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Table of Contents

Table of Figures 4

Introduction 5

1 Risk aversion 7

1.1 Key findings on risk aversion of women 7

1.2 Influence factors on the degree of risk aversion 11

1.2.1 Education 11

1.2.2 Contextual frame 12

1.2.3 Determinants of individual risk aversion 13

1.3 Implications of risk aversion on behavior 14

1.4 Implications of risk aversion on chances of promotion 16

2 Competition aversion 19

2.1 Key findings on competition aversion of women 19

2.2 Influence factors on the degree of competition aversion 24

2.2.1 Culture 24

2.2.2 Genes 25

2.2.3 Contextual frame 26

2.3 Implications of competition aversion on behavior 26

2.3.1 Selection into competitive environments 26

2.3.2 Job stress 27

2.3.3 Bargaining behavior 28

2.3.4 Sports 29

2.4 Implications of competition aversion on chances of promotion 31

3 Contextual factors 32

3.1 Key findings on contextual factors influencing women advancement 32

3.1.1 Stereotypes 32

3.1.2 Role Incongruity – Role Expectations 36
3.1.3 Developmental Job Opportunities 37
3.1.4 Family Planning 39
3.2 Implications of contextual factors on behavior 44
3.3 Implications of contextual factors on chances of promotion 45
4 Causal relationships and possible solutions 46
4.1 First Reflection 46
4.2 Second Reflection 47
4.3 Third Reflection 48
4.4 Identified Relationships 50
5 Own Experiment 59
5.1 Concept 59
5.2 Theoretical Framework 62
5.3 Design of the experiment 63
5.4 Treatment of the Experimental Data 67
5.5 Experiment Instructions 69
5.6 Sunders´ Seven Questions 76
6 Conclusion and Future Prospects 78
7 References 81
8 Annex 86
8.1 Abstract – English Version 86
8.2 Abstract – German Version 87

Table of Figures

Figure 1: Influence of risk aversion on chances of promotion 51

Figure 2: Influence of competition aversion on chances of promotion 52

Figure 3: Influence of babies on chances of promotion 54

Figure 4: Influence of stereotypes on chances of promotion 56

Figure 5: Influence of role expectations on chances of promotion 56

Introduction

When reading the newspaper, topics such as “women underrepresentation in top management” and the partly connected “gender wage gap” are of high relevance, both theoretically as well as practically.

In 2001, Bertrand and Hallock have revealed that in a large dataset of U.S. firms women only amounted to 2.5 % of the five top paid executives[1] at that time which was an extremely low rate. A study by the EPWN European Board Women Monitor in 2004 analyzed women in executive positions of 200 European top firms in 13 countries and showed that women held no more than 8% of these positions.[2]

When comparing these figures to the current situation, things haven´t changed a lot. A statistical overview of women in the workplace in the U.S. has shown that women´s share of Fortune 500 executive officer positions only made up around 14.1% in 2011 compared to 13.5% in 2009. The situation for board seats was quite similar, with 16.1% in 2011 compared to 15.2% in 2009 and 14.6% in 2006.[3] In Austrian firms, ranging from medium- to large-size enterprises, an average of 29% of employed women are holding leadership positions. Contrasting to women´s participation in management positions where Austria ranks in the middle group,[4] Austria is struggling with the biggest wage gap of the European Countries, at least according to recent newspaper articles. In European Countries, women´s wages on average amount to 81.5% of men´s wages according to Eurostat 2007, while only amounting to 74.5% of men´s wages in Austria.[5]

Even in times of women´s emancipation it seems that women somehow barely manage to achieve equality and to get to the top.

The simple and interesting question that remains is: WHY? How is it possible that women, although having the same level of education as men, are not able to climb the ladder to success?

Research suggests that there are many different reasons which explain the current state of play, at least to a certain degree. On the one hand, some behavioral traits of women seem to have a

[1] Bertrand/Hallock, 2001, in: Niederle/Vesterlund, 2007, p.2
[2] Fuchshuber, 2006, p.29f
[3] http://www.catalyst.org/file/541/qt_statistical_overview_of_women_in_the_workplace.pdf, accessed 7th April 2012
[4] Fuchshuber, 2006, p.29
[5] http://money.oe24.at/Gehaltsschere-in-Oesterreich/17096663, accessed 20th April, 2012

significant impact on individual careers and on the other hand, actual job choice is shaped by the environment, consisting of the own family in this context, and partly also social norms.

Apart from trying to find reasons for the fact that women are underrepresented in executive positions, I asked myself whether women really want to be in top management and achieve gender equality in all aspects of life. Intensive literature research in this field led me to the conclusion that many women don´t want to be in top management anyway, but I´ll go into this in more detail later.

The following chapters deal with identified reasons for underrepresentation of women in management as well as with actual implications of these factors and consolidate causal relationships in a further step. The first behavioral trait that will be discussed is risk aversion.

1 Risk aversion

1.1 Key findings on risk aversion of women

Most studies find that women are in general more risk averse than men, but there´s also some counter-evidence from studies with different environments which give less consistent results. Risk attitudes tend to fluctuate over contextual frames. The question whether women and men differ in their responses to risk is economically important as their attitude may influence many aspects of their decision making.[6]

Results from abstract gamble experiments and general field studies show that women are more risk-averse than men.[7] In an experimental study in 2008, Eckel and Grossman used a simple gamble-choice task to measure risk attitudes as well as differences in risk attitudes between male and female students. In this experiment, gambling choices and guesses about the other participants´ choices were combined with three different frames. Once, the gamble decision included a loss probability, once there were no losses and once the context was changed to an investment situation. Interestingly, women were found to be more risk-averse in all three settings which were also confirmed by the guesses of both men and women. What´s also important to note is that participants of the study got money for correct guesses[8] which served as an incentive to really think about potential behaviors of others. The result suggests that both men and women use stereotyping in assessing attributes of others.[9]

Byrnes, Miller and Schafer conducted a meta-analysis of 150 studies concerning risk attitudes of men and women and found that for 14 out of 16 types of risk taking, men were identified as being more likely to take risks than women. The extent of gender differences however varied according to topic and context.[10]

Jianakoplos and Bernasek used a U.S. sample data from the 1989 Survey of Consumer Finances to examine gender differences in investment behavior based on household holdings of risky assets. The dependent variable used in the study is the ratio of risky assets held to wealth.[11] After controlling for different variables such as age, high school degree, kids, race, homeowner and many more, they

[6] Eckel/Grossman, 2008, p.1061f
[7] Eckel/Grossman, 2008, p.1061f
[8] Eckel/Grossman, 2008, p.1
[9] Eckel/Grossman, 2008, p.14
[10] Byrnes/Miller/Schafer, 1999, p.367
[11] Jianakoplos/Bernasek, 1998, p.620

found that single women show a relatively higher degree of risk aversion in financial decisions than men.[12]

When investigating risk aversion in pension investment choices, Bajtelsmit and VanDerhei found evidence for a substantial gender effect on allocation decisions. In the rich sample of employee pension and demographic characteristics used for investigation, women are significantly more likely to invest their money in fixed-income securities than in employer stock[13] which is associated with higher risk.

Also Sundén and Surette arrived at this conclusion when studying the allocation of assets in retirement savings plans. They however used a rich set of demographic and also household variables which should have an influence on investment behavior.[14] Besides the gender variable, Sundén and Surette found that also the marital status significantly affects asset allocation. They however suggest interpreting the results with caution as they think that also other variables, so far not included in their models, may influence investment choices.[15]

While abstract gamble experiments provide evidence for higher risk aversion of women, laboratory experiments as well as contextual environment studies show less consistent results.[16] Schubert et al. for example found that under controlled economic conditions, females do not necessarily make less chancy financial choices than their male counterparts. The findings are based on an experiment where participants make abstract gambling decisions but also deal with risky financial choices embedded in an investment or insurance context.[17] Risk tendency of both sexes in investment choices strongly depends on the decision frame. In abstract gamble-experiments gender differences arise, with male having a higher risk propensity toward gains and women toward losses. However, when the same decisions are presented in different contexts of investment or insurance, no differences are detected. Schubert et al. therefore suggest that gender disparities in risk behavior may root in different opportunity sets.[18]

[12] Jianakoplos/Bernasek, 1998, p.626
[13] Bajtelsmit/VanDerhei, 1997, p.62
[14] Sundén/Surette, 1998, p.207
[15] Sundén/Surette, 1998, p.210f
[16] Eckel/Grossmann, 2008, p.1111
[17] Schubert et al, 1999, p.381
[18] Schubert et al, 1999, p.384f

Laboratory studies as well as field studies usually fail to control for knowledge, wealth, marital status, kids and other demographic factors which influence risky decisions. This is the reason why the results should be interpreted with caution.[19]

Besides looking at risk attitudes of men and women in experiments which are usually conducted to find differences or also no differences in risk behavior, considering individual risk attitudes may also be of particular relevance in this context. If other factors than gender determine a person´s individual risk attitude, it may not be sufficient to only look at gender differences. It may rather be necessary to also control for other variables and see behavior differences as the result of an interplay of many factors.

Dohmen et al studied risk attitudes by means of an extensive representative survey. Moreover, they conducted a complementary field experiment based on a representative subject pool, necessary for testing the validity of survey results as they may not have corresponded to reality due to the fact that they were not incentive compatible.[20] The objective of their study was to find whether greater willingness to carry risks in general also leads to a greater willingness to carry risks in the lottery game.[21]

When people were asked about their willingness to generally take risks, variables such as gender, age, height as well as the parental background were identified as having an economically significant impact on one´s risk propensity. The field experiment confirmed these findings using paid lottery choices.[22] The results therefore indicate that there exists a correlation between one´s willingness to take risks in general and in the lottery game. This is also shown by Booth and Nolen who investigated the effect of different education surroundings on risk behavior of girls and found that the general reported risk attitude was positively correlated to the probability of opting for the lottery game. Determinants of a person´s general risk attitude however deviate from those of actual risk behavior which needs to be taken into account for future research.[23]

Women were found to be significantly more risk averse than men in all different contexts examined, be it sports and leisure, car driving, financial matters, health matters or career. In the analysis of risk attitudes in different contexts, gender differences were found to be strongest for car driving and

[19] Eckel/Grossmann, 2008, p.1071
[20] Dohmen et al, 2011, p.522
[21] Dohmen et al, 2011, p.534
[22] Dohmen et al, 2011, p.522
[23] Booth/Nolen, 2012, p.70

financial matters and less pronounced for career matters.[24] The general risk question ultimately remains the best all-around predictor for risk attitudes in diverse contexts, which are despite some fluctuations shown to be relatively stable.[25]

In a laboratory experiment, Dohmen and Falk studied the influence of different pay schemes on worker self-selection and revealed the importance of multi-dimensional sorting. In their experiment, the likelihood that subjects preferred a variable payment was higher the less risk averse they were. This behavior reflects the fact that earnings in the variable pay scheme are unsure and thus risky. They also found that women were less likely to choose variable pay schemes than men.[26] The study therefore provides further evidence that women are more risk averse than men. When relating personality to sorting decisions, Dohmen and Falk found that women with certain behavior traits were attracted to certain incentive schemes. As for all tasks, participants could choose between revenue-sharing, tournament and piece rate contracts. Women who indicated to be "self-confident", "reckless", and to be able to "rather easily deal with defeat", were more likely to sort into tournaments, while women who were "rather shy", "mentally stable" and "unwilling to experiment" more often opted for revenue-sharing.[27]

As shown above, most studies concerning risk aversion try to measure short-term decisions while the career decision is usually a long-term one which also needs to be taken into account in this context.

[24] Dohmen et al, 2011, p.535
[25] Dohmen et al, 2011, p.542
[26] Dohmen/Falk, 2007, p.1f
[27] Dohmen/Falk, 2007, p.25f

1.2 Influence factors on the degree of risk aversion

Understanding whether risk aversion is an inherent trait or shaped by the environment, is crucial for taking appropriate measures to counteract undesirable consequences of behavior in uncertain circumstances. If risk attitudes are for example innate, under-representation of women in management may be solved by changing the compensation system. If risk attitudes are however influenced by the environment, a change in the educational or training context may have beneficial effects on women´s careers.[28]

1.2.1 Education

Booth and Nolen suggest that observed gender differences in behavior under uncertainty may reflect social learning rather than innate gender characteristics. They conducted an experiment to figure out whether individuals´ risk preferences are influenced by the gender composition of the group to which they are assigned at random and by the gender mix of their school.[29]

260 students with an average age of under 15 from eight different schools in the UK participated in the experiment, four of those schools being single-sex ones. The students were randomly assigned to 65 groups of four people, being either single-sex or mixed-sex groups. During the experiment, five rounds were played; one of those involved a real-stake gamble. After the five rounds, students were asked to fill out a questionnaire containing questions on their risk attitude, investment decisions[30] and other information which was used for investigating differences between stated and actual risk aversion.[31]

Findings of the conducted experiment give strong evidence that nurture actually affects the risk attitudes of girls and that the magnitude of this influence is large.[32] Gender differences in risk aversion were interestingly found to be sensitive to the composition of their school classes. Girls from single-sex schools were as likely as boys from either single-sex or co-educational schools to opt for the real-stake gamble. Moreover, risk preferences were found to depend on the group

[28] Booth/Nolen, 2012, p.56
[29] Booth/Nolen, 2012, p.56
[30] Booth/Nolen, 2012, p.61ff
[31] Booth/Nolen, 2012, p.58
[32] Booth/Nolen, 2012, p.70

composition of the experiment. Girls were in fact more likely to opt for risky choices when they were part of an all-girls group.[33]

According to these results, forming only single-sex classes at school may be beneficial for women´s careers later on as they may have a higher risk propensity which seems to be necessary for career advancement.

Lavy and Schlosser investigated impacts of gender peer effects at school.[34] The results provide evidence for higher academic achievement of both sexes in the case of a higher proportion of girls in class. The effect is however not linear and found to be strongest for a proportion of girls of 55 and more percent in class. Moreover, the study shows that gender composition in class is connected to levels of violence, the quality of student-teacher relationships and student satisfaction. Girls are found to have a positive effect on the learning environment and classroom atmosphere. The effects are linked to the change in classroom composition rather than to a change in individual behavior.[35]

When considering these results, only forming single-sex classes apparently has considerable positive effects on girls which are however offset by the negative effects such a composition has on boys.[36] Therefore, a development towards single-sex schools or classes may not be beneficial for the society as a whole despite its positive impact on risk attitudes of girls. Changing the educational context in this way is therefore a possible, but only suboptimal solution to the posed problem, at least when considering the effects on the whole society.

1.2.2 Contextual frame

As already mentioned above, contextual frames such as the educational surrounding influence the degree of risk aversion. Risk aversion is therefore not stable. The question that arises is why, due to which reasons, contexts influence a person´s risk aversion as well as how they affect it.

Besides the educational context, also the context of investment decisions plays an important role. According to my mind, people may be more willing to engage in financial investments which are associated with higher risk but still considered as ethical, than to engage in gambling which is considered as being kind of morally reprehensible.

[33] Booth/Nolen, 2012, p.73
[34] Lavy/Schlosser, 2011, p.1
[35] Lavy/Schlosser, 2011, p.4ff
[36] Lavy/Schlosser, 2011, p.31

Trevino and Youngblood developed a causal model of ethical decision-making and suggest that decision behavior is influenced by the decision maker´s ethical principles.[37] Ghosh and Crain examined the impact of a person´s risk attitude and its ethical standards on intentional noncompliance of tax payments and revealed that there exists a strong correlation between the two factors which is a very interesting finding[38] that can be used in politics as well as economics.

Schubert et al found that when comparing abstract decision frames such as hypothetical lottery choices with decision choices embedded in investment or insurance contexts, gender differences in risk attitudes vanish.[39] A richer context therefore reduces or completely eliminates differences.

