jobs have the largest gender bias caused by gender stereotypes.	as the gender dominated job. This gender bias is different for male and female evaluators.
Massengill & DiMarco (1979)	Evaluator gender influencing the effect of stereotypes on the hiring decision	Men stereotyped managers and men the same, but not mangers and women. Women stereotyped women, men and managers the same.	The evaluator gender could influence the relation of stereotypes and the hiring decision. The result of a male evaluator could be different form the result of a female evaluator.
Brenner, Tomkiewicz, Schein (1989)	Evaluator gender influencing the effect of stereotypes on the hiring decision	Male participants stereotype managers according to the male stereotype, and female participants stereotyped managers without a sex preference	The evaluator gender could influence the relation of stereotypes and the hiring decision. The result of a male evaluator could be different form the result of a female evaluator.
Koenig, Eagly, Mitchell and Ristikari (2011)	Evaluator gender influencing the effect of stereotypes on the hiring decision	The stereotypes of leaders are culturally masculine according to the male evaluators. Women have less traditional stereotypes.	The evaluator gender could influence the relation of stereotypes and the hiring decision. The result of a male evaluator could be different form the result of a female evaluator.

MacNell, Discoll & Hunt (2015)	Students and Gender	Students rate male teachers significantly higher than the female teachers.	There could be gender bias among students
Bennet (1982)	Students and Gender	the course evaluation was not gender biased. Female faculty members are subject to culturally conditioned gender stereotypes.	There could be gender bias among students

4. Hypotheses

The hypotheses of this research are built on the conclusions drawn from the literature overview and literature review. The hypotheses will be testable statements, and reflect the current state of knowledge, and direction of the relation.

The literature overview described the concepts in the relations that are examined. Due to the different roles in society, men and women are given different traits. These traits can be gender stereotyped. Agency and communality are the most common concepts to stereotype gender. Leadership functions, such as board positions, are also stereotyped with agency and communality. Because men occupy leadership functions the most, agency is mostly related to such functions. Lack of fit theory and role congruity theory both predict a biased evaluation when the gender stereotype and leadership stereotype of a board do not match. The outcome of an evaluation of a leader is the hiring decision of an applicant for a board position. Hiring bias occurs when two applicants with the same curriculum but different genders are not evaluated the same. Evaluation meaning being hired or not. Hiring bias can be explained with stereotyping, and lack of fit. The Literature review showed that stereotypes of gender and stereotype of the job are negatively related to the hiring decision. This is the case for hypothetical hiring decisions and actual hiring decisions. Because leadership positions are a male dominated job, these positions have the largest hiring bias caused by stereotypes. When the stereotype of the applicant (gender stereotype) does not match the stereotype of the job (board stereotype) the probability of being hired is expected to be lower. Multiple studies showed that this relation can be influenced by the gender of the participant that is hiring the applicant. The conclusion of both sections leads to the following hypotheses for this study

H1: The probability of a positive hiring decision of a new board member of a study/student association, will be positively influenced by the presence of an agentic gender stereotype and a presence of an agentic board stereotype.

H2: The probability of a positive hiring decision of a new board member of a study/student association, will be negatively influenced when the gender stereotype is not equal to the board stereotype (hence a lack of fit).

H3: the probability of a positive hiring decision of a new board member of a study/student association, will be negatively influenced by the interaction effect of the gender of the participant and the lack of fit

These hypotheses express the relation between stereotypes and hiring decision based on what is discovered from theory. A quantitative research is conducted to reach reasonable certainty about the hypothesized relations. In the methods chapter the theory described in the literature overview and literature review will be translated into an empirical framework. The measures for each variable will be described and the statistical technique to examine the relation will be discussed.

5. Methods

To test the hypotheses, the variables of interest and the possible relation of these variables need to be operationalized. Therefore, the methodological framework is covered in this chapter. The methodological framework transforms the theory into empirical evidence.

5.1 Research methods and procedures

This study examines whether stereotyping, and a lack of fit influences the hiring decision. The research question involves stereotyping of gender and stereotyping of a job position. Questionnaires are often used in psychological and sociological research and are often proven to be good measures for psychological constructs. Because stereotyping is a psychological construct, a good way to measure stereotyping is a questionnaire. The hiring decision of a board member can be simulated in a hypothetical event. This event will also be presented in the questionnaire.

Because time was limited, the questionnaires needed to be handed out as quickly as possible. Therefore, a hardcopy questionnaire was handed out during lectures and during the lunch break at the Erasmus University Rotterdam (EUR). Since the sample consists of students of the EUR this was a good method to get respondents as quick, and efficient as possible. Because students of the EUR can be Dutch or international, the survey was handed out in English. The questionnaire had two versions. In the first

version, the respondents had to stereotype both gender and a board position of a study association, and the respondents had to decide whether to hire a male student association board member applicant. In the second version, the respondents had to stereotype both gender and a board position of a study association, and the respondents had to decide whether to hire a female student. To make it extra obvious that the respondents were hiring a man or a woman, a picture was added to the CV of the applicant they were hiring. This picture was an image of a man or a woman that is often used for marking male or female toilets. This universally known picture of a man and women lightly emphasized that the respondents were hiring a man or a woman. The subject of the study was unknown to the respondents. Also, the respondents had to stereotype gender after making the hiring decision. In that way, they couldn't guess the subject of the study when making the hiring the decision.

In conclusion, the answer to the research question is based on the relation of the variables conducted from the survey and the differences between the female and male group.

5.2 Variable measurements

In this section the operationalization of the dependent and independent variables are explained. The choice of measurement instruments of the variables is explained.

5.2.1 Dependent Variable

As mentioned before the dependent variable is the hiring decision of a student board member, further mentioned as hiring decision. The **hiring decision** is a yes or no answer to the question: Would I hire this person to be a board member of the study association? This question was asked after explaining a hypothetical hiring situation in the questionnaire. The hypothetical hiring situation is as followed. A curriculum of a person was given. It was first stated that the respondent had to make a hiring decision about a future potential board member. The respondent had to keep in mind that he/she was a member of that study association and that the decision would have consequences for the study association. Also, all the curricula of the applicants for the board position looked alike. The education and work experience were almost the same for all applicants. Therefore, the decision had to be made based on the personality information. The curriculum of the female applicant was the same as the curriculum of the male applicant. The personal information contained both agentic and communal traits. After the hiring decision was made the respondent had to explain why he/she did or did not hire the applicant. This explanation is used for the internal validity of this study. The hiring decision was measured using a dummy variable. A '1' equals a yes, and a '0' equals a no.

5.2.2 Independent variables

There are several independent variables that explain the relations examined in this study. The first relation that was examined is: the influence of stereotypes on the hiring decision. The concept stereotypes consist of two variables, gender stereotypes and board stereotypes. The second relation that was examined is the influence of a lack of fit on the hiring decision. The lack of fit is a phenomenon that exists when the gender stereotype is not the same as the board stereotype. After these two relations were examined, the effect of the gender of the participant on these two relationships was examined. As mentioned before, the concept stereotype consists of two parts. Gender stereotypes and board stereotypes.

The board stereotype concept was first measured on a 5-point Likert scale with '1' strongly disagree, '2' disagree, '3' neither agree or disagree, '4' agree and '5' strongly agree. The respondents were asked what personality traits a board member should have. These personality traits were either communal or agentic associated with leadership. The five agentic traits were dedication, intelligence, determined, assertiveness, and competitiveness. These five items have been shown to represent agentic leadership characteristics (Abele A. , 2003) (Rosette & Tost, 2010). The six communal traits were caring, sensitivity, honesty, understanding, compassion, and sympathy. These six items have also been shown to be representative communal leadership characteristics (Abele A. , 2003) (Rosette & Tost, 2010). Then the agentic and communal items were averaged together to form two scores. An Agentic-board stereotype score, and a Communal-board stereotype score. These scores could range from 1.0 to 5.0. The **board stereotype** variable is a dummy variable. The score of '1' represents a stronger agentic stereotype, and the score '0' represents a stronger communal stereotype.