In a study focusing on financial risk taking, Dohmen et al however found that women showed a higher risk aversion in many different contexts examined.[40]

In the following section, I will describe the main determinants of individual risk aversion as well as its implications.

1.2.3 Determinants of individual risk aversion

In section 1.1, I have already given an introduction on individual risk aversion and will now discuss identified relationships in more detail. A person´s risk aversion is a function of different factors, including one´s gender, age, height as well as the family background.[41] Having already discussed the gender variable to a high extent, I will now focus on the other three variables which are found to have a statistically significant impact on risk aversion.

Willingness to take risks is negatively related to the age variable as risk propensity decreases significantly with age while being positively correlated to the family background. Having highly educated parents increases risk propensity to a high extent. As for the height variable, taller people interestingly show a higher willingness to take risks than smaller ones. Besides the gender variable, this relation may particularly influence women´s risk attitudes as they are on average smaller than men. Income and wealth, although constituting important economic variables, are not included in

[37] Trevino/Youngblood, 1990; in: Gosh/Crain, 1995, p.353
[38] Ghosh/Crain, 1995, p.353
[39] Schubert et al, 1999, p.385
[40] Dohmen et al, 2011, p.535
[41] Dohmen et al, 2011, p.522

the baseline regression of Dohmen et al due to the fact that they may be endogenous and rather an effect than a cause of risk behavior and could therefore distort results.[42]

In a second step, Dohmen et al also included many more variables such as the marital status, number of kids, health status, religion, employment status as well as education in the regression which revealed remarkable relationships. Being widowed or married, having a bad subjective health status or non-participating in the labor force at all have a negative influence on an individual´s willingness to take risks while life satisfaction has a positive influence on a person´s risk propensity. Moreover, the number of children is also negatively correlated to deliberate risk taking and decreases per kid.[43]

The question now is whether it is possible to change factors which negatively influence risk attitudes. As already discussed in chapter 1.2.1, a change in the educational context for example has desirable effects concerning risk attitudes for girls but isn´t optimal for society as a whole.

After having discussed influence factors on risk attitudes, I will now focus on its implications on job behavior as well as on general behavior in a next step.

1.3 Implications of risk aversion on behavior

Risk aversion as well as risk propensity influence many aspects and decisions in life. As I focus on risk aversion, I will mainly deal with consequences of this attitude. The general risk attitude has been found to have implications on risky behaviors such as holding stocks, smoking, self-employment and participation in active sports.[44]

Also occupational choices are related to risk attitudes as the level of risk varies from job position to job position, often depending on the job field. HR-managers usually have a lower level of variable income than for example sales managers. This may among others explain why the HR business unit is generally rather female-dominated.

The decision whether to become self-employed or not is also connected to the general occupational choice. Willingness to take risks in one´s career is the overall best-predictor of self-employment.[45] This may explain why fewer women than men consider self-employment as an option. But even

[42] Dohmen et al, 2011, p.529f
[43] Dohmen et al, 2011, p.530f
[44] Dohmen et al, 2011, p.525
[45] Dohmen et al, 2011, p.541

when deciding to start one´s own business, risk aversion guides main decisions connected to the start-up.

Women are found to establish smaller firms than men and are less focused on fast growth. Moreover, they usually set up their own company for more pragmatic reasons than men and just ask for little, manageable sources of money at the beginning. The positive effect of this behavior is that firms created by women show a higher probability of survival. The last point I want to mention in this regard is self-confidence. Women are found to show less-confidence in negotiations concerning credits.[46] This also happens in job interviews where men negotiate their salaries way more often than women and consequently also earn more. This fact may already part of the highly discussed gender wage gap.

Smoking is a further implication of risk aversion. According to Dohmen et al, the best predictor of whether a person is smoking or not is the question about willingness to take risks in health issues.[47] According to an American Health Study, about one quarter of adult men smoke at least occasionally in comparison to one in five women,[48] which corresponds to my anticipation of higher risk aversion of women and therefore a lower number of smokers among them.

As for financial matters, risk aversion has been shown to be negatively correlated to deciding upon risky investments, holding highly risky stocks[49] or participating in lottery games.[50]

Dohmen et al even found that there exists a strong correlation between risk aversion and being active in sports. Higher willingness to take risks is associated with a considerable increase in the probability of doing active sports.[51]

[46] http://www.gruenderszene.de/hr/gruenderinnen-startup-szene, accessed 30th April, 2012
[47] Dohmen et al, 2011, p.525
[48] http://www.newstrategist.com/productdetails/HealthSamplePgs.pdf, accessed 30th April, 2012
[49] Dohmen et al, 2011, p.539f
[50] Dohmen et al, 2011, p.533ff
[51] Dohmen et al, 2011, p.540

1.4 Implications of risk aversion on chances of promotion

This part now covers one of the main issues of this thesis due to the fact that promotion, maybe also missing chances of promotion and under-representation of women in management are directly connected. As many different factors influence chances of promotion, I will only cover implications of risk aversion in this section and will deal with implications of competition aversion as well as relevant aspects such as stereotyping or family-work conflicts in the upcoming chapters after already having discussed the theoretical and argumentative basis and therefore provided all knowledge necessary for understanding the relationship between discussed behavioral traits and chances of promotion.

I have identified three possible relationships between risk aversion and chances of promotion.

1. **Risk aversion lowers one´s willingness to accept a job with a high variable pay component.**

As women are found to be generally more risk averse than men, they may prefer a high fix pay and a lower variable pay component and may feel very uncomfortable with a high variable pay component. The reason for this assumption is that fact that variable pay usually depends on one´s job performance in a business year which again depends on internal as well as external business developments and other factors and is therefore associated with higher risk. As leadership positions are always connected to higher risks due to higher expertise required as well as staff responsibility, such positions are very likely to be incentivized.

Higher risk aversion may therefore decrease chances of promotion, partly due to women´s unwillingness to be in high incentivized positions.

2. **Risk aversion is negatively correlated to one´s aim of achieving a job position which is associated with greater responsibility.**

Greater responsibility again implies a higher level of risk and higher job burden for women due to the fear of failing and possible assignment of guilt, both constituting logical consequences of risk aversion.

3. **Risk aversion has negative effects on chances of promotion of women as they usually prefer less risky projects in their current jobs which may imply less recognition for success and lower chances of promotion.**

When being in project management, a risk-averse woman may probably go for projects which are quite secure and where the risk of failing is low for being successful in the end. The disadvantage in

this case however is that successful projects which imply less risk from day one are not attributed to special expertise of the project manager herself but more to ideal circumstances. Highly risky projects may imply much more recognition due to known difficult circumstances.

Do studies actually confirm these hypotheses?

The first two assumptions are shared by Eckel and Grossman who think that women´s preferences for lower levels of risk may keep them from seeking employment in high ranking professions often associated with higher risk and may also shape women´s investment decisions towards lower risk portfolios, which usually imply lower returns.[52] Niederle and Vesterlund investigated choices of compensation schemes and found that when having the choice between a tournament incentive scheme and a piece rate scheme, 73 percent of men select the tournament, while only 35 percent of women choose that riskier option.[53]

Grund and Sliwka studied the relationship between individual risk aversion and the occurrence of performance pay and found a highly significant negative effect of an employee´s risk aversion on the likelihood of receiving performance pay.[54]

As for actual job choice, many studies point out that women´s preferences are more sensitive to subtle signals from society than those of men which may lead to selecting a job which is regarded as being appropriate for women. [55] This attitude may negatively affect promotion as those women may show no interest in any promotion as they regard higher positions as being socially inadequate based on their own observations and on societal judgment about women in the labour force.

According to Krauss Whitbourne, a professor of psychology at the University of Massachusetts, risk aversion can have many negative consequences for women, which supports hypothesis three. Due to risk aversion, women are less willing to make risky business decisions and therefore also less willing to work on risky projects.[56] A lower probability of female involvement in high-risk projects which are essential for the success of a company has also been found by Gold & Pringle, Ohlott et al and Powell.[57]

[52] Eckel/Grossman, 2008, p.14
[53] Niederle/Vesterlund, 2007, p.1067
[54] Grund/Sliwka, 2010, p.10
[55] Croson/Gneezy, 2009, p.21
[56] Krauss Whitbourne, 2011, p.1
[57] Gold/Pringle, 1988; Ohlott et al., 1994; Powell, 1980; Ruderman/Ohlott, 1992; in: King et al, 2012, p.1838f

As I will show in chapter three, women very often have problems of being considered as equally competent as men and are given less developmental job assignments which lower their chances of promotion due to missing experiences in challenging circumstances.[58]

In sum, risk aversion is found to have negative influences on chances of promotion, partly due to women´s lower willingness to be promoted to higher positions associated with higher risk, higher variable payments or higher responsibilities. According to some studies, also the fear of negative societal reactions to promotion or management activities of women plays a major role.

Possible solutions to women under-representation based on findings regarding risk aversion, competition aversion as well as contextual factors will be discussed more deeply in the fourth chapter where all identified causal relationships will be brought together.

In the next chapter, I will discuss competition aversion and its consequences in general as well as on women´s careers and also investigate how risk aversion expresses itself in tournaments. We may therefore identify overlapping effects.

[58] Ohlott et al, 1994, p.47

2 Competition aversion

Besides risk aversion, competition aversion is another factor which has been found to play a role for women advancement. Together with other scientists, Uri Gneezy, an American Professor of Economics, has done lots of research in behavioral economics, among others in competition aversion, resulting in very interesting findings. I´ll therefore refer to his studies on several occasions.

2.1 Key findings on competition aversion of women

As I have mentioned in the introduction, there is still a deep cleft between desired and actual women quota in management. Large gender differences particularly prevail in competitive high-ranking positions. Proposed explanations usually include discrimination, differences in preferences as well as human capital. In an experimental paper concerning competitive behavior, Gneezy et al found evidence for lower effectiveness of women in competitive situations, even when performing as well as men in non-competitive environments. In their laboratory experiment, an increase in competitiveness resulted in a significant increase in performance of men, but not of women. As a result, the authors concluded that there exists a considerable gender gap in performance in tournaments which vanishes in the case of a fixed remuneration. A possible explanation for the observed differences in competitive behavior is that women are more risk-averse than men and consequently react to competition in another way than men.[59]

The study by Gneezy et al also provides evidence for the fact that women perform differently in single-sex than in mixed-sex groups. This argument supports single-sex classes which I have already discussed in the previous chapter as it might be more suitable for girls regarding the development of their skills and interests in science. If girls are less motivated to overtrump others than boys, single-sex classes may be less competitive and therefore more suitable for girls. As girls do perform well in single-sex environments, they may not be averse to competition itself, but just not willing or maybe also not able to compete against boys. The consequence is a higher effectiveness of education in single-sex environments as competitiveness of girls will increase in this case.[60] This finding corresponds to previous findings concerning risk aversion which has been found to be lower in the case of single-sex classes.

[59] Gneezy et al, 2003, p.1049f
[60] Gneezy et al, 2003, p.1051

To test the basic effect of competition on performance of women, Gneezy et al measured the performance of both sexes in single-sex tournaments and revealed a significant increase in the performance of women compared to non-competitive circumstances. This provides evidence for performance improvement of women in certain situations of competition. Moreover, no differences in the performance of winners in single-sex compared to mixed-sex tournaments have been found[61] which again confirms that women are able to compete per se.

But why do differences in competitive behavior of men and women exist? The authors suggest that differences in skills, talents as well as beliefs could be a reason. As a consequence, women and men may therefore differ in adjusting their behavior to diverse strategic environments. A given example for understanding this assumption is the following: If participants of so called winner-takes-all tournaments believe that men are more able to solve mazes than women and also know that effort is costly, men will probably put more effort than women in the tournament. A further explanation is that preferences over outcomes depend on the institutional setting of the tournament, being shaped by the gender composition of participants as well as the competitiveness of the tournament per se.[62]

Another interesting point which might explain the difference in behavior when moving from a non-competitive environment to a mixed-tournament is that men and women face different rivals: Men may for example have to compete against two male and three female competitors, while women have to compete against three men and two women. The faced situation of competition may therefore be easier for men than for women, as women have been found to perform worse than men.[63]

In their last experiment, Gneezy et al found evidence for the assumption that men feel more competent than women as men showed a statistically significant tendency to choose higher difficulty levels of mazes than women.[64] In her experiments on gender differences in the accuracy of self-evaluations of performance[65], Beyer found that men overestimate their abilities more often than women who tend to be either accurate in their self-assessment or underestimate their abilities. Men on the contrary are either accurate in their self-perception or overestimate their own competence. Women´s low assessment of their performance in the past, even when having been adequate, also leads to low future expectancies and deters them from pursuing careers in certain domains which

[61] Gneezy et al, 2003, p.1071
[62] Gneezy et al, 2003, p.1051f
[63] Gneezy et al, 2003, p.1066
[64] Gneezy et al, 2003, p.1068f
[65] Beyer, 1990, p.960

are known as being male-dominated. At the same time, men with at least similar abilities wouldn´t question their aptitude for only a minute. Eliminating women´s underestimation of their abilities may therefore provide a possibility to enhance female performance in mixed-sex competition.[66] Niederle and Vesterlund identified both genders as being overconfident. Men were however more overconfident than women, supporting previous findings already explained above.[67] A reason for higher overconfidence of men could be that they are generally more optimistic about their future performance.[68] Women are in fact more likely to attribute own successes to luck and external influence rather than to inner attributes with men doing just the opposite.[69]

As for risk aversion, Gneezy et al detected no significant differences in performance under piece rate and random pay, so uncertainty doesn´t change behavior in this case.[70]

When studying gender differences in preferences, Gneezy and Croson discovered robust differences in risk, social, as well as competitive preferences. Again, women are identified as being more risk and also competition averse than men. As for social preferences, Croson and Gneezy concluded that women are neither more nor less socially oriented than men, but their preferences are usually more situation-specific than those of men.[71]

Bowles et al empirically tested whether there exists a difference in treatment of men and women during negotiations, which also constitute competitive situations. Male evaluators were found to penalize female candidates more than male ones for initiating negotiations while female evaluators penalized all candidates. Moreover, women were less likely than men to negotiate with male evaluators. This effect has been found to be due to higher nervousness[72] as the relative social risk[73] was highest in this case.

To measure signs of competition aversion at young age, Gneezy and Rustichini conducted a sports experiment in an elementary school in Israel. 140 kids, 75 boys and 65 girls participated in the study in which the speed of 9 to 10 year old children in a short-distance race was measured. Every kid had to run twice a distance of 40 meters, the speed being measured by their gym teacher. What is important in this context is that at such an age, there´s no gender difference in speed in a short-

[66] Beyer, 1990, p.966ff
[67] Niederle/Vesterlund, 2007, p.1087
[68] Niederle/Vesterlund, 2007, p.1098
[69] Beyer, 1990; Felder et al, 1994; in: Niederle/Vesterlund, 2007, p.1098
[70] Gneezy et al, 2003, p.1056
[71] Croson/Gneezy, 2009, p.1
[72] Bowles et al, 2007, p.84
[73] Bowles et al, 2007, p.100

distance race. The conditions for girls and boys have therefore been the same. Kids first had to run alone so that their own speed could be measured. Afterwards, pairs of kids with similar results in the first run were matched together and had to run the same distance again, but this time side-by-side. To be able to control for other unobserved variables such as tiredness, a second group of kids also had to run alone the second time. As a result, Gneezy and Rustichini could compare results of competition with those of no competition.[74]

An important trait of the experiment was that the participants did not realize that they were observed as the race was part of their gym lesson. The race was therefore a situation they were used to from other gym sessions. Moreover, the challenge was based on an open competition where everyone received feedback and could observe their classmates in the race. As a third characteristic, the behavior of kids was based on intrinsic motivation as they were not given any monetary reward.[75]

The findings are very interesting, as kids running alone in both rounds showed a slight improvement in the second run. The difference in the performance of girls and boys was however not statistically significant. As for kids participating in the competition subgroup, a difference in performance was found, as boys improved, while girls were running slower in the second run. In this case, the variation in performance was statistically significant. Contrasting previous studies presented above which identified an increase in performance of girls when competing in homogeneous groups, the performance of girls in the short-distance race was found to be worse in the situation of competition compared to no competition, independent of group composition. The result was the opposite for boys, who improved by a large extent when running against another boy but also when competing against a girl.[76] That is actually what also other studies revealed.