The gender stereotype concept is divided into two separate variables. The female gender stereotype and the male gender stereotype. The concept of gender stereotype was first measured on a 5-point Likert scale. The agentic and communal traits are often measured in a questionnaire. Bem Sex-Role Inventory and Personality-Attributes-Questionnaire, are examples of such measures. The Personal Attributes Questionnaire (Spence & Helmreich, 1978) was used to measure agentic and communal traits. This questionnaire is an often-used psychological measurement tool for assessing agentic, communal and androgynous traits (Robinson, Shaver, & Wrightsman, 1991). The questionnaire consisted of 24 items that had a pair of characteristics with the number 1-5 in the middle. Each pair described a contradictory characteristic. The numbers were a scale between the two characteristics. Participants were asked to describe general traits of a man and a woman. Although the androgynous traits are not

removed from the questionnaire, the androgynous traits weren't used in this study. The Agentic traits used are: Independence, activity, competitiveness, making decisions, giving up, superior feelings, and how well performing under pressure. The communal traits were: Emotionality, devotion to others, gentle, kind, aware of feeling of others, understanding of others, and relations with others. These traits have been shown to be representative communal and agentic characteristics. The agentic and communal traits were then averaged together to form a score. A female agentic gender-stereotype score, a female communal gender stereotype score, a male agentic gender-stereotype score and a male communal gender stereotype score. These scores could range from 1.0 to 5.0. The gender stereotype concept is transformed into two variables, the **male gender-stereotype** variable and the **female gender stereotype** variable. Both variables are dummy variables. The score of 1 represents a stronger agentic gender stereotype and the score of '0' represent a stronger communal stereotype.

As mentioned before, a Lack of Fit is a phenomenon that occurs when the job stereotype does not correspond with the gender stereotype. To operationalize this concept the gender stereotype variables are compared to the board stereotype variable. The **Lack of Fit** variable is a dummy variable. The score of '1' represents a lack of fit and the score of '0' represents the absence of a lack of fit. To determine if there is a lack of fit the (fe)male gender stereotype variables and board stereotype variable are compared. When the (fe)male gender stereotype variables equal the board stereotype, the lack of fit variable will score '0'. When the (fe)male gender stereotype variable do not equal the board stereotype, the lack of fit variable will score '1'.

5.2.3 Interacting Variable

The gender of the respondent, further mentioned as gender of the participant, is the interacting concept on the relation between stereotype and the hiring decision, and on the relation between lack of fit and the hiring decision. This concept is measured with a dummy variable. The score of '0' represents a male participant and the score of '1' represents a female participant.

5.2.4 Control Variables

To ensure that the dependent variable is influenced only by the stereotypes, or lack of fit, a control variable will be included in the model.

Because some participants will be a (active) member of a study association, some participants will have more experience with regards to making a hiring decision. Because of this experience, the participant could have a more positive or more negative view on the applicant, than the participant that is not a (active) member. To control for this experience regarding the study or student associations, a dummy

variable is included. This **member of a study or student association** variable will have a score of '0' when the participant is not a member of a study association, and a score of '1' when the participant is a member of a student association.

Applicant gender is the gender of the person that is hired by the participants. To control for gender of the applicant this variable is included in the regression.

5.2.5 Summary of variables

Figure 1 will show the variables in the relation, and table 2 will summarize the variables.