A possible explanation for the worse performance of girls, even in homogeneous pairs, could be that even when only girls were running against each other, there was the additional effect that the whole class, consisting of both girls and boys, was observing the race[77] which may have created additional mental stress for the girls.

As in the case of risk aversion, there also exists counterevidence on the findings of higher competition aversion of women. Niederle and Vesterlund investigated gender differences under a

[74] Gneezy/Rustichini, 2004, p.377f
[75] Gneezy/Rustichini, 2004, p.380
[76] Gneezy/Rustichini, 2004, p.378ff
[77] Gneezy/Rustichini, 2004, p.380

piece-rate and a tournament situation and detected no variation when comparing performance of men and women. Both genders performed considerably better in the tournament situation. This could be explained in various ways. On the one hand, participants may have had the same preferences for competition. On the other hand it could also be that performance has been task-specific[78] in this case where participants had to solve short mathematical problems.[79]

In a next step, the same participants had to choose between two different compensation schemes, either a piece-rate or a tournament. Interestingly, although both genders were found to perform similarly, women were much more competition averse than men and opted for the safe compensation.[80]

In another experiment, Niederle, Vesterlund and Segal studied compensation choices in an affirmative action tournament where they required that for every two winners, at least one had to be a woman. This not only increased the probability that women would be among the winners of the contest, but it also made the competition more gender specific as in this case, a woman that outperformed her female competitors would win. Niederle et al found that in this situation of guaranteed equal gender representation among winners, more women and fewer men opted for competition. The change was even higher than forecasted by changes in the probability of winning.[81] This result implies that in order to achieve a more diverse set of winners, a lowering of the performance requirement for women may actually not be needed.[82]

Negotiation literature suggests that in some situations, gender differences are very small. A meta-analytic analysis on gender in negotiations indicates that women are for example more competitive when it is less possible to communicate with other parties.[83] Niederle and Vesterlund assume that this is due to the absence of gendered social roles in such a situation.[84]

In the next subchapter I will discuss different influence factors on the degree of competition aversion.

[78] Niederle/Vesterlund, 2007, p.1078
[79] Niederle/Vesterlund, 2007, p.1073
[80] Niederle/Vesterlund, 2007, p.1080
[81] Niederle et al, 2008, in: Niederle/Vesterlund, 2008, p.458f
[82] Niederle/Vesterlund, 2008, p.459f
[83] Walters et al, 1998; Stuhlmacher et al, 2007; in: Niederle/Vesterlund, 2008, p.460
[84] Niederle/Vesterlund, 2008, p.460

2.2 Influence factors on the degree of competition aversion

There are different factors which may have an influence on competitive behavior. One stream of literature supports the view that competition aversion is formed by society, while another stream favors the explanation that competitive behavior is inherited and therefore genetical. The third factor which plays a role in determining competition aversion is the contextual frame.

The following section will give an introduction on these three factors.

2.2.1 Culture

Gneezy, Leonard and List investigated competitive behavior of men and women in two distinct societies, one being the Maasai tribe in Tanzania and the other one the Khasi tribe in India. The big difference between the two is that the Maasai represent a patriarchal and the Khasi a matrilineal society.

In the matrilineal Khasi tribe, inheritance and clan membership follow the female line through the youngest daughter and family life usually takes place around the mother´s home. The youngest daughter never leaves the mother´s house while the elder daughters very often build their own houses nearby their mother´s place. While a woman never joins the household of her husband´s family, a man usually leaves the family household for living with his wife. Sometimes men also live in both places, with their wife and also in their mother´s household. In the Khasi tribe, women have the authority over the majority of household decisions. Men in contrast have no authority or property in the households they live, work for their wife´s family and have no meaningful social rules. [85]

The social structure of the patriarchal Maasai tribe is dominated by age and cattle and very different from the one described above. Men usually do not marry prior to having around 30 years and polygamy is very common. Roles of women are very restricted and generally regarded as less important than those of men who have the power over all decisions. Although women have access to a few years of education, they usually obtain less education than men.[86]

Findings of the conducted experiment show that in the patriarchal society, women are less competitive than men, a finding which is consistent with data from Western cultures. In this tribe, men are found to compete about twice as often as women. In the matrilineal society, the Khasi tribe,

[85] Gneezy et al, 2009, p.1640
[86] Gneezy et al, 2009, p.1640

results are the other way round as Khasi women are identified as being more competitive than Khasi men and are even somewhat more competitive than Maasai men. The latter finding is however not statistically significant.[87]

The results have important implications on the question whether behavior in competition is genetically determined and or whether it has been formed by education and culture. The findings provide an argument for the view that competitive behavior is shaped by culture as it shows that according to specific cultural norms and general characteristics such as access to education, women are more or less inclined to competition than men.

Our society tends to raise boys and girls in a different way, mainly encouraging gender-specific activities in kids. [88] Boys are taught to act assertively while girls are expected and encouraged to show empathy and to be more egalitarian.[89]

2.2.2 Genes

One stream of literature, opposing the view that "nurture matters", suggests that differences between men and women are due to genetic differences. Since Charles Darwin, the well-known founder of the evolutionary theory, biologists such as Trivers and Bateman as well as psychologists have shared the opinion that the basic structure of the brain is genetically determined. Consistent differences in behavior of men and women could therefore constitute inherited characteristics.[90] According to this view, it is well possible that genetical or hormonal differences cause women to be less competitive than men.[91]

Interestingly, Doty and Silverthorne discovered that menstrual cycles influence volunteering behavior as most female volunteers for their experiment were in the ovulatory phase, while most of those who didn´t participate were in the postovulatory, premenstrual and menstrual phases.[92]

Evolutionary psychology proposes that men have evolved in a way to enjoy competition. The theories are connected to the reproductive strategies of men and women and related responsibilities.[93]

[87] Gneezy et al, 2009, p.1637f
[88] Niederle/Vesterlund, 2007, p.1070
[89] Ruble et al, 2006, in: Niederle/Vesterlund, 2007, p.1070
[90] Croson/Gneezy, 2009, p.20
[91] Colarelli et al, 2006, in: Croson/Gneezy, 2009, p.20
[92] Doty/Colin, 1975, in: Croson/Gneezy, 2009, p.21f
[93] Niederle/Vesterlund, 2007, p.1071

2.2.3 Contextual frame

Following an empirical and theoretical analysis, Nylen found that competition aversion is not constant but rather depending on certain conditions. As already mentioned above, fluctuating beliefs about their abilities and themselves affect women´s competitive ability for better or for worse.[94] Their beliefs about themselves explain their behavior and consequently also the outcome. Nylen discovered in her analysis of three reality television shows that when women were reinforced related to their skills, their performance increased drastically, relative to men´s performance. This shows that expertise and confidence play a crucial role in determining female performance.[95] The influence of the personal feeling of competence and confidence on final performance has also been found by other researchs such as Gneezy and Rustichini or Niederle and Vesterlund, as already mentioned before.

In a next step, implications of competition aversion on behavior will be analyzed.

2.3 Implications of competition aversion on behavior

As in the case of risk aversion, also competition aversion has an influence on behavior. Some implications may even be overlapping as risk aversion and competition aversion are related to a certain degree. Others however refer to completely different contexts which is why risk and competition aversion do only sometimes interfere.

The following lines will provide an overview of possible and also empirically proven implications of competition aversion on several behaviors in life.

2.3.1 Selection into competitive environments

An implication or also consequence of competition aversion could be that women rather avoid competitive environments than deliberately opting for competition. In their study “Do women shy away from competition? Do men compete too much?” Niederle and Vesterlund investigated gender differences regarding tournament selection when choosing the compensation scheme for the next performance. They found that when having the choice, 73 percent of men select into the tournament, while only 35 percent of women opt for competition. That considerable gap couldn´t be

[94] Nylen, 2007, p.86f
[95] Nylen, 2007, p.88f

explained by performance or risk aversion, but rather by overconfidence of men and gender differences in preferences. These factors have been found to play an important role in women´s avoidance of competitive situations. Psychological studies have revealed that already at young age, boys mainly play competitive games, while girls rather play games for fun, without a final winner and without defining a clear end point.[96] Differences in preferences and behavior in situations of competition therefore already appear in childhood. That´s actually what also Gneezy and Rustichini found when investigating competitive behavior of 10 year old kids in a school in Israel, as already discussed in chapter 2.1.

The findings imply that when avoiding competitive environments per se, it seems clear that women also shy away from jobs which include a high level of competition. I will however go into this in more detail in chapter 2.4.

2.3.2 Job stress

Competition aversion could result in higher job stress if employees are required to participate in company-wide tournaments without being internally motivated to do so.

Depending on whether constituting a hindrance stressor such as role ambiguity or role conflict, or a challenge stressor, examples being job demands or job complexity, stressors can have different impacts on performance. Challenge stressors have been found to have a positive impact on performance while hindrance stressors mainly have negative effects.[97]

As women have been found to be rather competition averse, a situation of competition may result in negative job stress rather than a positive one and may therefore have a negative impact on performance. This would make sense as women have been found to perform worse in situations of competition.

Interestingly, Shurchkov detected that women change their preferences for competition under certain conditions which entail lower levels of stress such as longer time constraints for example. To arrive at this result, she changed the nature of a given task from a mathematical one to a verbal word-in-a-word puzzle and prolonged the time frame. In the verbal environment, competition was no more detrimental to women´s performance relative to men´s and women were more likely than men to deliberately choose competition. Women were even found to significantly outperform men

[96] Niederle/Vesterlund, 2007, p.1067
[97] Lepine et al, 2005, p.764

in the low time pressure tournament.[98] Stress caused by competition may therefore be the result of specific conditions which are perceived as being stressful.

The author tried to find reasons for these surprising results. Her conclusions are consistent with some theories by evolutionary biologists which suggest that men usually tend to have lower attention spans than women who are able to stay focused on a specific task for a longer time period. When ranking jobs by level of stress and time pressure, managerial positions are classified among high-pressure jobs where high mathematical skills are required.[99] This may further explain the scarcity of women in top management.

2.3.3 Bargaining behavior

A third point which is according to my mind relevant in this context is bargaining behavior. Negotiations also constitute competitive situations between two or more people or parties. Women may consequently be less inclined for negotiation, job-specific examples being wage bargaining or bargaining for opportunities of promotion. This may have monetary consequences like lower wages as well as negative consequences for advancement in a company.

Diverse expectations in bargaining processes in general may also affect the prices men and women pay as consumers when there is room for negotiation. A possible explanation for women´s lower achievements in negotiation is the common attitude that women are satisfied with less, tracing back to times when women had low working experience.[100]

The HR manager of the MELECS GmbH & Co KG, an Austrian manufacturing company, once stated that she was sure that women earned less than men because they didn´t ask for more money. This implies either a lower willingness for negotiation or a fear of refusal. The underlying cause in both cases could be a lack of self-confidence which has also been found to partly explain competition aversion.

Women were also found to use different negotiation strategies than men, being less efficient. King and Hinson for example studied the influence of gender on relationship preferences as well as

[98] Shurchkov, 2010, p.2
[99] Shurchkov, 2010, p.2f
[100] Solnick, 2001, p.189

on negotiation outcomes and revealed that in their study, men negotiated more effectively than women, mainly in the selling position.[101]

2.3.4 Sports

A further implication of competition aversion could be that women are less active in extreme sports or competitive sports such as tennis, swimming, mountain biking or skiing, as in these sports, women always have to compete against others and their performance is always compared to others´ performance. Such sports live from competition and people are attracted towards watching games, contests or matches due to the high intensity of competition and its related emotional experiences.

Women may therefore rather opt for non-competitive sports, due to different, already earlier identified reasons such as risk aversion, competition aversion or a low confidence in their own abilities. Indeed, self-confidence is found to be a critical factor in determining athletes´ success.[102]

An example for such a non-competitive sport is the current popularity of Zumba, a dance-fitness program which is inspired by Latin dance. Zumba provides a good opportunity for doing sports and having fun together with other people and is absolutely non-competitive as participants of the courses simply dance together without being controlled in any way.

But as we have seen in the experiment of Gneezy and Rustichini, girls are indeed able to compete per se and even increase their performance under certain conditions; they just do not want to compete against boys.[103] Therefore, participation in sports which are in most cases anyway separated by gender may not be strongly influenced by competition aversion.

Available data suggests that participation in active sports has beneficial effects for girls and women, not only physically but also mentally. It can for example promote psychological well-being through building self-esteem and confidence. Moreover, sports participation gives an opportunity to develop essential skills such as goal-setting, negotiation or the pursuit of excellence in performance. In an article devoted to women advancement, the authors strongly suggest that the participation of women and girls in active sports challenges gender stereotypes and discrimination and therefore represents a way towards gender equality and the empowerment of women and girls.[104]

[101] King/Hinson, 1994, in: Solnick, 2001, p.190
[102] Feltz, 1988, p.280
[103] Gneezy et al, 2003, p.1071
[104] Oglesby et al, 2007, p.2f

Participation in sports may provide an opportunity to reduce competition aversion due to the fact that girls learn how to deal with competition over time and also get used to it. When doing sports in teams, they also acquire skills regarding leadership and team-building which is essential for jobs in management later on. Sports may strengthen girls´ ability to assert themselves against their counterparts.

As a result, promoting sports participation already at young age may be an efficient way of reducing competition aversion in girls and therefore optimally prepare them for a possible future in leadership positions.

2.4 Implications of competition aversion on chances of promotion

What is also important in this context is that if women are due to different preferences less likely to compete, this decreases the number of women entering tournaments, but, what is even more important, also the number of those who finally win tournaments. This consequently reduces women´s chances of being successful in competitions for promotions or more well-paid jobs.[105] Fewer promotions of women to higher positions are in this regard not due to lower ability but due to lower willingness to compete at a high level.

But even if women opt for the tournament and have to compete against male counterparts, they may perform worse than men who have been found to improve their performance more strongly than women in tournaments.

It is possible that women consider high-level positions as less desirable because they do not like the responsibilities which are associated with executive positions and may therefore be completely satisfied with their current job, even when implying less challenging tasks and less responsibility. Another explanation could be that women avoid managerial jobs due to long working hours[106], time they may prefer to spend otherwise, be it with their kids, their life partner, their friends or even with housework but I will come to that later on.

Moreover, women may have lower chances of promotion due to lower willingness to engage in negotiation, partly connected to lower self-confidence of women, as already mentioned in the previous chapter.

Having already mentioned the threat of stereotypical thinking, I will discuss different contextual factors in the next chapter and also explain how these factors contribute to the current situation of women in leadership positions.

[105] Niederle/Vesterlund, 2007, p.1067
[106] Niederle/Vesterlund, 2007, p.1068

3 Contextual factors

Contextual factors form the last part of my literature analysis and basically cover environmental factors as well as other influence factors such as stereotypical thinking and existing prejudices towards leadership styles which influence women advancement. Environmental factors include family-career trade-offs such as babies and the care of elderly or ill family members as well as still prevailing societal role expectations.

3.1 Key findings on contextual factors influencing women advancement

3.1.1 Stereotypes

3.1.1.1 Stereotypical Thinking

In 1989, Brenner, Tomkiewicz and Schein examined the relationship between sex role stereotypes and perceived management characteristics among male and female managers and compared the results with those of studies conducted 15 years earlier.[107]

Results for men confirmed still existing stereotypes as men attributed success in middle management to characteristics, attitudes and temperaments which were generally ascribed to men. Women, in contrast, considered successful managers as having attitudes and temperaments which were attributed to both men and women. Female middle managers considered women as being more likely to hold certain traits essential for success while men were perceived as holding others. This altered perception of women was and still is the consequence of a changed view of women in general and suggests that women do no longer stereotype managerial jobs. Unlike male executives, female managers may therefore treat both genders equally in selection and promotion decisions.[108] The experiments didn´t deal with men´s and women´s actual qualities, but only with managers´ perceptions of them. What is important in this context is that even successful female managers were rated as having less leadership skills than successful male ones. In contrast to men, women were regarded as having negative qualities such as being bitter, selfish or contentious. This shows that even if a woman is as competent as a man, she will at the beginning be seen as less able. Interestingly, women who are as tall as men will mistakenly also be seen as being shorter than them

[107] Brenner et al, 1989, p.662
[108] Brenner et al, 1989, p.667f

due to inaccurate perceptions and judgments being based on the thought that women are on average shorter than men.[109]

Coming back to the study conducted by Brenner et al, the fact that men didn´t change their attitudes over 15 years is critical and supports the assumption that the increase of women in management is most of all due to the power of law and internal business changes realized to implement the law and not to special efforts of male leaders. The attitudes of male managers, who are the main decision makers at upper levels, may therefore negatively influence women advancement. This highlights the urgent need for structural changes as otherwise, career ladders of women may be limited and not exceed middle-level jobs.[110]

3.1.1.2 Leadership Styles

To examine sex differences in leadership, Dobbins and Platz conducted a meta-analytic review of 17 studies, including laboratory experiments, laboratory simulations as well as field studies.[111]

The examined dependent measures of the meta-analysis were composed of initiating structure, consideration, subordinate satisfaction and effectiveness. Male and female leaders were found to show similar amounts of initiating structures and consideration in their jobs. Also subordinate satisfaction has been found to be independent of the leader´s gender. Interestingly, male leaders were assessed as being more effective than female ones, but only in laboratory experiments. In field experiments, the leader´s gender was found to be irrelevant for effectiveness. The authors explain the identified lower effectiveness of women leaders in laboratory settings by the existing ambiguity in these situations as raters do not have as many opportunities to observe leader performance as it is the case in field experiments where it is much easier to evaluate and also compare performance of individual people. Missing opportunities induce raters to refer to their own theories about behavior of men and women and therefore again result in the reconstruction of long-existing stereotypes.[112]

Partly contradicting the findings from above, many journalists and authors of trade books suggest that women have an advantage in effective leadership. This assumption has been examined by Eagly

[109] Valian, 1999, p.126
[110] Brenner et al, 1989, p.667f
[111] Dobbins/Platz, 1986, p.118f
[112] Dobbins/Platz, 1986, p.124f

and Carli who found that women indeed have some advantage in typical leadership styles but suffer from disadvantages due to prejudicial assessment of their leadership ability.[113]

Gender has so far been left out of economics in general and therefore also by researchers dealing with leadership theories. The current interest for women in management and gender issues in general requires economists to rethink their models and even introduce new variables in order to have sufficient explanatory power.

In a study of employees who carried out structured tasks in dyadic interactions, Hall and Friedman found that women used a warmer and more expressive nonverbal style than men which was expressed by their face, their body, their voice quality and also their vocal dominance in interactions.[114]

As leadership has formerly been seen as a rather masculine job, various theories of leadership have focused on desired masculine qualities and left out typical feminine qualities which may also be relevant for effective leadership. Social scientists and psychologists have emphasized the problems associated with prejudicial masculine thinking already in the past. This strengthens the need to also consider feminine qualities in the analysis of effective leadership behavior. Contemporary approaches to leadership propose lower hierarchy levels and put the leader more strongly in the role of a teacher or a coach.[115]

Apart from leadership theories, also women have changed, which may have been a driver of the recent interest in female managers. Diverse studies have revealed that career ambition of female students, women´s self-reports of assertiveness, dominance and masculinity and also the value they place on freedom, challenge, prestige and power in their jobs has changed over the past years and become more similar to attitudes of men.[116]

Besides attitudes, also our culture has changed. Nowadays, women represent a new symbol for leadership that suggests greater effectiveness and synergy than leadership of the past.[117] Moreover, the selection of women for management position signals companies´ willingness for innovation and organizational change. Appointing women therefore increases a firm´s chances to succeed under

[113] Eagly/Carli, 2003, p.807
[114] Hall/Friedman, 1999, in: Eagly/Carli, 2002, p.590
[115] Miner, 1993, in: Eagly/Carli, 2003, p.808f
[116] Astin et al, 1997; Twenge, 1997 ; Konrad et al, 2000 ; in: Eagly/Carli, 2003, p.826
[117] Adler, 1999, in: Eagly/Carli, 2003, p.828

modern conditions.[118] So far, this thinking however remains more a myth than reality which will be shown in the following studies.

Porter and Geis conducted a study concerning leadership perceptions in which they showed college students slides of five people sitting round a table, working together on a special project.[119] Two people sat at each side of the table and one at the head. The gender composition of the group always changed on the slides. When the students were asked to make out the leader of a same-sex group, they always pointed to the person sitting at the head of the table. In mixed-sex groups with a man at the head, students came up with the same result. When the person at the head was however a women, they appointed a man sitting somewhere else as the leader. The experiment shows that male and female students see the situation in the same way. Gender schemas and stereotypes therefore affect all people.[120]

Also names have been found to play a role with female job candidates being rather underrated and male ones rather overrated. Greenhaus and Parasuraman examined supervisors´ ratings of directly reporting low- and middle-level managers of three companies and found that female managers were as likely as males to get highly successful job-performance ratings from their supervisors. The supervisors however rated male mangers as having more ability and attributed success of females to other factors such as hard work. For managers with moderate performance, no difference in the supervisors´ capability ratings has been detected. [121]

A further study by Butler and Geis clearly shows that both genders visibly react negatively to women who take a leadership role in a group which tries to solve a problem. They used facial reactions to measure a person´s response to another group member because facial reactions are under less direct control than verbal comments. No matter which role trained female participants played, they always received a greater number of negative facial reactions than positive ones while the reactions to proposals of trained male group members were the other way round. This again shows that women are perceived in a less positive way than men in such problem-solving situations, no matter whether they play the role of a leader or a non-leader. Males were also rated as being more skilled and intelligent than female participants who were rather classified as being too emotional, dominant and even imperious. The latter two adjectives refer to situations where women acted as group leaders. What independent observers recognized was the women talked more than men. This finding

[118] Eagly/Carli, 2003, p.828
[119] Porter/Geis, 1981, in: Valian, 1999, p.127
[120] Valian, 1999, p.127
[121] Valian, 1999, p.128

corresponds to the experience of female managers who very often get the impression of receiving less attention than men and of being more often ignored when coming up with suggestions.[122]

As the experiments have been conducted with many professional people as well as students in different countries, the results provide significant support to the view that "think manager – think male" is a worldwide phenomenon, particularly among males.[123]

The studies clearly show that women face many obstacles in their careers, starting with their name which is associated with lower ability, going on with stereotypes how women should behave and stronger mistrust as well as lower attention and willingness for adoption when coming up with new ideas. These are problems which need to be overcome, but which will still last for many decades as role perceptions and stereotypes can´t be changed over a short period of time.

3.1.2 Role Incongruity – Role Expectations

Many difficulties that women have to deal with arise from incongruity of the traditional female role and many leader roles[124] as in former times, women were primarily responsible for the household, for their kids and for elderly caring. Pursuing a career at work was the task of men and therefore no option for women. These things have changed nowadays, as women are increasingly part of the working population. As management positions have so far been dominated by men, also qualities needed to succeed in management are attributed to men. That is one of the obstacles women, whose qualities differ from those of men to a certain degree, nowadays face when trying to get higher management positions. Being a woman and being in top management is considered as being incongruent itself as women have historically not been supposed to be leaders. Therefore they are very often viewed as being less able and less skilled than men who are in the eyes of society still "supposed to be leaders", at least to a certain degree.

To alleviate this dilemma of role incongruity, women have to act especially competently in their job[125] and correspond to the expectations of adequate female behavior at the same time. This double-hardship makes it very tough for women to win recognition for high ability.[126]

[122] Valian, 1999, p.130f
[123] Schein, 2001, p.683
[124] Eagly/Karau, 2002, p.573
[125] Eagly/Karau, 2002, p.583
[126] Biernat/Kobrynowicz, 1997; Foschi, 2000; in: Eagly/Carli, 2003, p.825

Transformational leadership may provide a possibility for women to overcome the dilemma of role incongruity as it comprises some behaviors such as consideration and support, which are consistent with female role expectations.[127] Having a rather assertive style is for example incongruent with the idea of female behavior. This is why women are penalized if they decide to adopt such a style.

Bernard found that although egalitarian sex role attitudes are associated with a stronger career orientation for women, those women who place their careers before their families experience emotional confusion and stress.[128]

This shows that women apparently can´t have it all but I will come to that in chapter 3.1.4. A further factor that influences women´s careers are opportunities for "on the job development".

3.1.3 Developmental Job Opportunities

To test gender differences in managers´ developmental job experiences, Ohlott et al surveyed male and female managers about developmental components in their jobs. The study found evidence for the hypotheses that men experienced greater task-related challenges, whereas women experienced greater challenges descending from obstacles they faced at work.[129] Developmental assignments at work have been identified as being one of the crucial factors in preparing employees for high-level management positions.[130] It is clear that when women get less developmental job assignments than men, they are less prepared for being able to deal with future challenges. In 1991, Rosen et al conducted a survey concerning differences in developmental assignments and found that managers of 60 percent of the examined organizations were aware of the lack of challenging as well as high-profile assignments given to female managers.[131] The fact that female subordinates are less likely than men to be given challenging tasks has also been shown in laboratory studies.[132] This is problematic as key job assignments have the purpose of motivating as well as retaining managers and of improving important skills.[133]

In the study by Van Velsor and Hughes in 1990, women stated that they were given no opportunity to start something in their job from scratch or/and had only few chances to turn around a troubled

[127] Eagly/Carli, 2003, p.825
[128] Bernard, 1981, in: Long/Kahn/Schutz, 1992, p.228
[129] Ohlott et al, 1994, p.46
[130] Bray et al, 1974; Davis/Easterby-Smith, 1986; Mc Call et al, 1998, in: Ohlott et al, 1994, p.47
[131] Ohlott et al, 1994, p.47
[132] Mai-Dalton/Sullivan, 1981, in: Ohlott et al, 1994, p.49
[133] Donnel/Hall, 1980, in: Ohlott et al, 1994, p.48

business. Also other given assignments were reportedly more limited than those of men, both by nature and by scope.[134]

After a comprehensive literature research, Ohlott et al made two hypotheses, which they tested in a further step by analyzing collected data of around 370 managers who participated in management development programs. The first one was that men would experience greater developmental challenges stemming from transition and task-related job components than women. The second one referred to women, who would according to the mind of the authors experience greater developmental challenges stemming from obstacles than men.[135] Such obstacles are the lack of network contacts or missing feedback.[136] The study revealed that women in fact experienced higher challenges from one obstacle, the lack of personal support. Contrasting the first hypothesis, women scored higher than men on influencing without authority, constituting one task-related job component. Men however scored higher than women on three other important task-related job components, namely high stakes, managing business diversity and handling external pressure. The hypotheses have therefore partly been right.[137]

The results finally show that both genders face some similar and some diverse job challenges. Unlike previous studies, Ohlott et al found no differences between women and men concerning chances of starting new businesses or turning around a troubled business. It therefore seems that in this case, diversity measures may have had success, as men and women are given similar opportunities to gain job experience by means of developmental appointments. The few differences that have been detected are however worrying as significant differences in the level of a manager´s responsibility have further implications. Men and women may therefore be promoted to similar organizational levels, but women may lack key assignments and related experience which is essential for further development. Moreover, women may get only stereotypical challenges which would strengthen prevailing stereotypes.[138]

[134] Ohlott et al, 1994, p.50
[135] Ohlott et al, 1994, p.50ff
[136] Ohlott et al, 1994, p.62
[137] Ohlott et al, 1994, p.57
[138] Ohlott et al, 1994, p.62

In a very recent study, "Benevolent Sexism at Work", King et al examine the extent to which gender influences the distribution of demanding job assignments. According to Van Velsor et al, developmental work experiences have three crucial qualitative characteristics, namely challenge, feedback and support that give employees a strong impetus and provide resources for learning. If one of those characteristics is missing, the developmental potential and personal benefit of the experience decreases.[139] Based on different findings regarding the extent to which women are given developmental job assignments, the authors assume that both genders may be exposed to similar numbers of developmental assignments, but that the related experiences may differ qualitatively.[140] King et al conducted five different studies regarding the choice of challenging assignments of male and female employees as well as the assignment of and recommendation for such tasks to find out about benevolent sexism.[141] The results provide evidence that seemingly positive forms of sexism such as benevolence can have unfavorable consequences for women. It may influence their views about themselves, their self-efficacy as well as their employment decisions when risks or challenges are involved. Women advancement may therefore not only be hindered by traditional forms of sexism, but also by benevolent decisions and behaviors of managers. The findings suggest that women with high ambition, as well as the organizations they work in, should try to make sure that men and women have equal chances of getting developmental job assignments.[142]

3.1.4 Family Planning

Family Planning is a further factor which deserves considerable attention as it influences women´s job choice to a high extent. Most women at least wish to have kids and to bring them up and care for them. This significantly influences job choice, as being a mother and a top manager at the same time usually seems impossible due to job related long working hours, lots of stress and no time for kids at home. As long as a woman doesn´t have a partner who plans to reduce working hours to have more time for the family, it will be the woman who cuts back her career dream, at least for some time till the kids are going to school and need less attention at home. But even later it is difficult to return back to a full-time job at high level, firstly due to high competition at the labor market and missing job experience during pregnancy and waiting period afterwards as well as due to a high private workload.

[139] King et al, 2012, p.1836f
[140] King et al, 2012, p.1839
[141] King et al, 2012, p.1842-1859
[142] King et al, 2012, p.1860f

Findings suggest that women are increasingly opting for non-traditional, protean careers due to the need for flexibility to be able to fulfill non-work responsibilities at home.[143] Such careers involve several career cycles and are characterized by self-direction and the congruence of personal values.[144] When comparing costs and benefits of a traditional career, especially mothers are found to consider the cost of promotion to a higher level within an organization as being too high for the benefits and personal satisfaction received.[145] This seems quite comprehensible as women are even today handling the majority of home-related tasks as well as caring responsibilities for children and elderly people.

3.1.4.1 Prioritization of Job Issues

In general, recent job prevalence and a re-evaluation of work versus family preferences have led to an increasing prioritization of career issues.[146] This already explains the current interest in gender issues in management and desired gender equality also in executive positions.

The development has among others been driven by the invention of the first pill in the 1960s, leading to a later age at first marriage as well as a greater representation of women in nontraditional, professional occupations as it gave women a new possibility to plan their careers as well as childbearing.[147] Contrary to Bailey, many economists have adjudged rising women employment to other factors than birth control. Bailey however states that together with all other developments regarding female employment at that time, the pill has given a very powerful tool to women.[148]

The pill has made it possible to plan kids at a later stage of employment and can explain high numbers of female students with high aspirations. If those women plan to have kids around thirty, they can start their career paths at a younger age and rise to higher management levels before that, which is in general a good idea, but some years later also they are confronted with the problems of work-life balance discussed above. The timing of babies therefore seems to play a crucial role in career planning as having a baby very late can be dangerous for the women herself, but having it already in the twenties or early thirties may simply reduce chances of ever climbing the ladder to top management due to career interruption in the “best years”. Having babies really early may reduce

[143] Enache et al, 2011, p. 243
[144] Briscoe et al, 2006, in: Enache et al, 2011, p. 243
[145] Grady/McCarthy, 2008, in: Enache et al, 2011, p. 243
[146] Louis, 1980, p.329
[147] Bailey, 2006, p.289
[148] Bailey, 2006, p.317

motivation and ambition to attain a high university degree and ever enter management positions due to the double burden of child caring and work.