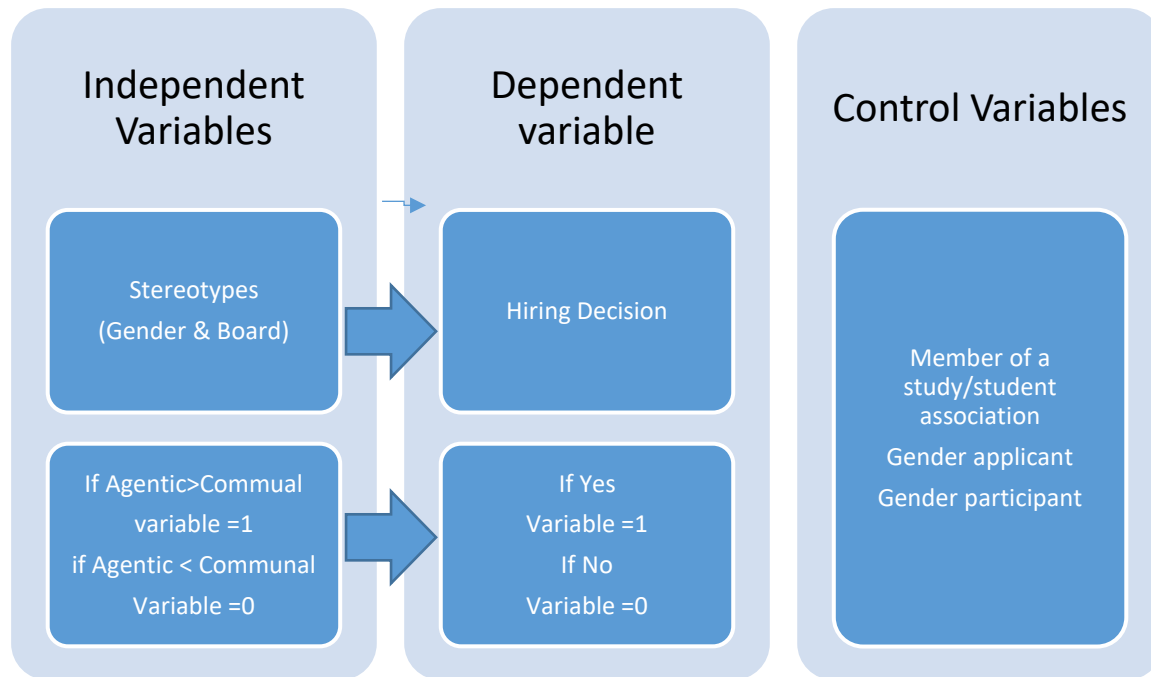


Figure 1 Conceptual model Hypotheses 1

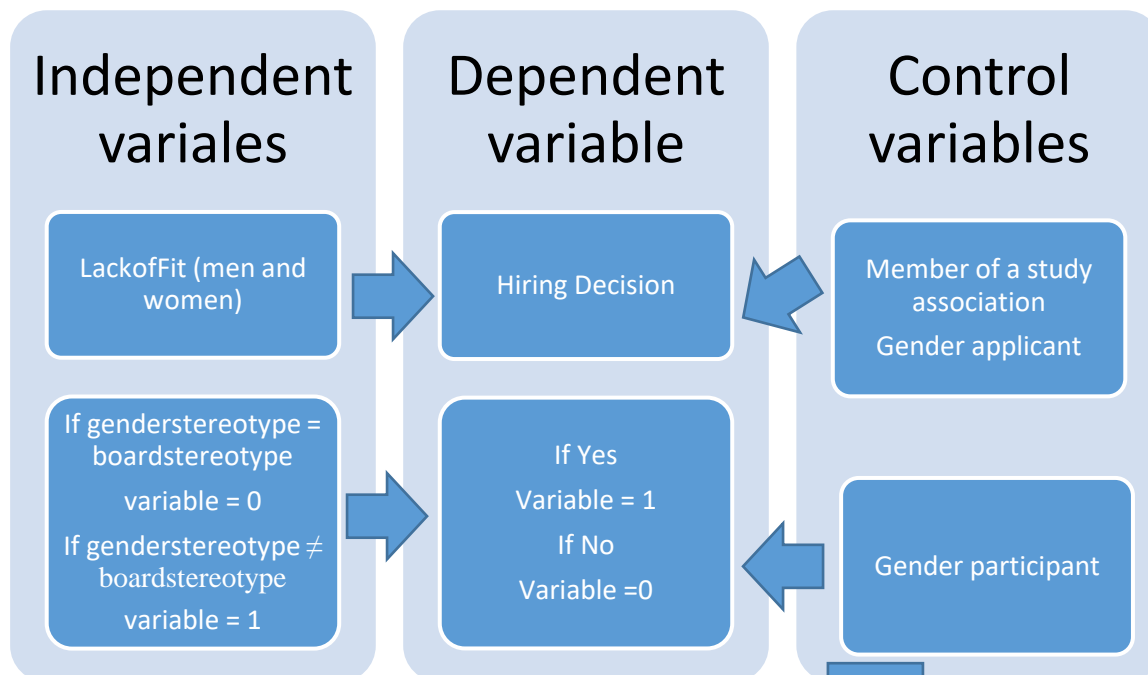


Figure 2 Conceptual model Hypotheses 1 and Hypotheses 2

Table 2: Summary of variables

Variable	Measurement	Type /Theoretical scores
Dependent variable		
Hiring Decision	One item, indicating hiring or not hiring	Nominal Scale: 0=Not hiring 1=Hiring
Independent variable		
Gender Stereotype	GenderstereotypeMen <i>When agentic male>communal male</i> GenderstereotypeWomen	Nominal Scale: 0=Communal 1=Agentic
Board Stereotype	<i>When Agentic female>Communal female</i> <i>When agentic board>communal board</i>	Nominal scale: 0=Communal 1=Agentic
Control variables		
Association Member	One item, indicating being a member or not	Nominal Scale 0=No 1=Yes
Gender Participant	One item, indicating being a male or female	Nominal Scale 0=No 1=Yes
Gender applicant	One item, indicating being a male or female	
Underlying variables of IV		
Agentic Board	Mean score of five items measuring agentic traits of men, scored on a 5-point Likert scale	Interval scale: 1-5
Communal Board	Mean score of six items measuring agentic traits of men, scored on a 5-point Likert scale	Interval scale: 1-5
Agentic Male	Mean score of seven items measuring agentic traits of men, scored on a 5-point Likert scale	Interval scale: 1-5
Agentic Female	Mean score of seven items measuring agentic traits of women, scored on a 5-point Likert scale	Interval scale: 1-5
Communal Male	Mean score of eight items measuring agentic traits of men, scored on a 5-point Likert scale	Interval scale: 1-5
Communal Female	Mean score of eight items measuring agentic traits of men, scored on a 5-point Likert scale	Interval scale: 1-5

5.3 Research design

Because the dependent variable is binary (only two outcomes), this variable does not have a normal distribution. A normal distribution is a condition needed for most types of regression. Also, the predicted values of the dependent variable will be beyond 0 and 1 and this violates the definition of the hiring decision. Hence, you can be hired or not hired, not somewhat hired. Therefore, the best way to test the hypotheses is to perform a binary logistic regression analysis. This regression follows a logistical distribution. Logistic regression shows the probability of event '1' hiring, depending on stereotyping, or lack of fit. The logistic regression estimates the odds of an event '1' occurring. The odds are the probability of success divided by the probability of no success.

$$odds = \frac{p}{1-p}$$

The logistic regression is the logit of estimated odds for a linear combination of the independent variables.

$$logit(p) = \ln\left(\frac{p}{1-p}\right) = \beta_0 + \beta_1 X_1 + \dots + \beta_n X_n$$

The independent variables do not need to be at interval or ratio scale. The nominal data for LackofFitMen, Gender stereotype and Board stereotype will therefore be sufficient.

To test the first hypothesis the following regression was formulated

$$u = \beta_0 + \beta_1 GenderstereotypesMale + \beta_2 GenderstereotypesFemale + \beta_3 BoardstereotypesMale + \beta_4 BoardstereotypesFemale + \beta_5 Associationmember + \beta_6 Genderapplicant + \beta_7 Genderparticipant + \varepsilon$$

To test the second hypothesis the following regression was formulated

$$u = \beta_0 + \beta_1 LackofFitMale + \beta_2 LackofFitFemale + \beta_3 Associationmember + \beta_4 Genderapplicant + \beta_5 Genderparticipant + \varepsilon$$

To test the third hypothesis the following regression was formulated

$$u = \beta_0 + \beta_1 LackofFitMale + \beta_2 LackofFitFemale + \beta_3 Associationmember + \beta_4 Genderapplicant + \beta_5 Genderparticipant + \beta_6 LackofFitMale * Genderparticipant + \beta_7 LackofFitFemale * Genderparticipant + \varepsilon$$

The probability that the event '1' occurs can be calculated as follows

$$p = \frac{e^u}{1 + e^u}$$

When performing a binary logistic regression, assumptions must be met. These assumptions are, Multicollinearity, linearity and, independence of errors. These assumptions will be discussed in the results section.

6. Results

This chapter will cover the empirical framework. Before the hypotheses are tested, several preliminary analyses are conducted. Then, the correlations and descriptive statistics will be described. Based on the preliminary analyses, it is decided which statistical test will be conducted to test the hypotheses. Some test related assumptions will be done before the actual test of the hypotheses.

6.1 Preliminary analyses

This section includes the analyses of the constructs behind the independent dummy variables. The constructs are tested for convergent validity and discriminant validity and reliability. As mentioned before, the dummy variables gender stereotype (male and female) and board stereotype is measured with multiple components on a 5-point Likert scale. The board stereotype Likert scale had two extremes 1= strongly disagree and 5= strongly agree. The gender stereotype Likert scale was between a pair of contradicting items, where 1= item, and 5=contradicting item. In this section, we'll test the communalities in the item variance. Although we want the questions to perfectly measure the construct perfectly, there might be an underlying factor that influences the item scores (convergent validity). We also want that all questions measure their own construct and do not fit another construct better (discriminant validity). The factor analysis that is used is the principle component analysis with a Varimax rotation. The reliability analysis that is used is Cronbach's alpha.

6.2.1 Analysis of the board stereotype construct

First the board stereotype construct will be evaluated. The board stereotype is divided into two measures. The agentic board stereotype variable and the communal board stereotype variable.

The agentic board construct has a Cronbach's alpha of 0.770. This seems like a reliable measure. When conducting a principle components analysis, it is shown that indeed the construct relies on one factor.

The KMO and Bartlett's test indicates that 0.775 of the variance is explained by the factor and that the underlying questions are significantly correlated.

The communal board construct has a Cronbach's Alpha of 0.825. This seems highly reliable. When conducting a principle components analysis, the construct consists of two loading factors. The KMO and Bartlett's test indicates that 0.795 of the variance is explained by the underlying items, and that the items are significantly correlated. Because the construct does not rely on one common factor, the construct lacks convergent validity. However, when looking at the rotated component matrix, the honest and sympathy questions are the only two loading on another factor than the other questions. When the question sympathy is removed the communal board stereotype depends on one factor. These remaining questions explain 0.779 of the variance according to the KMO and Bartlett's test and have a Cronbach's alpha of 0.825. When looking at the rotated component matrix of the items of the two constructs both constructs rely on their own factor, which implies discriminant validity.

In conclusion, the board stereotype variable has two underlying constructs which are: communal board and agentic board. These variables are both reliable and both convergent validity and discriminant validity is achieved

6.2.2 Analysis of the gender stereotype constructs

The gender stereotype constructs consist of four components. The agentic-male gender stereotype, the communal-male gender stereotype, the agentic-female gender stereotype and the communal-female gender stereotype. These constructs were measured with 24 items on a 5 point Likert scale. Eight items were related to agentic traits, eight items were related to communal traits and eight items were related to androgynous traits. Because the measure of androgyny was not reliable (Cronbach's Alpha < 0.200), the items of androgyny were left out. The 16 items measuring agentic and communal traits are tested for reliability, convergent validity and discriminant validity. The reliability analyses of the four constructs are displayed in the appendix.

6.2.2.1 Male constructs

First the 16 items related to the agentic male construct and the communal male construct are discussed. The reliability analyses show that the Cronbach's Alpha of the agentic male construct seems very reliable with a value of 0.870. The same goes for the communal male construct, which has a Cronbach's Alpha of 0.828.

The principle component analysis of the agentic male construct indicates that indeed all items load on one factor. The KMO and Bartlett's test indicates that 0.899 of the variance is explained by the 8 items, and that they are significantly correlated. The loading factor explains 53.53 of the variance.

The principle components analysis of the communal male construct indicates that the items are loading on two factors. The KMO and Bartlett's Test indicate that 0.823 of the variance is explained by the eight items and that they are significantly correlated. The first factor explains more than 46% of the variance, the second factor explains 18.8% of the variance. The items that are related to the second factor do not have a specific relation. Therefore, the variable can't be separated into more variables. Because the communal male construct can't be separated in more variables, the convergent validity can't be proven for this construct. However, the most important factor almost captures half of the variation and consist of five of the eight items.

A principle component analysis of the agentic male and the communal male construct together showed that both have their own factors. This is shown in the rotated component matrix. Discriminant validity is therefore proven.

6.2.2.2 Female constructs

First a reliability test for the constructs Agentic female, and Communal female are performed. The construct Agentic female seems reliable with a Cronbach's Alpha of 0.834. The same goes for the Communal female construct that has a Cronbach's Alpha of 0.768.

When performing the principal component analysis for the agentic female construct, it is shown that the 8 items load on two factors. All items, but superior, have one factor in common. When the principal component analysis is conducted again, but this time without the superior item, the items all load on one factor. This item explains 52.79% of the variance of the seven items. The KMO and Bartlett's test shows that .839 of the variance is explained by the seven items. By extracting the superior item, the Cronbach's alpha also improved to 0.843. It is therefore decided to remove the item superior. The convergent validity of the agentic female construct is confirmed.

The principal component analysis for the communal female construct shows that the eight items load on two factors. The KMO and Bartlett test shows that .788 of the variance is explained by the eight items. Just like the communal male construct, the communal female can't be separated into different variables. The variance explained by the first factor is 40.1%. The second factor only explains 12.3% of the variance. Unfortunately, convergent validity can't be proven for the communal female construct.

The rotated matrix of the 8 agentic items and 8 communal items show that the agentic female construct loads on its own factor and, that the agentic female and communal female construct do not share a factor. This proves the discriminant validity of the female constructs.

6.2.2.3 Conclusion

Both the agentic male and agentic female construct are reliable and valid. Although the communal male and communal female construct seem reliable, they are not valid. This could have some implications for interpreting the communal constructs. However, the constructs are used for the dummy variable gender stereotype. Because this dummy takes a value when the agentic construct is higher than the communal value, the factors included in the communal construct are not very important.

6.2 Descriptive statistics and correlations

This section contains the descriptive statistics of the variables used in the logistic regression. Also, the correlation matrix of Pearson with all the used variables is shown.

6.2.1 Descriptive statistics

The sample includes 151 participants with a minimum age of 20 and a maximum age of 27. There were 71 female participants and 80 male participants. The cases men hiring a man, men hiring a woman, women hiring a woman, and women hiring a man are not divided equally. In total, 34 males made a hiring decision concerning a male applicant, 46 males made a hiring decision concerning a female applicant, 40 females made a hiring decision concerning a male applicant, and 31 females made a hiring decision concerning a female applicant. Around 60% of the participants are member of a study or student association. Most the participants stereotyped men to be more agentic and stereotyped women to be more communal (75% agentic man, and 64% communal woman). This indicates a difference in stereotyping a man or a woman. A board is mostly stereotyped as agentic (79%). The lack of fit occurs more with women than with men (54% women, 35% men). A t test for comparing means shows that only the gender stereotype for women differs between the male and female participant. The mean of gender stereotype of men and board stereotype is the same for male and female participants. The LackofFit for men and women has the same mean for both male and female participants. This indicates that only women are stereotyped differently by men compared to women.

6.2.2 Correlations

In the tables 3 and table 4 the bivariate correlations among the variables of interest are given. Table 3 will give the correlations for the first hypotheses and the second table will give the correlations for the second and third hypothesis.

The variables in the relation of the first hypothesis are analyzed in the table below. The independent variable Hiring Decision is significantly positively correlated with the independent variable GenderstereotypeMen ($r(151) = .190, p < 0.019$), and is significantly negatively correlated to the control variable GenderApplicant ($r(151) = -.346, p < .000$). This means that when the gender of the applicant changes, the hiring decision is also likely to change. GenderParticipant and GenderstereotypeWomen are significantly negatively correlated ($r(151) = -.162, p < .047$). This is also explained with the t test for comparing means. The GenderstereotypeWomen, is significantly different for male and female participants.

The variables in the relation of the second and third hypotheses are analyzed in table 4. The independent variable Hiring Decision is significantly positively correlated with the control variable GenderParticipant ($r(151) = .178, p < 0.029$). This indicates a significant change in the hiring decision when the GenderParticipant changes. The independent variable LackoffitWomen is significantly negatively correlated to the dependent variable Hiring Decision ($r(151) = -.167, p < 0.040$). Like the first relation, the control variable GenderApplicant is significantly negatively correlated to the Hiring Decision ($r(151) = -.346, p < 0.000$).

No evidence of multicollinearity has been found. Further analysis of multicollinearity is described in the section below.

Table 3: Correlations of variables in first regression

Correlations variables of first regression							
Variable	Hiring Decision	Boardstereotype	Genderstereotype Men	GenderstereotypeW omen	GenderApplicant	GenderParticipant	AssociationMember
HiringDecision		.190*	.082	-.064	-.346**	.178*	.027
		.019	.315	.433	.000	.029	.746
Boardstereotype	.190		-.037	.008	-.050	.027	.028
	.019		.654	.927	.546	.746	.723
GenderstereotypeMen	.082	-.037		.112	-.111	-.162*	.080
	.315	.654		.170	.173	.047	.327
GenderstereotypeW omen	-.064	.008	.112		.092	-.047	.090
	.433	.927	.170		.261	.568	.273
GenderApplicant	-.346**	-.050	-.111	.092		-.138	.097
	.000	.546	.173	.261		.091	.234
GenderParticipant	.178*	.027	-.162*	-.047	-.138		-.103
	.029	.746	.047	.568	.091		.209
AssociationMember	.027	.028	.080	.090	.097	-.103	
	.746	.723	.327	.273	.234	.209	

P values are displayed under correlation coefficients in grey style
 **. Correlation is significant at the .01 level (1-tailed)
 *. Correlation is significant at the .05 level (1-tailed)
 N=151

Table 4: Correlations of variables of the second and third regression

Correlations variables of second and third regression						
Variable	Hiring Decision	LackofFitMen	LackofFitWomen	GenderApplicant	GenderParticipant	AssociationMember
Hiring Decision		-.138	-.167*	-.346**	.178*	.027
		.092	.040	.000	.029	.746
LackofFitMen	-.138		-.151	-.028	-.053	-.112
	.092		.064	.728	.515	.172
LackofFitWomen	-.167*	-.151		.125	.078	.059
	.040	.064		.127	.344	.469
GenderApplicant	-.346**	-.028	.125		-.138	.097
	.000	.728	.127		.091	.234
GenderParticipant	.178*	-.053	.078	-.138		-.103
	.029	.515	.344	.091		.209
AssociationMember	.027	-.112	.059	.097	-.103	
	.746	.172	.469	.234	.209	
<p><i>P</i> values are displayed under correlation coefficients in grey style</p> <p>** . Correlation is significant at the .01 level (1-tailed)</p> <p>* . Correlation is significant at the .05 level (1-tailed)</p> <p>N=151</p>						

6.3 Assumption tests

Before the hypotheses tests are presented, this section will discuss the assumptions that the statistical test conducted have. Because the depended variable is a binary variable, the main test for testing the hypotheses will be logistic regression. The logistic regression assumptions are linearity of the logit and the absence of multicollinearity and independence of errors. The error terms will be discussed during the hypothesis tests.

6.3.1 Linearity

First, the linear relation of the independent variables will be tested. While logistic regression does not require the dependent and independent variable to be linearly related, logistic regression does require that the independent continuous variables are linearly related to the dependent variable. Because the independent variables are all nominal, the linearity assumption will be tested with the underlying constructs. We will compare the model with dummy variables to the model with continuous variable measures. A likelihood ratio test will indicate if there is absence of linearity caused by the dummy variables.

First the linearity of the continuous variables will be tested. A logistic regression with the continuous constructs B_Agentic, B_Communal, M_Agentic, M_Communal, W_Agentic, and W_Communal. A natural log transformation of the constructs was created. Interaction terms, between the construct and the natural log of the construct, are included in the logistic regression. A significant interaction between a construct and its natural log will indicate whether there is linearity or not. No interaction term of the construct and the natural log is significant. This indicates that the linearity assumption of the logit has been met.

To test whether the dummy model is equal to the continuous variable model a log likelihood ratio test will be performed. This test indicates that the models do not significantly differ from each other. This means that linearity wasn't lost due to the dummy variables.

6.3.2 Multicollinearity

The presence of multicollinearity will be tested. This is not an assumption but the presence of multicollinearity could be a problem when interpreting the results of logistic regression. To test this assumption two linear regression analyses were conducted to assess collinearity diagnostics. The tolerance values of the independent variables are all greater than 0.1, which indicates no collinearity problem. The VIF values should be less than 10, which is the case for all independent variables. In

conclusion, there is no case of multicollinearity between the dependent variables. The results of the multicollinearity analysis can be found in the appendix.