3.1.4.2 Influence of Babies on Women´s Careers

In their study of PhD careers of men and women, Mason and Goulden found that women with kids younger than six were the least likely ones of the sample to get a ladder-rank faculty position. Married women without kids younger than six were a bit less likely than men with the same family status to receive a tenure-track position. Single women without little kids were in contrast a bit more likely than single men with the same status to get an indefinite employment. When statistically testing the different relationships between gender-family interaction and career advancement, the authors identified neither a form of penalty for women having a baby nor for women getting married. They rather found that regardless of babies and marriage, women were more likely than men to leave prior to achieving tenure, maybe partly due to these family effects.[149] A logistic regression analysis of ladder-rank women compared to ladder-rank men and second-tier women who are either in a non-tenure job, employed part-time or not working at all, showed a significant difference in the family life of ladder-rank women compared to the other two categories observed. Ladder-rank women were for example 50 percent less likely to be married than men and 52 percent less likely to have a husband than women in second-tier positions. They however had a 144 percent higher probability of being divorced than men in the same rank and a 75 percent higher probability than women being employed in second-tier positions explained above.[150]

The effects are not unique for ladder-rank university jobs as they are also valid for other professional jobs which are occupied by female PhDs. There is some evidence that recent PhDs increasingly show lower rates of having children under six the first three years after completion of their degrees but show higher rates of having children at a later stage. Women may therefore delay childbearing until their careers are more solid. The study also reports a number of 101 hours per week that women were engaged in household, professional work and caring activities, compared to an average of 88 hours for men with children. This reflects the still existing inequality in the division of private workload between men and women. In the study of 2004, women devoted 35 percent of their actual working hours to caregiving activities, which resulted in a lower number of hours devoted to their professional careers. This fact may also today have negative effects on career advancement and can partly explain fewer promotions of women, even when working on a full-time basis. The high private

[149] Mason/Goulden, 2004, p.90f
[150] Mason/Goulden, 2004, p.92f

workload also leads to increased stress of faculty women compared to men. As a result, women experience greater conflict in balancing career and family life than men.[151]

Mason and Goulden state that "rather than blatant discrimination against women, it is the long working hours and the required travel, precisely at the time when most women with advanced degrees have children and begin families, that force women to leave the fast-track professions." [152]

Even if the authors of the study don´t know the exact reasons why some women do renounce family formation or career pursuit, they know that the low number of marriage and birth rates among academic women is strongly at odds with most Americans´ wish for marrying and having kids.[153]

The presented key findings highlight the difficulty of women to pursue a career and have a family with kids at the same time.

3.1.4.3 Occupational Stress

In the context of family planning, occupational stress is mainly related to family stress due to dual career.

In stress theory, psychological stress is defined as a relationship between a person and its environment that is considered by the person as taxing or exceeding his or her own resources and endangering the personal well-being.[154] Bebbington has classified both internal and external strains.[155] Internal strains are work or role overload and work-family interference, external ones comprise prevailing normative issues, social network dilemmas and the occupational structure.[156] As for the occupational structure, Holmstrom revealed different sources of stress such as pressures for international mobility, status inconsistencies of academic women and a pressure for fulltime and steady careers.[157]

Being able to cope with such strains is very important to a marital relationship. Orden and Bradburn found that the women´s general decision to work is strongly related with a higher balance between

[151] Mason/Goulden, 2004, p.96ff
[152] Mason/Goulden, 2004, p.90
[153] Thornton/Young-DeMarco, 2001, in: Mason/Goulden, 2004, p.100
[154] Lazarus/Folkman, 1984, in: Long/Kahn/Schutz, 1992, p.227
[155] Bebbington, 1973, in: Skinner, 1980, p.474
[156] Skinner, 1980, p.474f
[157] Holmstrom, 1973, in: Skinner, 1980, p.475

satisfactions and strains for both partners. It may only lead to higher strains in the case of preschool kids as Orden and Bradburn have seen in their study of working wives and marital happiness.[158]

Occupation in general has positive effects on family life, only in the case of long working hours it may have detrimental consequences for the family members involved as balance may be hard to be restored once the mother is highly overloaded. For this reason, firms need to offer new forms of flexible work arrangements to reduce unnecessary stress for dual-career couples. I will however discuss such possibilities in more detail in the next chapter where I will try to find possible solutions to underrepresentation of women in management based on the findings of my literature review.

Especially in male-dominated careers such as in top management, women have to deal with particular employment stressors such as gender-role stereotypes and occupational sex discrimination.[159]

In general, higher occupational status, income and education have been identified as being related to higher problem-focused coping.[160] Marriage and especially parenthood have been found to be negatively related to strong career orientations and the choice of professional careers.[161]

Ways of lowering job stress are also important in this context. Emotional support of colleagues and supervisors has been shown to have beneficial effects on job stress reduction and mental health.[162] Long, Kahn and Schutz tested a model of executive women´s stress with structural equation modeling.[163] Results of the study suggest that women with traditional lifestyles and also traditional beliefs usually experience occupational stressors as less threatening. This may be because they have less at stake in stressful situations at work, based on the assumption that they are less focused on their careers.[164] Thoits even indicated that multiple roles can improve well-being due to numerous sources of reward coming from each role. [165]

[158] Orden/Bradburn, 1969, p.392
[159] Terborg, 1985, in: Long/Kahn/Schutz, 1992, p.227
[160] Pearlin/Schooler, 1978, in: Long/Kahn/Schutz, 1992, p.228
[161] Hock/Morgan/Hock, 1985, in: Long/Kahn/Schutz, 1992, p.228
[162] Cohen/Wills, 1985, in: Long/Kahn/Schutz, 1992, p.228
[163] Long/Kahn/Schutz, 1992, p.227
[164] Long/Kahn/Schutz, 1992, p.235
[165] Thoits, 1983, in: Long/Kahn/Schutz, 1992, p.235

3.2 Implications of contextual factors on behavior

Contextual factors have many different impacts on behavior of women at work. Stereotypical expectations are particularly powerful.[166] Spencer et al, who examined the impact of stereotypes on performance, revealed that women´s anxiety about confirming other people´s expectations about their lower ability resulted in worse performance.[167]

Also self-regulatory processes are relevant to the effects of gender roles.[168] Ely found that women´s social identities at work reflect dominating gender stereotypes, mainly in male-dominated firms.[169] Women may therefore behave according to stereotypes due to prior internalization of gender roles. In this way, gender roles can lead to sex differences in behavior without any intrinsic psychological gender difference.[170] To the extent that women have internalized such traditional or stereotypical roles, they may be less willing to achieve any leadership position.[171] Traditional values and role expectations strongly shape job choice as women who choose a traditional lifestyle often do not consider executive positions as a realistic option as such a job is considered to be incompatible with private responsibilities such as household work, caring tasks and parenting.

As already mentioned above, well-being of women is enhanced in the case that they have to fulfill different roles.[172] This shows that general occupation has positive effects on women´s welfare, the upper bound of the extent of employment is however unknown. According to my mind, the upper bound may be the level where positive, productive stress switches into negative stress, so called "distress". Distress can be explained as a very high level of stress with mainly negative aspects which limit or even destroy physical or mental soundness and welfare of an individual person.

Besides traditional lifestyles such as the wish for having a family and kids, prevailing stereotypes, the belief in the own inability and the fear of non-acceptance may prevent women from choosing certain professions, mainly those in male-dominated fields.

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[166] Synder, 1981, in: Eagly/Karau, 2002, p.589
[167] Spencer et al, 1999, in: Eagly/Karau, 2002, p.589
[168] Eagly et al, 2000, in: Eagly/Karau, 2002, p.589
[169] Ely, 1994/1995, in: Eagly/Karau, 2002, p.589
[170] Eagly/Karau, 2002, p.590
[171] Lips, 2000, in: Eagly/Karau, 2002, p.590
[172] Long/Kahn/Schutz, 1992, p.235

3.3 Implications of contextual factors on chances of promotion

Referring to the issue of developmental job opportunities, which has been discussed before, a lack of key assignments may result in women having less responsibility than men in the same jobs, even if they have followed similar career paths. As a consequence, women may be eliminated from a pool of candidates when applying for a new job because they have never shown what they are able to do when facing new challenges. Having less responsibility at work therefore lowers chances of promotion as women are considered as being less competent to deal with unfamiliar events than their male colleagues. It is therefore crucial to give women the possibility to acquire further experience in order to be able to compete in an organization and to get access to high-level responsibilities.[173]

A high private workload resulting in the decision for only a part-time employment is another factor which influences chances of promotion. Due to less responsibility at work, maybe not enough time to show high potential and less possibilities for job development, women may not be given the possibility of professional advancement. I could imagine that part-time employees may very well be given new areas of responsibility at work but may not be promoted to a higher level due to expected higher competence of fulltime workers and maybe also expected lower willingness to climb the career ladder. Women working part-time may be considered as not being willing to prioritize job issues and invest full energy in them.

As already mentioned above, also stereotypes and expected leadership styles influence whether a man or a women is promoted to an executive position. Stereotypes shape an individuals´ views about others and therefore influence own decisions, especially when stereotypes are internalized or considered as carrying at least a spark of truth within them. These stereotypes which are according to research still predominant in the mind of especially male managers need to be changed and women need to be given equal promotion opportunities as men, particularly in the case of similar potential.

[173] Ohlott et al, 1994, p.62

4 Causal relationships and possible solutions

4.1 First Reflection

Now being aware of different relationships between risk aversion and behavior as well as its implications on job choice and women underrepresentation in management, I thought about possibilities to counteract negative consequences of risk aversion for women.

Can incentive systems be changed so that they are more appropriate for women?

Is it difficult to incentivize women or is it easier to change the context as we have already seen in the example of class composition at school? How could the context be changed in business? Is it possible to implement such measures in companies?

These and many more questions need to be considered when the current state of the art in management should be changed towards more gender equality.

As for incentive systems, I think that women should be given at least a low variable compensation part as otherwise, if remaining at fixed pay, nothing would change and women´s higher risk aversion would just be accepted and even reinforced. Reducing consequences of misjudgment for women and therefore offer job security while increasing consequences of misjudgment for men at the same time due to overconfidence, higher aggressiveness in business operations, a strong focus on short-term profits instead of long-term orientation and higher risk propensity is an idea that could work. The implementation of such a compensation system may however be difficult due to its gender asymmetry in treatment and can lead to perceptions of unfairness as well as legal problems.

Concerning context change, job rotation may be a good way of learning to cope with many different situations, people, tasks et cetera and therefore get used to uncertainty, new and unfamiliar situations. Another possibility would be to only bring women together in teams or only having women trainees in one business unit to achieve the same effect as in the case of single-sex classes at school which I discussed in chapter 1.2.

Over time, the proposed organisational measures may result in lower risk aversion and higher ability and willingness to deal with uncertainty. The remaining question is: Would these proposals really have the desired effects in reality? Is it possible to change the effect of competition aversion as well as risk aversion in tournaments through moderation or other means of support?

Such ways of changing negative effects of competition or risk aversion as well as other possible solutions to women under-representation in management based on previous findings will be discussed as of chapter 4.4, where all identified causal relationships will be brought together.

4.2 Second Reflection

After having identified different implications of competition aversion, I also thought about possible actions to offset negative consequences of competition aversion on women advancement.

First of all, I want to build a bridge between competition and risk aversion. Interestingly, risk aversion itself has been found to play a less important role in tournaments as other factors such as gender differences in preferences, levels of confidence and perceived competence have been found to influence competition aversion more strongly. A link between these two traits therefore does exist but apparently seems to be of less importance.

According to Niederle and Vesterlund, the creation of environments in which women of high ability are willing to compete would lead to high gains for society. [174] *The creation of such an environment still remains a challenge as no solution has been found yet. A possibility could be to create a supportive environment that assures positive reinforcement of behavior based on confidence and expertise. This may however be difficult to implement as it requires continuous motivational appraisal of women´s actions.*

In the last reflection I mentioned moderation as a possible method of lowering risk aversion in tournaments. In fact I really do think that moderation is a good way of enabling better group communication and cooperation, increase self-awareness of participants and allow for many different opinions, but I think it is more efficient regarding competition aversion than risk aversion as personal factors such as self-confidence or perception of competence are more important in the case of competition aversion.

Apart from influencing contextual factors, legislative actions such as women quota could be introduced to ensure a sufficient number of women in top management positions. Women quota sound good, but in reality they do not solve the problem at all. If women are just promoted or recruited due to quota restrictions without looking at their qualification, they may get even less esteem from men than now. Therefore, attitudes of men are the first ones that need to be changed.

[174] Niederle/Vesterlund, 2007, p.1100

A recent article in the career section of the Austrian newspaper Kurier emphasized the importance of primarily basing recruitment processes on qualification. An introduced women quota wouldn´t change that. According to the article, the reason for the current desire to have more women on board of top management is the fact that women seem to have a positive impact on turnover and profits of a company which has been shown in a recent study of Ernst & Young. Moreover, women are found to take better use of their emotional intelligence than men and develop a closer relationship to employees. [175]

4.3 Third Reflection

Research has shown that babies do influence job choice as well as working hours of women to a high extent. The remaining question is whether different incentives of companies would increase working hours or also willingness to be in top management.

Considering stereotypes for example, a change in the views of male managers as well as society in general would for sure change promotion opportunities of women if they were regarded as being equally able and competent as men.

But would women change their mind regarding their career goals if companies offered them for example flexible working hours and/or corporate kindergartens? Would they then decide to work more as their kids are cared for as long as they are at work? Or would they rather devote more time to their own interests?

I think such initiatives would maybe not make ambitious candidates for top management out of all employed mothers, but they may reduce their double burden at least to a certain degree and maybe enable them to work at least some hours more in the case of part-time employment. More working hours usually imply more responsibility as well as a higher task variety, or less job stress in the fulfillment of required tasks, depending on how a person looks at it.

It is however difficult to say whether mentioned incentives could really solve the whole problem of women underrepresentation in management as the baby effect is quite strong and significantly changes career paths of women. Moreover, provided child support such as company kindergartens is quite expensive for the firm, so the additional costs and benefits need to be weighed up.

[175] Thurn, 2012, p.2

Besides economic considerations, also psychological aspects need to be considered. I think that it is not in the nature of a mother to give birth to a baby and afterwards turn back to work and put the baby in the kindergarten all day long. According to my mind, this is not what parenting should be as the first years of a baby heavily impact its further development. Although company incentives may enhance chances of women to get a more desirable and more responsible position, I doubt whether women with kids really want to climb the career ladder before their children are grown-up, on the one hand due to the willingness to care for their children and see them growing up and on the other hand also due to high occupational and personal stress when working long hours and managing the household and family life at the same time.

What may however work is paternity leave, a good possibility to relieve working mothers from home responsibilities so that they have more time and energy which they can invest in their job. This would also reduce the time span between the birth of a baby and women´s return back to the job which may have some beneficial effects as such a long time span easily results in a feeling of not really belonging to the company anymore and of being less competent when returning back to work after maternity leave. This feeling of lower competence is due the fact that the women are not up to date with the latest developments. To avoid such a situation it would be important to regularly inform them about current developments during maternity leave. Moreover, firms need to ensure that men who take the opportunity to spend some time with their baby do not suffer any disadvantage in their job when returning from child care.