6.3.3 Unique logistic regression problems

Lastly, logistic regression could have some unique problems. These problems are related to the ratio of cases to variables. A case were all the data with the presence of lack of fit, show a positive hiring decision could be a problem to predict the probability. This is called, incomplete information from the predictors. A multiway cross tabulation of all categorical independent variables could check for this. Results of the multiway cross tabulation show that all combinations of independent variables have multiple cases. This can be seen in the appendix. When there is incomplete information, the presence of large standard errors can also detect such problem. When the dependent variable is perfectly predicted by the independent variables, the problem of complete separation could occur. This problem often arises when too many variables are fitted to too few cases. Large standard errors will also detect this problem. The variables will be fit in the model one by one, to detect if too many variables are put in the logistic regression. The fit of the three logistic models are not perfect, as discussed in the hypothesis testing and no large standard errors are detected. Therefore, the problem of complete separation hasn't occurred in the used logistic regression analyses.

To conclude if the logistic regressions were a good fit, the error terms were evaluated. The Cook's distance, leverage, standardized residuals and DFBeta values were therefor examined. All the Cook's influence statistics are under 1. This indicates no influential cases are having an effect on the models. The expected leverage of a model is $(k + 1)/N$. The leverage of this model is there for 0.046, 0.039 and 0.053. The reported leverage values are all around the expected leverage of this model. All standardized residuals lie below 3 and no standardized residual value lies outside ± 2.58 . Finally, all the DFBeta of the constants are less than one. This all indicates that the logistic model is a good model for our hypotheses test.

6.3.4 Conclusion

Because the dependent variable of the study is binominal, the testing method of this study is logistic regression. Logistic regression is based on a few assumptions, and these assumptions were tested. The independent continuous variables were linear. The model of the continuous variable was equal to the nominal variable model. The independent Therefor the linear assumption was met. Next the assumption of multicollinearity was tested and no cases of multicollinearity were found. Logistic regression has

some unique problems. There is no problem of incomplete information, complete separation and the error are independent.

6.4 Hypothesis testing

The hypotheses will be tested with a logistic regression analysis. The variables will be treated as categorical variables. Over-dispersion is a statistical problem that can occur in logistic regression when the observed variance is bigger than expected for logistic regression model. Therefore the regressions will be tested for goodness-of-fit. When a goodness of fit is determined the contribution of the predictors will be evaluated. After the evaluation, a conclusion of the hypothesis will be drawn. This section will end with a conclusion on the acceptance or rejection of the hypotheses.

6.4.1 First hypothesis

The first logistic regression that was performed was the regression of the first hypothesis. This regression includes gender stereotype and board stereotype as predictor variable of the hiring decision. The results of the regression are summarized in table 5. The overall fit of this regression is assessed by using the log likelihood statistic. The model is significantly better at predicting than the model with only a constant included ($\chi^2 = 28.682$, $DF=6$, $p<0.000$). The Cox & Snell R square has a value of 0.173, and the Nagelkerke R square has a value of 0.233. The variance explained by the model is 14.66%. The Hosmer and Lemeshow Test indicates that the model has a good overall fit ($\chi^2=5.541$, $DF=8$, $p<0.699$). When only the constant was included, the model correctly classified 58.3% of the hiring decisions. When the variables were included, the model correctly classified 70.2% of the hiring decisions.

Table 5: Logistic regression first hypothesis

Logistic Regression Analysis Stereotypes				
Model 1				
	B (SE)	95% CI for Odds Ratio		
		Lower	Odds Ratio	Upper
Constant	.67 (.49)			
Boardstereotype	.27 (.47)	.52	1.31	3.28
GenderstereotypeMen	-.93*(.41)	.18	.40	.89
GenderstereotypeWomen	-.40 (.40)	.31	.67	1.46
GenderApplicant	1.42**(.38)	1.98	4.14	8.67
GenderParticipant	-.73* (.38)	.23	.48	1.01
AssociationMember	-.34 (.38)	.34	.71	1.50

Note: R^2 =.69 (Hosmer & Lemeshow), .173(Cox & Snell), .233(Nagelkerke). Model $\chi^2(1)$ =28.68, p <.01, * P <.05. ** p <.01

Only the predictors GenderstereotypeMen GenderParticipant and GenderApplicant have a significant contribution to the model. The variable GenderstereotypeMen had parameter coding 1 if the gender stereotype was communal. The odds ratio of this variable is 0.31. This ratio is interpreted as follows. The probability of a positive hiring decision is significantly 70 percent lower compared to the probability of a positive hiring decision when the gender stereotype is agentic. The odds ratio of the GenderApplicant was 4.14. The parameter coding of a male applicant was 1. For the male applicant, the probability of hiring a male applicant is significantly 4.14 times higher than the probability of hiring a female applicant. The parameter coding of a communal board stereotype was 1. The probability of a positive hiring decision is significantly 1.31 (30 percent) higher when a person has a communal board stereotype compared to an agentic board stereotype. The odds ratio of GenderParticipant is 0.48. The parameter coding for a male participant is 1. The probability of a positive hiring decision is 0.48 times smaller when the participant's gender is male compared to the probability of a positive hiring decision when the participants gender is female. The other variables, GenderstereotypeWomen, Gender do not significantly contribute to the probability of a positive hiring decision.

6.4.2 Second Hypothesis

The second logistic regression that was performed was the regression of the second hypothesis. This regression includes LackofFitMen and LackofFitWomen as predictor variable of the hiring decision. The results of the regression are summarized in table 6. The overall fit of this regression is assessed by using the log likelihood statistic. The model is significantly better at predicting than the model with only a constant included ($\chi^2 = 30.481$, DF=5, $p < 0.000$). The Cox & Snell R square has a value of 0.183, and the Nagelkerke R square has a value of 0.246. The variance explained by the model is 14.13%. The Hosmer and Lemeshow Test indicates that the model has a good overall fit ($\chi^2 = 5.560$, DF=8, $p < 0.696$). When only the constant was included, the model correctly classified 58.3% of the hiring decisions. When the variables were included, the model correctly classified 70.2% of the hiring decisions.

The predictors LackofFitMen, LackofFitWomen, GenderApplicant, and Gender Participant were all a significant contribution in predicting the outcome of the hiring decision. When there was no lack of fit, the parameter was coded 1. The odds ratio of lack of fit for women and men were very similar. The odds ratio of LackofFitMen was 2.24. This implied that the probability of a positive hiring decision is 2.24 times higher when there is no lack of fit for men, compared to the probability of a positive hiring decision when there is a lack of fit for men. The odds ratio of LackofFitWomen was 2.29. The probability of a positive hiring decision is there for 2.29 higher when there is no lack of fit for women compared to the probability of a positive hiring decision when there is a lack of fit for women. The GenderApplicant variable had an odds ratio of 4.347. The parameter code of GenderApplicant was 1 when the applicant was a male. This is very similar to the odds ratio of the first regression analyses. Being a male applicant, increases the probability of hiring 4 times compared to the probability of hiring when the applicant is female. Being a male participant, decreases the probability of a positive hiring decision by .48 compared to the probability of a positive hiring decision of a female participant. The AssociationMember variable is not significant, and has no significant influence in the probability of a positive hiring decision.

6.4.3 Third hypothesis

The third logistic regression that was performed was the same regression as the second, only this time an interaction term was included. The results of the regression are summarized in table 6. The overall fit of this regression is assessed by using the log likelihood statistic. The model is significantly better at predicting than the model with only a constant included ($\chi^2 = 33.251$, DF=7, $p < 0.000$). The Cox & Snell R square has a value of 0.173, and the Nagelkerke R square has a value of 0.233. The variance explained by the model is 14.66%. The Hosmer and Lemeshow Test indicates that the model has a good overall fit

($\chi^2=5.541$, $DF=8$, $p<0.699$). When only the constant was included, the model correctly classified 58.3% of the hiring decisions. When the variables were included, the model correctly classified 70.2% of the hiring decisions.

The only variables that are significant are GenderApplicant and GenderParticipant. The odds ratio of GenderApplicant is 4.90. A male applicant has bigger odds than the female applicant to get a positive hiring decision. Both interaction terms are not significant.