Interestingly there are some studies on the effects of increased paternal involvement on children. The results were surprisingly consistent. Children with fathers that were highly involved in their lives showed a higher cognitive competence, increased empathy, fewer sex-stereotyped beliefs and also a more internal locus of control.[176] *Parental child care therefore positively influences stereotypical thinking of their kids when talking about egalitarian sex roles in society. The findings show that parental involvement in child education and child caring does not only relieve women but has also very beneficial effects on the child´s development.*

In the following subchapter, I will try to combine findings of the last chapters and set up some causal relationships which finally influence or determine women underrepresentation in management. Also possible solutions will be discussed.

[176] Pleck, 1997; Pruett, 1983/1985; Radin, 1982/1994; in: Lamb, 2004, p.7

4.4 Identified Relationships

In dealing with risk aversion, competition aversion and contextual factors in the last chapters, many interactions as well as cause and effect relationships between these factors and the current underrepresentation of women in management have been identified.

To analyze influence factors on career paths of women, I may have to start from scratch. At the beginning there is the sum of all women in the labor market. Of those I identify a number of women who are not able to pursue a career, maybe due to lack of intelligence, or who anyway do not want to do so. Furthermore, there are those women who opt for jobs in social sciences or school education where occupational advancement to a higher level is often not an issue. The third group is composed of women who have the necessary prerequisites to pursue a management career. These are the women whom I want to shed more light on.

Why do some women of the third group arrive in leadership positions and others not? What motivates their choice? What are the differences between capable women arriving in top management and others who do not get there?

Job choice is usually motivated by one´s own abilities and strengths as well as by a person´s life planning. It may be difficult to achieve a top management position and to have kids and devote adequate time to them at the same time. Family-career trade-offs are therefore very important in this regard. To counteract negative effects connected to a person´s family status, different incentives which consider the specific circumstances of women need to be offered.

Also the belief in the own abilities is relevant in this regard. Women have been found to rather underestimate their abilities than to overestimate them as men usually do.[177] A lower willingness to pursue a management career may among others be motivated by a lack of self-confidence and the personal belief of having lower than required competence for those high-level jobs. This thinking is partly caused by the evolutionary differences between men and women and the fact that men are at least physically the stronger sex which gives them a reason to transfer this dominance in all areas of life, even if it is not true. Building up someone´s self-confidence is according to my mind the duty of an individual´s closest reference persons such as parents, teachers, relatives and friends. If self-confidence has never been built up, or once it has been seriously weakened, it is very difficult to be restored. In a company, self-confidence can mainly be strengthened by means of positive appraisal of

[177] Beyer, 1990, p.966ff

one´s work, esteem and regular feedback. This becomes more difficult in higher management as praise will become rarer the higher a person rises in a company. A healthy dose of self-confidence is therefore one of the main prerequisites for arriving in top management. Self-confidence itself has direct implications on a person´s behavior in competition, both in terms of competition aversion as well as in terms of performance.

Out of the considered group of women relevant for management, those women who finally arrive in leadership positions may be those who put less emphasis on private issues such as family and who pursue their career target with iron will. As I have already mentioned in the previous chapter, there is no one best approach to the ideal female management style as women should be neither too masculine neither too feminine in their behavior as having a masculine style is considered as being inappropriate for women while being too feminine is associated with lower competence. It is therefore a tightrope walk with which a women needs to be able to cope with.

In contrast to contextual factors, which are most of all exogenous, risk and competition aversion are rather determined internally and part of an individual´s personality. A high degree of risk and/or competition aversion has been found to negatively affect women advancement, as is shown below.

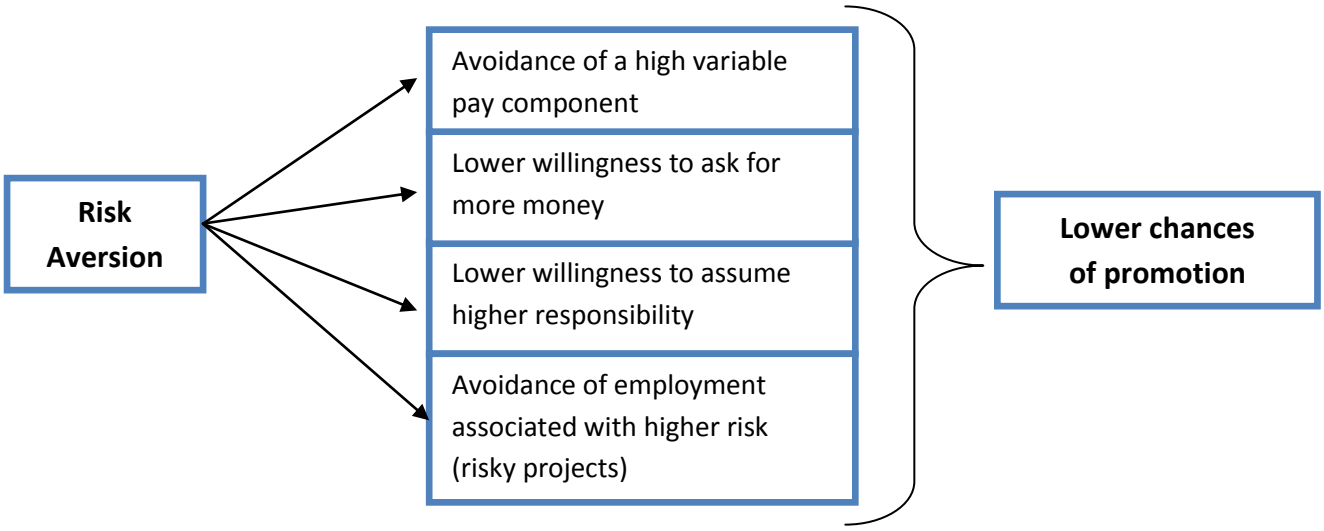

Figure 1: Influence of risk aversion on chances of promotion

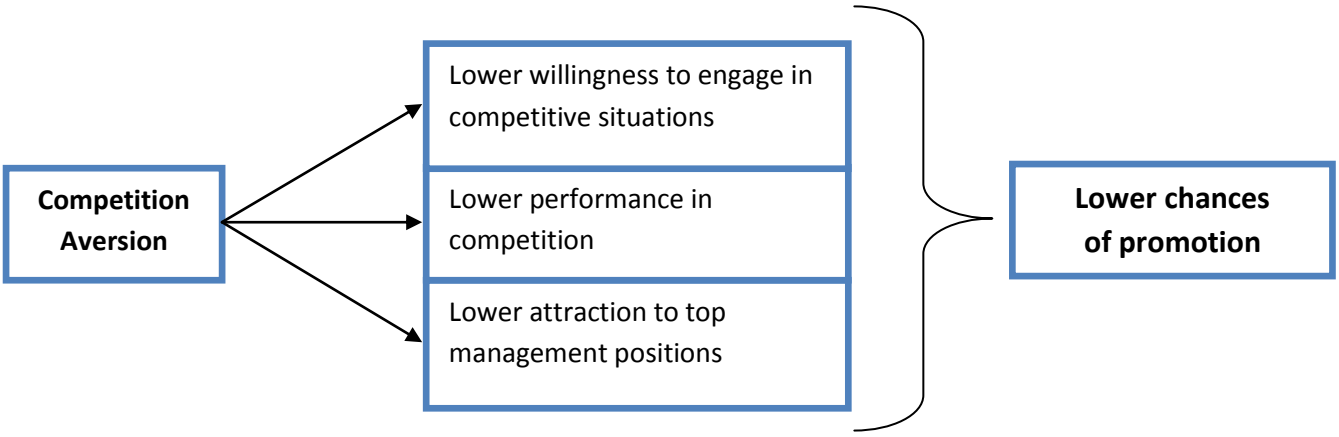

Figure 2: Influence of competition aversion on chances of promotion

In the first reflection, I have already thought about possibilities to deal with risk aversion. Incentive setting in general is a very interesting possibility to influence the behavior of employees and to meet their needs. Raith found that with higher competition due to increased product substitutability or a larger market, companies give stronger incentives to lower costs, although profits are more volatile. The finding is based on the assumption of free market entry.[178] Higher market competition therefore has a positive influence on company incentives as some economists have already assumed in the past.[179]

The effectiveness of such company incentives depends on a person´s individual risk attitude. As women have been found to be more risk-averse than men, high financial incentives may not have the desired effect. A risk-averse person simply doesn´t want the own salary to be based upon exogenous developments he or she can´t control and therefore rather prefers a fixed pay. As for the question whether incentive systems can be changed to be more appropriate for women, I have to distinguish organizational and material incentives. I think, women would generally respond to incentives in a more positive way, if they were not strictly success-related but rather contingent on overall performance. As long as incentives are mainly related to the achievement of agreed objectives, women will be less willing to go for them due to the related uncertainty. If firms manage to reduce the consequences of lower performance due to misjudgment of external factors and circumstances for women, they will according to my mind be less averse to variable pay components.

Moreover, the agreement of objectives which are realistic and can be achieved with usual effort so that women have the feeling of really being able to achieve their goals is a possible. This approach however has a negative connotation of lower competence of women as the agreement of lower

[178] Raith, 2003, p.1433
[179] Leibenstein, 1966; Nickell, 1996; in: Raith, 2003, p.1425

goals that are related to medium effort simply have to be lower than those that can be achieved with high effort. The required exertion of high effort in turn implies feelings of stress and external pressure which are negatively related to risk aversion. When continuing with this idea, I somehow end in a vicious circle.

Offering a job with a low variable pay component may be more appropriate as the scale of performance contingency is not that high which means that the associated personal risk is lower. This can serve as a motivation and stimulus for women as a lower risk may intrinsically motivate women to perform very well in order to be able to achieve their goals, which is not only important for their appraisal within the company but also for their own self-confidence.

In this context, envy has been found to play a non-negligible role, mainly when applying different incentive schemes and having only subjective performance measures available at the same time.[180] The long term danger in such a case is that people are seduced to feel treated unfairly when earning less than others even when personally having chosen a certain incentive scheme.

I will deal with the matter of incentive setting in even more detail regarding practical relevance within the framework of my experiment design in the next chapter. The experiment will be designed to elicit time preferences as well as to examine how people react to a range of offered incentives and which ones they choose.

Incentive systems are technically rather easy to change as long as they are accepted by the employees, conform to our legislative system and do not discriminate anyone. But still, once an incentive system has been introduced and is accepted by the employees, it is hard to change it as the employees get used to it and may probably show resistance in the face of further innovations.

As for context change, things are even more difficult. Already mentioned possibilities are job rotation, having only women together in teams or only having female trainees in a business unit. I think all these possibilities would provide women with a surrounding that could encourage them to deliberately take risks as well as to perform well, even in the case of competition. This is due to the finding that when being in a single-sex class, in our case a team, women are found to show a lower risk aversion than in mixed-sex classes or teams as discussed in chapter 1.2.1. Moreover, girls are not competition averse in every respect, as initially thought; they just seem to be unwilling to compete against boys. This may among others be due to evolutionary differences of both genders. The fact that men are stronger in terms of physical strength may give girls reason to believe that they are also

[180] Kragl/Schmid, 2009, p.776

better in other disciplines which could explain why girls usually perform worse when having to compete against boys. Single-sex teams would probably solve problems of risk aversion and competition aversion at the same time.

In theory, this sounds perfect, but in reality I think that the implementation of such strategies may entail problems concerning discrimination. Moreover, gender segregation has been found to have negative effects on boys´ behavior and is therefore suboptimal for society as a whole. Furthermore, such measures can have the consequence that boys and girls do not learn to work together and to get along when facing any problems or difficulties. Moreover this would enforce already existing gender segregation which we already have in many business areas such as the construction business or social work.

The third component that influences women advancement is the environment, being mainly composed of a person´s family planning, societal norms and expectations, developmental chances at work and prevailing stereotypes. The baby effect has been found to be the most significant one in my thesis as the relationship between having a baby and a mother´s willingness to work only part-time is very strong. The baby effect is also one that is more conscious to a person and can be much more controlled by oneself than risk aversion for example which is rather an endogenous factor than an exogenous one.

As for contextual factors I want to split the effects for women with kids, or who at least want to have kids, and women who don´t have kids and are without any aspiration to ever have kids.

For women with kids, the baby effect is the strongest one. The implications of having a baby are shown in the following graph.

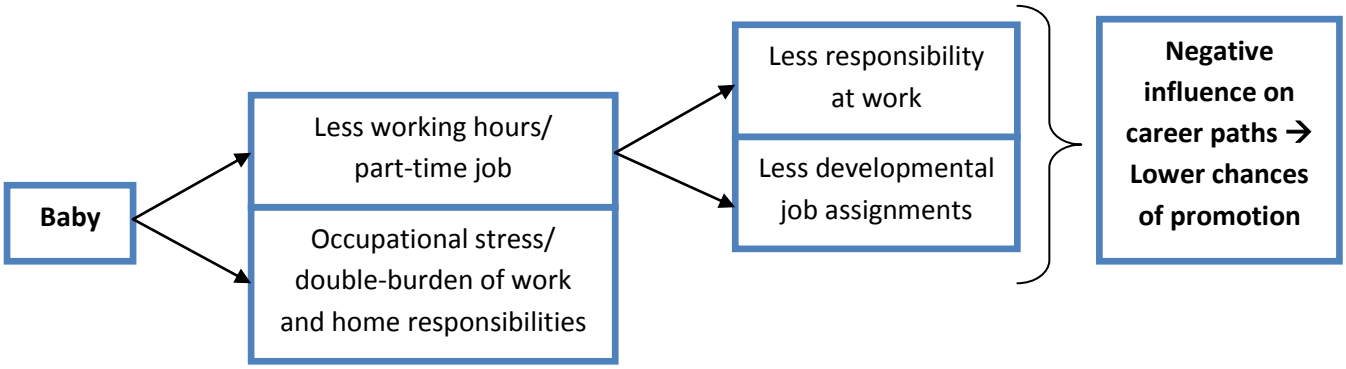

Figure 3: Influence of babies on chances of promotion

Women need to devote lots of time to their babies, at least during the first years and have therefore only limited possibilities to pursue a career at the same time. Even a part-time job leads to high occupational stress due to the double-burden of work and home responsibilities as even nowadays, women usually do most of the housework. Engaging a nanny for child caring and a cleaner for the household would relieve women of their double-burden but is also a question of money and of women´s priorities.

Besides limited time reserves, a further problem that women have to face is the current requirement of overall flexibility. If they have kids at home, they can´t be totally flexible and change their plans at short notice, as they may have to fit their office hours to the hours of business of their kids´ kindergarten or the working hours of their nanny. Here, a step forward would be not to require flexibility of female employees, but to give them flexibility to be able to bring private and business life into line.

The wish to rise up the ladder and also to have kids has a further implication which has among others been found among female PhDs employed at university level, as presented in chapter 3.1.4.2.

Due to longer periods of education and the wish to start business life prior to having a baby in order to have better chances on the job market later on, many graduates delay the timing of childbearing to a later time.

Due to longer periods of education and the wish to start business life prior to having a baby in order to have better chances on the job market later on, many graduates delay the timing of childbearing to a later time.

To achieve higher female representation in management, firms are increasingly required to show consideration for working mothers and to offer work arrangements which may help them to reduce levels of stress. As already mentioned above, flexible scheduling, increased availability of part-time employment, on-site day care facilities and split-location employment are only some possibilities which may permit working mothers and fathers to combine work and family roles with less strain. Flexible work arrangements such as additional home office hours provide an ideal opportunity to at least partly stay in business also during the waiting period and the following years of childcare. As for my research question it would be interesting whether top management jobs could also be executed on a part-time basis. This would change the whole situation as management jobs would then also be attractive for those women who have more or less left this option aside so far.

Apart from the discussed baby effect, other influence factors such as stereotypes, role expectations or developmental job assignments are primarily relevant for women who prioritize their career, as they pose diverse obstacles to them and hinder them in their career advancement. For those women who consider their job just as one of multiple roles they have to fulfill in their lives, those factors are of less importance and only influence their advancement in a company to a limited degree as they often do not have high career aspirations.

Identified causal relationships relevant for the advancement of career women are presented in the following:

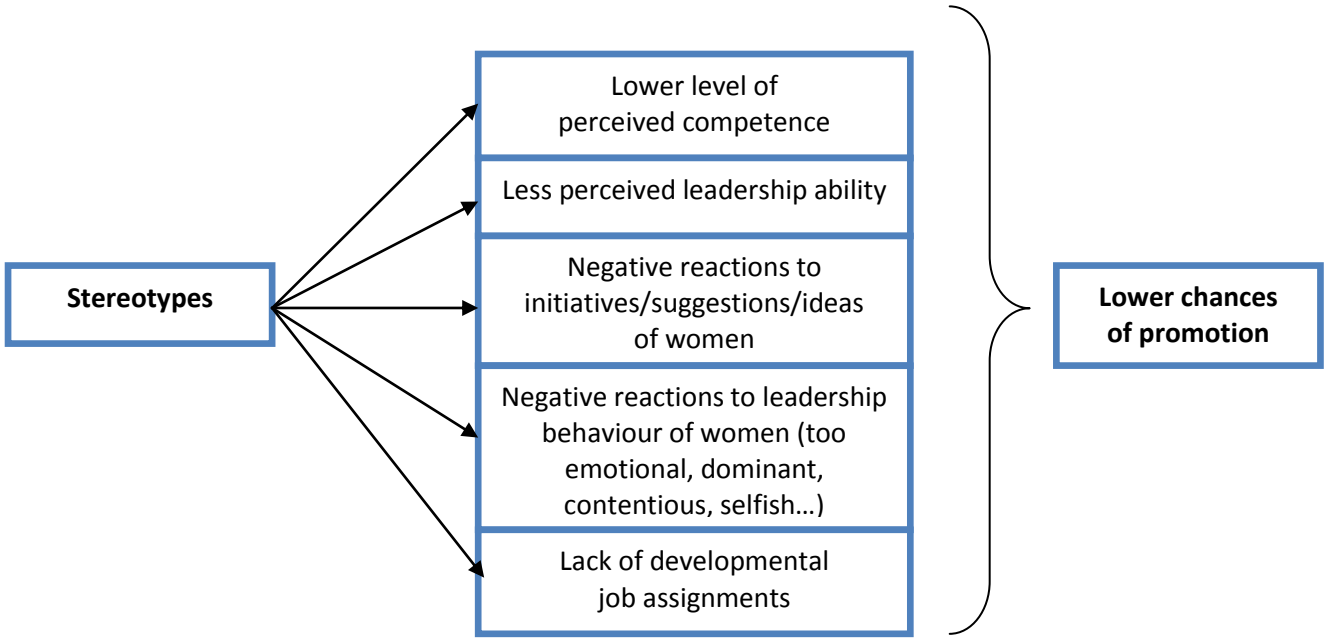

Figure 4: Influence of stereotypes on chances of promotion

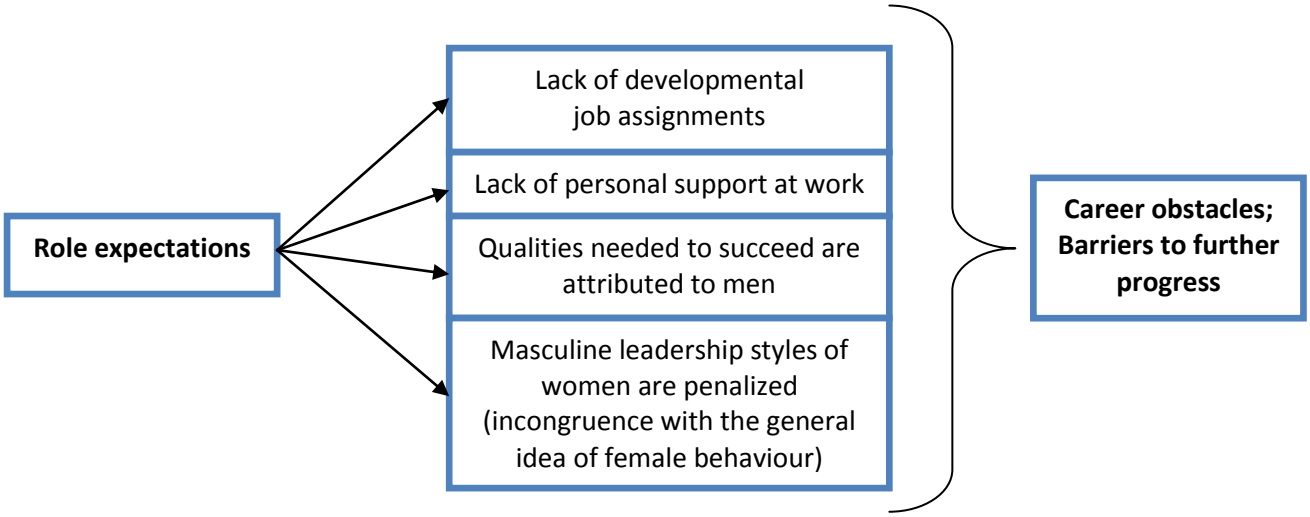

Figure 5: Influence of role expectations on chances of promotion

I have assigned developmental job experiences to both role expectations and stereotypes as I think that they are relevant in both cases. On the one hand, women may be given less developmental job assignments as they are expected to be less able than their male colleagues and on the other hand they are categorized as being less willing to climb the career ladder due to traditional role models of women. According to King et al[181], good and benevolent intentions of shielding women from very demanding, challenging tasks do have negative effects on women´s careers and need to be avoided to ensure equal chances of promotion for both men and women. Women that have high aspirations should be given the opportunity to acquire new knowledge and skills by being confronted with unfamiliar situations instead of being protected by male managers, just because they are women.

Moreover, stereotypes, traditional role expectations and all its negative implications and consequences need to be overcome in times of gender equality as equal chances in business will for sure lead to a change in women´s roles and a redistribution of family duties between couples.

What Austrian female executives such as Tatjana Oppitz, current country general manager of IBM Austria, try to force is a fast reintegration into business life after maternity leave. Moreover, the aim is to reintegrate them on a part-time basis if necessary, but in a position that allows further development so that those women can acquire essential leadership skills and higher qualification during the years of part-time work so that they are able to climb the ladder at a later stage of their career, when their kids are already teenagers or even grown up. Oppitz wants to introduce special labor time models for mothers.[182] Moreover she has a high interest in supporting young women in defining their personal career goals by means of specific mentoring and coaching programs.[183] For her, mentoring is a two-way street as she has own mentors that help her and at the same time, she is mentoring many females. Oppitz´s goal is to encourage young women and to give them confidence in their abilities. Women should be supported in order to be more decisive, to dare to follow new paths.[184]

I think that such mentoring and coaching programs may be a very effective way to support women and help them make their way. Women need models that have climbed the ladder to top management in order to strengthen their belief in themselves and in their chances to become successful managers. They need to know how those women managed to get to the top, which steps

[181] King et al, 2012, p.1835-1866

[182] http://www.welt-der-frau.at/index.htm?http://www.welt-der-frau.at/viewcat.asp?ID=4214&cat=17, accessed 28th July 2012

[183] http://www.ibm.com/ibm/at/de/cgm.html, accessed 28th July 2012

[184] Oppitz, interview published at http://typischich.at/home/business/726731/Tatjana-Oppitz, accessed 28th July 2012

they took in order to be respected by their male colleagues, how they were able to successfully compete against numerous competitors for high management positions and how they reconciled work, private and family life.

Creating special networks for women where they can establish contacts, talk about their experiences, develop new ideas, support each other and give advices on certain issues would also be a good way to promote female advancement. This is especially important for women who are occupied in male-dominated professions as they particularly have to assert themselves against their male colleagues. But also for those women who work in female-dominated professions or occupy general management positions, the personal exchange of experiences is very important.

In times of Facebook, Twitter and LinkedIn, access to and participation in social networks are gaining in importance. So far, business relevance of those networks is still limited, but things may change in the future.

All presented cause and effect relationships show that women still face many challenges as well as obstacles in their professional lives, even in times where the attainment of women emancipation has a high priority in society. Much more needs to be done to ensure equal promotion possibilities for men and women and a more balanced representation of both genders in management.

In the next chapter, I am going to present a possible experiment design in order to elicit time preferences of men and women and maybe find a difference in decisions of men and women. The results should give an indication on factors that influence women´s decisions and show whether risk aversion, competition aversion or personal factors are predominant. As early business decisions already lay the foundation for future career paths, the presented decision settings have also practical relevance.

5 Own Experiment

5.1 Concept

The general idea of the experiment is to elicit time and risk preferences of women and find out how women compared to men make their choices in business life. The experiment therefore has two main purposes.

The first purpose is to elicit time preferences. In this regard, the experiment tries to grasp women´s intertemporal choices. The choices refer to decisions which can influence the personal career path in the long run. The second purpose of the experiment is to capture risk preferences of women with regard to the family-career trade-off. The experiment therefore covers two paths that have not been followed very often in the literature, at least so far. The ultimate ambition of the experiment is to make a constructive contribution to the issue of women´s underrepresentation in managerial positions.

Even if the experiment investigates preferences of women both on a short-term and a long-term basis, the range of time in the experiment is short in order to be realistic and make sure that decision makers tend to look as forward as they are supposed to in the experiment. The long-term decisions therefore refer to choices that can affect the career-path in the future but are taken on a short-term basis. This fact is crucial for the interpretation of the experiment results. The time frame considered in the described experiment is approximately three years.

The subjects in the experiment are male and female students from the Economic Faculty of the University of Vienna. The reason for choosing students as a perfect population is that the majority of them will enter the labor market after university education. There they will be confronted with new challenges and have to take their first career decisions. These decisions are highly relevant for the purpose of the experiment as they reveal important details about the students´ preferences. The experiment is based on contract choices of a university graduate right at the beginning of his or her professional career, continuing up to a point where the graduate has managed to become promoted. Whether the student really gets there depends on his or her contract choices at an earlier stage.

In order to elicit time preferences of women, the experiment comprises two stages at different points in time. In the first stage, the subject is given the information that he or she has been selected for the trial period in a highly desirable job and is allowed to choose between three contract packages providing a series of incentives. These incentives have different implications on the career

development and amount of income. The outcome of the own effort itself is however uncertain, so whether the subject´s position will be confirmed after the trial period or not and whether the person finally gets promoted or not. In the second stage, the situation is similar, but at that point, the trial period is over and the position of the subject is finally confirmed by the company. The participants are informed that they are eligible for promotion which means that career options become more specific. Results may make clear whether in this case women are more likely to opt for investment in the internal MBA training, a prerequisite for promotion. In both stages, the participants of the experiment are encouraged to think about their future and their own preferences in order to make a good decision for the short as well as for the long term.

Besides the elicitation of time preferences, the experiment is designed in order to seize risk preferences with regard to the trade-off between family and career. It is difficult to isolate this trade-off and participants cannot be asked directly. For this reason, the second stage of the experiment contains one treatment with a trade-off between career advancement and the certainty to work at the headquarters. As participants are firstly presented the baseline situation of stage 2 and are afterwards confronted with the possibility to be sent abroad in the case of career advancement, there is the possibility to compare subjects´ choices horizontally. This means that besides looking at subjects´ choices at different points in time, the experiment also allows an analysis and interpretation of subjects´ choices in a horizontal dimension.

The experiment results may show whether the possibility to be assigned to a foreign subsidiary does deter women from choosing a contract that enhances chances of promotion. This can be the case when women have intentions of becoming married and starting a family, as under these circumstances, moving abroad may be no option for them. The situation may differ for those women who have opted for future career investment in the first stage as they are offered a performance-contingent refund if they want to become promoted but do not want to be assigned to a foreign subsidiary.

Stage three covers the choice of certain benefits after a promotion. This stage is only planned for those that have at least once opted for investment in their future career in order to become promoted and plays just a secondary role in the experiment. The benefit selection may give hints on underlying preferences and show, what is finally important to women. If women opt for bonuses or stock options, they may not be as risk averse as initially thought. If women choose paid time off or parental leave, family may be of high importance in their decision-making process. The choice of health insurance or pension plans may give an indication on prevailing risk aversion as those benefits

offer a certain degree of personal security. The choice of the benefits will finally find its utility at data interpretation level.

On the basis of students´ contract choices, it should be possible to interpret whether women´s choices have direct implications on women underrepresentation in management. Women that are more risk averse, have less ambition and other priorities than work may make different contract decisions than others who want to climb the career ladder and therefore prioritize their job over their private life. Preferences of women may shape their personal career expectations, their attitudes to work and consequently also possibilities for further advancement in a company. As a result, the elicitation of preferences may help to explain why women are still underrepresented in top management positions.

At the end of the experiment, students are asked to answer a general questionnaire containing person-related questions as well as family-related ones. The data is necessary for later interpretation of the experiment results and help to find correlations between a person´s decision and its family environment for example. In this way, effects of different factors can probably be disentangled.

5.2 Theoretical Framework

Risk aversion

In chapter 1 I have already presented a series of studies measuring risk aversion. In theory, risk aversion (r(x)) is measured by dividing the second derivative by the first derivative of a certain utility function, which means r(x) = – u´´(x)/u´(x). This is the so-called Arrow-Pratt measure.[185]

As people are usually not aware of their own utility function, I try to measure the participants´ risk-aversion by means of simple gamble- and investment-choice tasks in the post-experiment questionnaire. The more often participants opt for the safer investment or more secure amount of money, the higher I classify their risk aversion. The questionnaire is presented in chapter 5.5. In my method of measuring risk aversion, I follow the example of many previous studies which tried to get indications on risk aversion by studying investment behavior, participation in the lottery, choice of payment schemes and many other decisions. I refer to the studies that I have presented in chapter 1.

As for the experiment, risk aversion is relevant in two respects. To a certain degree, it influences contract choice at every stage as the contract packages involve different kinds of risk but is particularly relevant for the treatment situation in stage 2. At this point, the participants get the additional information that career advancement may be related to a transfer abroad. As a consequence, the risk associated with career advancement gets higher. Based on women´s risk preferences, this fact may influence and probably change their contract choices. Risk aversion is therefore central to the horizontal dimension of the experiment which is set out above.

[185] http://www.econport.org/econport/request?page=man_ru_advanced_riskaversion, accessed 7th February, 2013

5.3 Design of the experiment

We invite 100 students from the Faculty of Economics of the University of Vienna to participate in our survey which constitutes a decision-making experiment. The data is anonymous and the participants receive a participation number as identifier. The experiment consists of a total of three independent stages but according to the participants´ decisions, there is the possibility to do only two stages of the total.

We invite both bachelor and master students to participate in our experiment. The age of the participants therefore ranges from 18 to 30 years. The students are informed that they will be paid for their participation in cash at the end of the experiment. As soon as the students are ready to start, we ask them to carefully read the instructions. Afterwards the students are briefed on the experiment process and get to know that the experiment comprises a total of three stages.

The participants are informed about their chances to get a job at the FOCUS Company in Vienna, a highly desirable job which corresponds to their educational level, a master degree in Business Administration. The job requires a high level of competence, offers possibilities of further training and interesting promotion opportunities. After having read the first part of the experiment instructions, the students also know that there are three different contract schemes, employees of the FOCUS Company can choose between. The setting up of the contracts is also clearly specified in the instructions. Then, students get general information about the first stage which is the following:

As a new applicant at the FOCUS Company you can choose among these 3 different contracts for your trial period.