Table 6: Logistic regression analysis second and third hypotheses

Logistic Regression analysis LackofFit								
	Model 2				Model 3			
	B (SE)	95% CI for Odds Ratio			B(SE)	95% CI for Odds Ratio		
		Lower	Odds Ratio	Upper		Lower	Odds Ratio	Upper
Constant	-.68 (.49)				-.32 (.58)			
LackofFitMen	.80*(.39)	1.04	2.24	4.81	.08(.60)	.33	1.09	3.54
LackofFitWomen	.83*(.38)	1.08	2.29	4.84	.91(.60)	.77	2.50	8.09
GenderApplicant	1.47**(.38)	2.07	4.35	9.14	1.59**(.40)	2.25	4.90	10.63
GenderParticipant	-.73*(.38)	.23	.48	1.01	-1.50*(.77)	.22	.05	1.000
AssociationMember	-.35 (.38)	.33	.70	1.50	-.28 (.39)	.35	.76	1.63
LackofFitMen *GenderParticipant					1.303 (.79)	3.68	.72	18.76
LackofFitWomen *GenderParticipant					-.13 (.76)	.19	.88	4.08

Note Model 1: $R^2=$.69(Hosmer & Lemeshow), .183 (Cox & Snell), .246(Nagelkerke). Model $\chi^2(1)$ =30.481, $p<.01$,

Note Model 2: $R^2=$.915 (Hosmer & Lemeshow), .198 (Cox & Snell), .266 (Nagelkerke).

Model $\chi^2(1)$ =33.251, $p<.01$.

* $P<.05$. ** $p<.01$

6.4.4 Conclusion

The logistic regression was performed to test the three hypotheses of this study. The odds ratio with a 95% confidence interval are included in the tables 5 and 6. To generalize the results, these ratios will be interpreted.

The first hypothesis is as follows: H1: The probability of a positive hiring decision of a new board member of a study/student association, will be positively influenced by the presence of an agentic gender stereotype and a presence of an agentic board stereotype. The only significant predictor of a positive hiring decision was the GenderstereotypeMen. This implies that the probability of a positive hiring decision is significantly lower compared to the probability of a positive hiring decision when the gender stereotype is agentic. However, since only the GenderstereotypeMen is significant, not enough evidence is found that gender stereotypes and Boardstereotype can predict the positive hiring decision. Therefore, the first hypothesis is rejected.

The second hypothesis is: H2: The probability of a positive hiring decision of a new board member of a study/student association, will be negatively influenced when the gender stereotype is not equal to the board stereotype (hence a lack of fit). The variable LackofFitWomen and LackofFitMen significantly influences the probability of hiring decision. The odds of the LackofFit variables both imply that the probability of a positive hiring decision is significantly higher when there is no lack of fit compared to the probability of a positive hiring decision when there is a lack of fit. This significant prediction is evidence to accept the second hypothesis.

The third hypotheses is: H3: the probability of a positive hiring decision of a new board member of a study/student association, will be negatively influenced by the interaction effect of the gender of the participant and the lack of fit. The interaction terms in the third regression did not give a significant prediction of a positive hiring decision. Therefore the hypothesis is not accepted.

7. Conclusion

In this final chapter, the results of this study are discussed and the research question will be answered. Several limitations of this study will be explained and suggestions for further research will be given.

7.1 Answer research question

The underrepresentation of women in boards of study and student associations is very similar to the underrepresentation of women in corporate boards. Because of this similarity, it was expected that the female students could face the same problems as female employees. One of the problems female employees face is the presence of stereotypes during the hiring process. This similarity of barriers for female students and female employees led to the question if the evaluator of a new student board member is influenced by stereotypes when making the hiring decision. The study focused on students of the Erasmus University Rotterdam.

Most of the research papers discussed in the literature study indicate a negative influence of both gender- and board stereotypes, and lack of fit on the probability of a positive hiring decision. This influence could have an interacting effect caused by the gender of the participant. By simulating a hypothetical hiring decision via a questionnaire, these relations were tested. Because the hiring decision is a binary variable, a logistic regression analyses was conducted. To test the three hypotheses, three separate logistic regression analyses were created. These logistic regressions estimated the probability that the event “positive hiring decision” occurs. This probability can be influenced by the independent variables.

The results of these regressions suggest that the gender stereotypes and the board stereotypes do not significantly influence the probability of a positive hiring decision. The presence of a lack of fit does significantly influence the probability of a positive hiring decision. However, the influence of a lack of fit interacted with the gender of the evaluator (gender participant), is not significant. In other words, when the evaluator makes the hiring decision without the presence of gender stereotypes and board stereotypes, the probability of being hired will be as high as when the evaluator makes the hiring decision with the presences of gender stereotypes and board stereotypes. When the evaluator experiences a lack of fit, this will significantly decrease the probability of a positive hiring decision. This decrease in probability is not interacted by the gender of the participant.

Some explanations of the non-significant results will be given. First the non-significant results of the relation between gender stereotypes and the hiring decision will be discussed. The variables male and

female gender stereotypes depend on the construct of communal traits and agentic traits. Participants of the study were asked to stereotype women and men by stereotyping a person other than yourself. Recent research of Abele and Bogdan suggests that agency is mostly used to describe yourself and communality to describe others. This is because a person is more likable when they are communal, and an agentic description of yourself is more likable than a communal description (Abele & Bogdan, 2007). Because the participants were asked to describe others, communal traits may have been revealed more. Communal traits could therefore be more present in the constructs of both the female and male gender stereotype variable. The communal stereotype of women is less likely to influence the hiring decision compared to the stereotype of men. The study of Rudman & Phelan (2008) found that agentic women are penalized more in social dimensions. Communal women are less likely to be penalized, and the hiring decision might not be influenced because of that (Rudman & Phelan, 2008). This could be of influence of the significance of the male gender stereotype variable and the non-significance of the female gender stereotype variable.

The insignificance of the interaction of gender of the participant on the lack of fit could be because the direction of the effect is opposite than what was expected. It is expected that the probability of a male evaluator hiring a female applicant is lower than the probability of a female evaluator hiring a female applicant. However, Biernat and Fuegen (2001) suggested a different direction. They found that the probability of a male evaluator hiring a female applicant is higher compared to the female evaluator. Because of different directions of the interaction of gender applicant, the effects could cancel each other out.

In conclusion, the answer to the research question is defined as follows: Yes, the evaluator of a new student board member is influenced by the combination of board and gender stereotypes when making the hiring decision.

7.2 Limitations of the study

The most important limitation of this study is the sample size. Logistic regression is a statistical tool that estimates whether an event will happen. This all depends on the number of cases. A case consists of a combination of possible outcomes the independent variables. The more participants, the more cases. When the sample size of this study is bigger, the significance of the variables could be influenced. This study shows some insignificant variables. This might not be the case with a larger sample.

Logit modelling tells us something about odds, but the effect can still be small. The odds are the probability of an event occurring compared to the probability of an event not occurring. Even if the

probability of both is small, the ratio can still be high. The magnitude of the relation is therefore hard to determine.

Because the hypothetical hiring decision was based on the questionnaire, response bias can occur. Although the variables had high reliability measures, it is still possible that false conclusions can be drawn from the results of this study. Because stereotyping gender is a sensitive subject, the participants could have felt pressure to answer the questions politically correct. Because the survey was handed out during lunch and lectures, the participants could have the idea that their responses weren't anonymous, although their names and personal information wasn't asked.

The standards of hiring an individual could be different in the case presented in the questionnaire compared to a real hiring decision. Because participants were forced to make their decision based on the personality of the applicant, the decision was not based on the work experience or other experiences. Most hiring decisions are not only based on personality. Presumably the standard to hire someone, based only on personality, are lower.

7.3 Suggestions for further research

Potential fields of further research are based on the outcome of this study and its limitations.

The effect of stereotypes could be different for actual hiring decisions. These actual hiring decisions will not only take the personality into account, but also the work experience, and other experiences. The effect size of the stereotypes can then be determined as predictor of a positive hiring decision, taken the work experience and other experience into account. A suggestion for further research could therefore be to analyse the hiring decisions of actual student board members. Because the actual hiring decision of actual board members reflects the situation more precisely than a hypothetical situation. However, response bias could still occur during the measurement of stereotypes. Therefore a more anonymous approach would be preferable. With a large sample size.

Because some of the student board members will eventually work for corporate organizations, their actions in student life might be a good predictor for hiring decisions in the future. To be sure of this an additional study can be done. This study could focus on hiring decisions made by student board members compared to hiring decisions of ex board members, who are working in corporate organizations. This comparative study will give insight in if the hiring decision of student board members is comparable to the hiring decision of ex-student board members that are working in corporate organizations.

Bibliography

- Abcarin, R. (2014, May 15). Is fired NY times editor Jill Abramson the new Lilly Ledbetter? . *The Los Angeles Times*, pp. <http://www.latimes.com/local/abcarian/la-me-ra-new-york-times-fired-jill-abramson-20140515-column.html>.
- Abele, A. (2003). The dynamics of masculine agentic and feminine communal traits: Findings from a prospective study. *Journal of Personality and Social Psychology* 85, 768-776.
- Abele, A., & Bogdan, W. (2007). Agency and Communion from the perspective of self versus others. *Journal of Personality and Social Psychology*, 93 (5), 751-763.
- Bakan, D. (1966). *The duality of human existence*. Chicago: Rand McNally.
- Bem, S. (1981). Gender Schema Theory: A Cognitive Account of Sex Typing. *Psychological Review*, Vol. 88, No. 4, 354-364.
- Bennet, S. (1982). Student perceptions of and expectations for male and female instructors: Evidence relating to the question of gender bias in teaching evaluation. *Journal of Educational Psychology*, 170-197.
- Brenner, O., Tomkiewicz, J., & Schein, V. (1989). The relationship between sex role stereotypes and requisite management characteristics revisited. *Academy of Management Journal*, 662-669.
- Broverman, K., Vogel, S., Broverman, D., Clarkson, F., & Rosenkrantz, P. (1972). Sex-Role stereotypes: A current appraisal 28 (2). *Journal of social issues*, 59-78.
- Centraal Bureau voor de Statistiek. (2014, April 17). *female labour participation stabilising following years of increase*. Retrieved from CBS: <https://www.cbs.nl/en-gb/news/2014/51/female-labour-participation-stabilising-following-years-of-increase>
- Dasgupta, N., & Asgari, S. (2004). Seeing is believing: Exposure to counterstereotypic women leaders and its effect on the malleability of automatic gender stereotyping. *Journal of Experimental Social Psychology*, 642-658.
- Davidson, H., & Burke, M. (2000). Sex discrimination in simulated employment contexts: a meta analytic investigation. *Journal of Vocational Behavior*, 56, 225-248.
- Deaux, K., & LaFrance, M. (1998). Gender. In D. Gilbert, S. Fiske, & G. Lindzey, *The handbook of social psychology* (pp. 788-827). New York: McGraw-Hill.
- DiDonato, L., & Strouph, J. (2013). Do college students' gender-typed attitudes about occupations predict their real-world decisions. *Sex Roles*, 536-549.
- Eagly, A., & Karau, S. (2002). Role congruity theory of prejudice toward female leaders. *Psychology Review*, 573-598.
- Eagly, A., & Steffen, V. (1984). Gender stereotypes stem from the distribution of women and men into social roles. *Journal of personality and Social Psychology*, 46, 735-754.
- Eagly, A., Makijani, M., & Klonsky, B. (1992). Gender and the evaluation of leaders - A meta analyses. *Psychological Bulletin*, 125-145.

- European Commission. (2012). *Proposal for a Directive of the European parliament and of the council on improving the gender balance among non-executive directors of companies listed on stock exchanges and related measures*. Retrieved from Europa: <http://eur-lex.europa.eu/LexUriServ/LexUriServ.do?uri=COM:2012:0614:FIIN:en:PDF>
- Gherardi, S., & Murgia, A. (2014). What makes a good manager? positioning gender and management in students narratives. *Equality, Diversity and Inclusion: An International Journal*, 690-707.
- Gutek, B., & Morasch, B. (1982). Sex ratios, Sex role spillover, and sexual harassment of women at work. *Journal of Social Issues*, 38 (4), 55-74.
- Haig, D. (2004). The Inexorable Rise of Gender and the Decline of Sex: Social Change in Academic Titles, 1945-2001. *Archives of Sexual Behavior*, Vol. 33,, 87-96.
- Hais, S., Hogg, M., & Duck, J. (1997). Self-categorization and leadership: Effects of group prototypicality and leader stereotypicality. *Personality and Social Psychology Bulletin*, 1087-1099.
- Heilman, M. (1983). Sex Bias in Work Settings: The Lack of Fit Model. *Research in Organizational Behavior* (Vol.5).
- Heilman, M. (1997). Sex discrimination and the affirmative action remedy: The role of sex stereotypes. *Journal of Business Ethics* 16 (9), 877-889.
- Heilman, M. (2001). Description and prescription: How gender stereotypes prevent women's ascent up the organizational ladder. *Journal of social issues* 57 (4), 657-674.
- Heilman, M. (2012). Gender Stereotypes and Workplace Bias. *Research in Organizational Behavior* 32, 113-135.
- Hymowitz, C., & Schellhardt, T. (1986, March 24). The glass ceiling. *The Wall Street Journal*, pp. 4-5.
- Koch, A., D'Mello, S., & Sackett, P. (2015). A Meta Analysis of gender stereotypes and bias in experimental simulations of employment decision making . *Journal of Applied Psychology* , 128-161.
- Koenig, A., Eagly, A., Mitchell, A., & Ristikari, T. (2011). Are leader stereotypes masculine? A meta-analysis of three research paradigms. *Psychological Bulletin*, 616-642.
- Kroes, N. (2009, July 16). *European Commission Press Release Database*. Retrieved from Europa: http://europa.eu/rapid/press-release_SPEECH-09-344_en.htm?locale=en
- Kusterer, H., Lindholm, T., & Montgomery, H. (2013). Gender typing in stereotypes and evaluations of actual managers. *Journal of Managerial Psychology*, 28 (5), 561-579.
- Langford, T., & MacKinnon, N. (2000). The affective bases for the gendering of traits Comparing the United States and Canada. *Social Psychology Quarterly*, 34-48.
- Larwood, L. S., & Rose, S. (1988). When discrimination makes 'sense': The rational bias theory. In B. Gutek, A. Stromber, & L. Larwood, *Women and Work: An Annual Review*, 3 (pp. 265-288). California: Sage.

- Lückerath-Rovers, M. (2015). *The Dutch Female Board Index 2015*. Tilburg: TIAS.
- MacNell, L., Discoll, A., & Hunt, A. (2015). What's in a Name: Exposing Gender Bias in Student Ratings of Teaching. *Innovative Higher Education*, 291-303.
- Marshall, J. (1984). *Women Managers: Travellers in a Male World*. Wiley: Chichester.
- Massengill, D., & DiMarco, N. (1979). Sex-role stereotype and requisite management characteristics: A current replication. *Sex roles*, 561-570.
- Oakley, J. G. (2000). Gender-based Barriers to Senior Management Positions: Understanding the scarcity of female CEO's . *Journal of Business Ethics* , 321-334.
- Powell, G., & Butterfield, A. (2015). The Glass Ceiling: what have we learned 20 years on? *Journal of Organizational Effectiveness: People and Performance*, 2 (4), 306-326.
- Powell, G., & Butterfield, D. (1994). Investigating the ' glass ceiling' phenomenon: an empirical study of actual promotions to top management. *Academy of Management Journal*, 37, 68-86.
- Powell, G., & Butterfield, D. (2002). Exploring the influence of decision makers' race and gender on actual promotions to top management. *Personnel Psychology*, 55 , 397-428.
- Remie, M. (2016, September 30). *Bangalijs? Die snotneuzen willen gewoon stoer doen*. Retrieved from NRC: <https://www.nrc.nl/nieuws/2016/09/30/bangalijs-die-snotneuzen-willen-gewoon-stoer-doen-4539612-a1524224>
- Rice, L., & Barth, J. (2016). Hiring Decisions: The Effect of evaluator gender and gender stereotype characteristics on evaluation of job applicants. *Gender Issues*, 1-21.
- Robinson, J., Shaver, P., & Wrightsman, L. (1991). *Measures of Personality and Social Psychological Attitudes: Measures of personality and social psychological attitudes* . San Diego: Academic Press. Inc.
- Rosette, A., & Tost, L. (2010). Agentic Women and Communal Leadership: How Role prescriptions confer advantage tot top women leaders. *Journal of Applied Psychology* 95(2), 221-235.
- Rudman, L. (1998). Self-promotion as a risk factor for women: the costand benefits of counterstereotypical impression management. *Journal of personality and social psychology*, 74, 629-645.
- Rudman, L., & Phelan, J. (2008). Backlash effect for diconfirming gender stereotypes in organizations. *Research in Organizational Behavior*, 28 , 61-79.
- Spence, J., & Helmreic, R. (1978). *Masculinity and femininity: Their psychological dimensions, correlates, and atecedents*. Austin, TX: University of Texas Press.
- Steinpreis, R., Anders, K., & Ritzke, D. (1999). The impact of gender on the review of the curricula vitae of job applicants and tenure candidates: a national study . *Sex Roles*, 509-528.
- Van Dale. (2010). *Woordenboek*. Utrecht: Van Dale Uitgevers.
- Zimmer, B. (2015, April 4-5). Glass ceiling, invisible but in the news. *Wall Street Journal*, p. C4.

Appendix

Table A1 Overall Kaiser Meyer Olkin Measure and Bartlett's Test of Sphericity of the Board Stereotype constructs

KMO and Bartlett's Test		
Kaiser-Meyer-Olkin Measure of Sampling Adequacy		.767
Bartlett's Test of Sphericity	Approx. Chi-Square	449.966
	Df	45
	Sig.	.000

Table A2 Reliability Analyses for the Board Stereotype constructs

Construct	Cronbach's α	Personality Trait	Cronbach's α if item deleted
Agentic Board Stereotype	.770	Assertive	.748
		Competitive	.745
		Dedication	.718
		Determined	.702
		Intelligent	.728
Communal Board Stereotype	.825	Caring	.790
		Compassionate	.763
		Honest	.817
		Sensitive	.785
		Understanding	.790

Table A3 Rotated Component Matrix for the 10-item scale used to measure the Board Stereotype constructs

	Board Stereotype	Personality traits	Factor 1	Components 2
1	Agentic Board Stereotype	Determined	.785	
2	Agentic Board Stereotype	Dedication	.750	
3	Agentic Board Stereotype	Intelligent	.700	
4	Agentic Board Stereotype	Competitive	.657	
5	Agentic Board Stereotype	Assertive	.645	
6	Communal Board Stereotype	Compassionate		.830
7	Communal Board Stereotype	Sensitive		.780
8	Communal Board Stereotype	Caring		.768
9	Communal Board Stereotype	Understanding		.766
10	Communal Board Stereotype	Honest		.682

All coefficients below 0.4 are suppressed in the table

Table A4 Overall Kaiser Meyer Olkin Measure and Bartlett's Test of Sphericity of the Male gender stereotype constructs

KMO and Bartlett's Test		
Kaiser-Meyer-Olkin Measure of Sampling Adequacy		.823
Bartlett's Test of Sphericity	Approx. Chi-Square	468.916
	Df	28
	Sig.	.000

Table A5 Overall Kaiser Meyer Olkin Measure and Bartlett's Test of Sphericity of the Female gender stereotype constructs

KMO and Bartlett's Test		
Kaiser-Meyer-Olkin Measure of Sampling Adequacy		.841
Bartlett's Test of Sphericity	Approx. Chi-Square	420.089
	Df	28
	Sig.	.000

Table A6 Reliability Analyses for the Gender Stereotype constructs

Construct	Cronbach's α	Personality Trait	Cronbach's α if item deleted
Agentic Male	.870	Active	.848
		Competitive	.848
		Confidence	.865
		Decision-making	.863
		Giving Up	.847
		Independent	.843
		Pressure	.852
		Superior	.867
Communal Male	.828	Devotion	.799
		Emotional	.792
		Awareness of feelings	.805
		Gentle	.803
		Helpful to others	.810
		Kind	.802
		Relations	.839
		Understanding of others	.812
Agentic Female	.834	Active	.803
		Competitive	.828
		Confidence	.804
		Decision-making	.796
		Giving Up	.816
		Independent	.819
		Pressure	.807
		Superior	.848
Communal Female	.768	Devotion	.730
		Emotional	.781
		Awareness of feelings	.754
		Gentle	.738
		Helpful to others	.703
		Kind	.726
		Relations	.752
		Understanding of others	.750

Table A7 Rotated Component Matrix for the 16-item scale used to measure the Male Gender Stereotype constructs

	Male constructs	Personality traits	Factor Components		
			1	2	3
1	Agentic Male	Independent	.812		
2	Agentic Male	Giving Up	.797		
3	Agentic Male	Active	.791		
4	Agentic Male	Competitive	.768		
5	Agentic Male	Pressure	.739		
6	Agentic Male	Decision making	.634		
7	Agentic Male	Confidence	.629		
8	Agentic Male	Superior	.624		
9	Communal Male	Emotional		.865	
10	Communal Male	Gentle		.863	
11	Communal Male	Understanding of Others		.788	
12	Communal Male	Devotion		.600	.441
13	Communal Male	Awareness of feelings			.812
14	Communal Male	Helpful to others			.785
15	Communal Male	Relations			.735
16	Communal Male	Kind		.464	.562

All coefficients below 0.4 are suppressed in the table

Table A8 Rotated Component Matrix for the 16-item scale used to measure the Male Gender Stereotype constructs

	Female constructs	Personality traits	Factor Components		
			1	2	3
1	Agentic Female	Independent	.691		
2	Agentic Female	Giving Up	.662		
3	Agentic Female	Active	.744		
4	Agentic Female	Competitive	.593		
5	Agentic Female	Pressure	.769		
6	Agentic Female	Decision making	.799		
7	Agentic Female	Confidence	.799		
9	Communal Female	Emotional			.845
10	Communal Female	Gentle		.473	.643
11	Communal Female	Understanding of Others		.589	
12	Communal Female	Devotion		.485	.400
13	Communal Female	Awareness of feelings		.817	
14	Communal Female	Helpful to others		.772	
15	Communal Female	Relations		.715	
16	Communal Female	Kind		.741	

All coefficients below 0.4 are suppressed in the table

Table A9 Model Summary Continuous Variables with interaction for linearity

Model Summary Continuous Variables with interaction for linearity		
-2 Log likelihood	Cox & Snell R Square	Nagelkerke R Square
181.568	.145	.195

Table A10 Model Summary Logistic regression analysis with Continuous Variables

Model Summary Continuous Variables		
-2 Log likelihood	Cox & Snell R Square	Nagelkerke R Square
172.011	.197	.265

Table A11 Multicollinearity analysis of the first regression

Variable	Collinearity statistics	
	Tolerance	VIF
Boardstereotype	.994	1.006
GenderstereotypeMen	.936	1.069
GenderstereotypeWomen	.971	1.030
Member of a study association	.970	1.031
Gender applicant	.942	1.061
Gender participant	.944	1.060

Table A12 Multicollinearity analysis of the second regression

Variable	Collinearity statistics	
	Tolerance	VIF
LackofFitMen	.964	1.038
LackofFitWomen	.953	1.049
Member of a study association	.963	1.049
Gender applicant	.957	1.045
Gender participant	.960	1.042

Table A13 Cross tabulation of Gender Applicant, Hiring Decision and the Independent Variables.

Gender Applicant			GenderstereotypeMen		Total
			No	Yes	
Male	Hiring Decision	No	7	11	18
		Yes	10	46	56
Female	Hiring Decision	No	15	30	45
		Yes	6	26	32
			GenderstereotypeWomen		Total
	Hiring Decision	No	11	7	18
		Yes	32	24	56
	Hiring Decision	No	32	13	45
		Yes	21	11	32
			Boardstereotype		Total
Male	Hiring Decision	No	4	14	18
		Yes	14	42	56
Female	Hiring Decision	No	7	38	45
		Yes	6	26	32
			LackofFitMen		Total
Male	Hiring Decision	No	9	9	18
		Yes	38	18	56
Female	Hiring Decision	No	27	18	45
		Yes	24	8	32
			LackofFitWomen		Total
Male	Hiring Decision	No	5	13	18
		Yes	34	22	56
Female	Hiring Decision	No	18	27	45
		Yes	13	19	32

Table A14: Female Male Ratio of student/study associations of the Erasmus University Rotterdam

Association	Members	Female/Male Ratio Members	Female/Male Ratio Board of Association	Representative Board
RSV Laurentius	1000	50%	38%	No
RSG	450	42%	29%	No
NSR	297	50%	50%	Yes
EFR	5552	30%	25%	No
JFR	3500	55%	29%	No
InDuplo	606	33%	50%	Yes
FAECTOR	1500	42%	29%	No
FSR	2091	24%	33%	Yes
Cedo Nulli	1685	68%	67%	Yes

Associations that were not able to give information about the female male ratio were excluded from the table