Each contract has a different incentive structure and therefore different implications. The contract schemes of the first two stages are the same. They are specified in the following:

CONTRACT 1: Your payment scheme will be based on a fixed monthly wage $y = \alpha$.

CONTRACT 2: Your payment scheme will be based on your performance. You will receive the minimum fixed wage and according to your performance you will also get a piece rate payment. $y = \beta + f(x)$ *with* $\beta < \alpha$ *(The variable* x *represents your personal performance)*

CONTRACT 3: Your payment scheme is composed as follows: you will receive only the minimum fixed wage as in CONTRACT 2 but instead to receive a piece rate payment for your performance you will

have the possibility to attend the MBA internal program (which is a prerequisite for promotion) for free. y = ß + σ (where σ represents the option to attend the MBA for free)

In the first treatment of the second stage, participants are given the information that the trial period is over and that they can choose their contract package again. In the second treatment, participants are informed that the promotion will include the possibility to be assigned to a foreign subsidiary and are again asked to make a contract choice. For those who have already opted for contract three in stage one but do not want to be assigned to a foreign subsidiary, contract three is replaced by a performance-contingent refund.

In the third stage, which is only for those that have at least once chosen contract three, participants get the possibility to choose between a range of five different benefits which are listed in the following:

- *Health insurance*
- *Paid holidays or paid time off*
- *Retirement plan*
- *Parental leave*
- *Bonuses or stock options*

Besides having to choose one contract package at the beginning, the students are given the possibility to change the package offer after a specific time period. In this way, the long-term perspective of career paths is taken into account. As a result, long-term preferences of the students can be elicited which may give an answer on the research question of women underrepresentation in management.

At the end of the experiment, the students are asked to answer the following questionnaire.

Post-Experiment Questionnaire

Sex: M ☐ F ☐

Age: …….. years

Family status: Single ☐ Married ☐ Divorced ☐ Widowed ☐

Studies: Bachelor ☐ Master ☐

Semester of your current Studies: 1-2 ☐ 3-4 ☐ 5-6 ☐ 7-8 ☐ 9-10 ☐

What is the major field of your studies? ……

Do you work besides your studies? Yes ☐ No ☐

If yes, how many hours do you work?

1-10 ☐ 10-20 ☐ 20-30 ☐ 30-40 ☐

Which is the highest educational attainment of your father?

Secondary School Qualifications ☐

General Qualification for University Entrance (A-levels) ☐

University degree ☐

Which is the highest educational attainment of your mother?

Secondary School Qualifications ☐

General Qualification for University Entrance (A-levels) ☐

University degree ☐

Do you have brothers or sisters? Yes ☐ No ☐

If yes, how many brothers/sisters do you have? ……

Have you grown up in a city (>10.000 inhabitants) or on the countryside?

City ☐ Countryside ☐

If you were given the opportunity to either get 10€ in cash or to participate in a lottery with a 50:50 chance to win 20€, what would you take?

The 10€ in cash ☐ The 50:50 chance ☐

Suppose that your employer asks you to choose between two options of income. In the first option you get A dollars per month, in the second one you get B or C dollars, each with equal likelihood. The expected utility is the following: *0,5*U(B) + 0,5*U(C) ≥ U(A)*
Which option would you choose?

Option 1☐ Option 2 ☐

Suppose that you are allowed to choose between two alternatives. In the first one, you have the chance to win 4.000€ with a probability of 80% and 0€ with a probability of 20€. In the second alternative, you get 3.000€ for sure. Which alternative would you choose?[186]

Alternative 1 ☐ Alternative 2 ☐

If your parents gave you 2000€ and asked you to invest it, would you invest it in hedge funds which imply a higher risk or rather in federal bonds which are a more secure form of investment?

Hedge funds ☐ Federal bonds ☐

You are again asked to choose between two alternatives. In the first case, you may win 5000€ with a probability of 70% and 0€ with a probability of 30%. In the second case, you have a 90% chance to win 3000€ and a 10% chance to win nothing. Which alternative do you prefer?[187]

Alternative 1 ☐ Alternative 2 ☐

Thank you very much for your participation. If you are interested in the experiment results, please write down your e-mail address: .....

[186] Kahneman/Tversky, 1979, p.266
[187] Kahneman/Tversky, 1979, p.266

5.4 Treatment of the Experimental Data

For the analysis and interpretation of the experimental data, a range of classic as well as robust regressions needs to be carried out. T-Tests as well as F-Tests are necessary to get meaningful results. Moreover, correlations between the decisions of the participants in stage 1 and 2 should be conducted.

The main variables in the dataset are the following:

- Gender (Dummy-Variable with the Values 0,1)
- Stage 1 (Values 1,2,3)
    - 1=C1
    - 2=C2
    - 3=C3
- Stage 2.1 (Values 1,2,3)
    - 1-3=same as in stage 1
- Stage 2.2 (Values 1,2,3,4)
    - 1-3 = same as in stage 1
    - 4=Refund
- Stage 3 (Values 1,2,3,4,5)
    - 1=Health insurance
    - 2=Paid holidays or paid time off
    - 3=Retirement plan
    - 4=Parental leave
    - 5=Bonuses or stock options

Besides these variables, also characteristics of the post-experiment questionnaire need to be included in the dataset and considered in the analysis as they may give important indications on relations between personal characteristics and decisions made in the experiment and therefore add a higher explanatory power to the model of analysis. The post-experiment questionnaire contains a series of questions in order to measure risk aversion of the subjects. It may be interesting to know whether there is a correlation between risk aversion measured in the questionnaire and choices subjects take in stage 2 where risk preferences with regard to the family-career trade-off are examined.

In order to analyze the data in the right way, I set up different hypotheses that should be tested.

Hypothesis 1

Women show no time preference for any contract, which means that the value they attribute to a special contract stays the same over time. (Women that choose C1 in stage 1 also choose C1 in stage 2, the same applies to C2.)

Hypothesis 2

The contract choices of men and women in the experiment do not differ significantly.

Hypothesis 3

The uncertainty of employment after the trial period does not influence decision-making in the first stage. (Participants do opt for C3 in stage 1.)

Hypothesis 4

The family-career trade-off does not influence women´s contract choices. (The distribution of choices in the treatment situation is similar to that in the baseline situation. Here, the refund should be considered as a special form of C3.)

Hypothesis 5

There is no correlation between the choice of C3 in stage 1 and the decision for the refund in the treatment situation of stage 2. (Those women that have chosen C3 in the first stage show no preference for a special workplace and therefore do not opt for the refund that is offered in the treatment situation in stage 2.)

After having tested these hypotheses, it should be possible to answer the following key issues:

- Do women show certain time preferences with regard to their contract choice?
    - Did they change their contract choice from stage 1 to stage 2? If yes, to which contracts did they change?
    - Is the percentage of women that opt for the costly training program higher in stage 2 than in stage 1?
- Which risk preferences do women show?
    - Did women change their contract choice from the baseline to the treatment situation? If yes, to which contract did they change?
    - How does the family-career trade-off influence women´s choices? (Which contract did women that have opted for C3 in the baseline situation of stage 2 choose in the treatment situation?)
    - Did women that chose C3 in stage 1 opt for the refund in the treatment situation of stage 2?

- Which benefits did women choose?
- Which other choices did women that have chosen C3 make?

5.5 Experiment Instructions

Welcome. Thank you for participating in today´s experiment. This is a study in decision making and you will be paid in cash for your participation at the end of the session. All data will be anonymous and you will receive a participation number as identifier.

It will not be possible to communicate with the other participants during the experiment as this is an individual decision making experiment.

Please turn off your cell phones. What is more, please do not write on these instructions, use the provided notepad instead. If you have any question or problem during today´s session, just raise your hand and the experimenter will come to you.

Today´s experiment will consist of three independent stages, but according to your decisions there will be the possibility to do only two stages of the total.

The following instructions represent your starting position and describe the general framework. Please read them carefully and take as much time as you need for each single decision.

Suppose that you have just finished your master studies in Business Administration at the University of Vienna and are about to start your career in the labor market. You have applied for several full time jobs and were fortunately invited to a job interview at the FOCUS Company in Vienna. The interview went perfectly well and you have finally been selected for the trial period.

From the description of the job it emerges that the vacant position could perfectly fit your objectives. The job seems perfect for you since it is a job that corresponds to your major field of studies. More specifically in this position you will be able to use all your fresh skills acquired at university and you will be able to learn, make experiences and enlarge your skills portfolio.

In the description of the job and during the first interview it has been mentioned that it will be given the opportunity to get one promotion at the beginning of your career´s path.

Moreover, the HR responsible of the company emphasized the company´s willingness to engage new applicants for a long lasting relationship. For that purpose he mentioned interesting opportunities for promotion once your position within the company will be confirmed at the end of the trial period.

The first year of employment is going to be a trial period. During the trial period, you cannot get promoted as you are supposed to acquire all skills necessary for internal advancement.

It will be possible to obtain only one promotion in the period considered today.

The possibility to get a promotion will be effective after the end of the trial period once your position inside the firm will be confirmed. Even if you are still not eligible for promotion you can acquire the right requirement for be promoted. The promotion means that you will obtain an advancement in your job, higher responsibilities, higher wage and the possibility to obtain also different kind of benefits.

In order to be eligible for the promotion the commission who will judge your case will consider only two criteria. The first criterion is your performance (such as productivity records) and the second one is the successful conclusion of the internal training program (MBA).

The second requirement is mandatory in order to be eligible for promotion.

The MBA internal training program is not free. You can sustain the cost of the program by yourself or you can choose a particular contract which includes the payment of the fees for the training program. Choosing this particular contract you will have the opportunity to attend the course without paying the cost of the program.

Due to the characteristics of this open job position and the opportunity to be trained in order to reach a higher position, the company´s aspiration aims to build a long-term relationship with its intake.

Besides from your decision related to the contract, your performance records will be registered in any case.

Regarding the payment, the employees of the FOCUS Company have the possibility to choose between three different contract schemes. What is important to know is that they can change their contract choice after a specified period of time.

Please read the described cases carefully. Try to put yourself in the outlined scenario and to answer the posed questions. How would you decide if you had to take the following decisions?

STAGE 1

As a new applicant at the FOCUS Company you can choose among 3 different contracts for your trial period.

CONTRACT 1: Your payment scheme will be based on a fixed monthly wage $y = \alpha$.

CONTRACT 2: Your payment scheme will be based on your performance. You will receive the minimum fixed wage and according to your performance you will also get a piece rate payment. $y = \beta + f(x)$ *with* $\beta < \alpha$ *(the variable x represents your personal performance)*

CONTRACT 3: Your payment scheme is composed as follows: You will receive only the minimum fixed wage as in CONTRACT 2 but instead to receive a piece rate payment for your performance you will have the possibility to attend the MBA internal program (which is a prerequisite for promotion) for free. $y = \beta + \sigma$ *(σ represents the option to attend the MBA for free)*

Remember: for the unique promotion considered here, you can choose Contract 3 only once.

At the end of the first stage, you will receive the information whether your position will be confirmed or not within the company. You should not be confirmed for other reasons than your personal evaluation of your performance (due to too many applicants for the trial period, economic or stochastic reasons).

The contract 1 will guarantee you a sure payment which is independent of your performance. Either you will perform well or not, your general performance will be recorded, but your monthly wage will be the same.

The contract 2 will guarantee you a sure payment which is smaller than the fixed payment offered in contract 1. The company decides to offer this second contract for those applicants who want to be tested and have the opportunity to earn more according to their performance.

The contract 3 will guarantee you a sure payment which is the same as the one offered in contract 2 but in this case you will decide to invest in your future within the company, agreeing to attend the MBA once your place will be confirmed.

Of course the commission will positively judge the early decision to attend the MBA as a signal of your interest in building a long relationship with the company. The decision will however not ensure you that your place will be confirmed in the next stage.

Which contract would you choose?

☐ **Contract 1**

☐ **Contract 2**

☐ **Contract 3**

STAGE 2

The trial period is finished and your position has been definitely confirmed by the FOCUS Company. Since your position now has been confirmed, you are eligible for promotion for now on.

Eligible means that you can attend the MBA training program in order to be a potential candidate for the promotion. The company offers you the opportunity to change your contract.

CONTRACT 1: Your payment scheme will be based on a fixed monthly wage $y = \alpha$.

CONTRACT 2: Your payment scheme will be based on your performance. You will receive the minimum fixed wage and according to your performance you will also have a piece rate payment. $y = ß + f(x)$ *with* $ß < \alpha$ *(the variable x represents your personal performance)*

CONTRACT 3: Your payment scheme is composed as follows: You will receive only the minimum fixed wage as in CONTRACT 2 but instead to receive a piece rate payment for your performance you will have the possibility to attend the MBA internal program (which is a prerequisite for promotion) for free. $y = ß + \sigma$ *(*σ *represents the option to attend the MBA for free)*

Attention: For those of you who have already chosen contract 3 in stage 1, the choice will be only between contract 1 and contract 2.

Which one would you choose?

☐ **Contract 1**

☐ **Contract 2**

☐ **Contract 3**

Suppose that with the confirmation of your position within the company, the HR department informs you and all the new confirmed applicants that the promotion will include the possibility to be assigned to a foreign subsidiary of the company. The promotion will always include higher remuneration, higher responsibilities and higher benefits, but the decision, to which European subsidiary you will be transferred, will not be yours.

Contract 1 and contract 2 are the same as in your previous decision. Contract 3 will consist of a refund for those who have chosen contract 3 in the first stage (they want to attend the MBA program in order to be eligible for promotion) but do not desire the possibility to end up in a different country. With this option, those who invest in the MBA program but are not interested in the promotion where there is the possibility to work abroad will receive a refund. The proportion of the refund will be calculated on the basis of the performance in stage 1.

Given this different condition, which contract would you choose?

☐ **Contract 1**

☐ **Contract 2**

☐ **Refunding**

STAGE 3

(Only for those who decided at least in one occasion contract 3)

Congratulation! You got the promotion so now you can choose between five different kinds of benefits. Please choose two of the following benefits:

3.1 Health insurance

3.2 Paid holidays or paid time off

3.3 Retirement plan

3.4 Parental leave

3.5 Bonuses or stock options

Which benefits would you choose?

- ☐ **3.1**
- ☐ **3.2**
- ☐ **3.3**
- ☐ **3.4**
- ☐ **3.5**

Post-Experiment Questionnaire

Sex: M ☐ F ☐

Age: …….. years

Family status: Single ☐ Married ☐ Divorced ☐ Widowed ☐

Studies: Bachelor ☐ Master ☐

Semester of your current Studies: 1-2 ☐ 3-4 ☐ 5-6 ☐ 7-8 ☐ 9-10 ☐

What is the major field of your studies? ……

Do you work besides your studies? Yes ☐ No ☐

If yes, how many hours do you work?

1-10 ☐ 10-20 ☐ 20-30 ☐ 30-40 ☐

Which is the highest educational attainment of your father?

Secondary School Qualifications ☐

General Qualification for University Entrance (A-levels) ☐

University degree ☐

Which is the highest educational attainment of your mother?

Secondary School Qualifications ☐

General Qualification for University Entrance (A-levels) ☐

University degree ☐

Do you have brothers or sisters? Yes ☐ No ☐

If yes, how many brothers/sisters do you have? ……

Have you grown up in a city (>10.000 inhabitants) or on the countryside?

City ☐ Countryside ☐

If you were given the opportunity to either get 10€ in cash or to participate in a lottery with a 50:50 chance to win 20€, what would you take?

The 10€ in cash ☐ The 50:50 chance ☐

Suppose that your employer asks you to choose between two options of income. In the first option you get A dollars per month, in the second one you get B or C dollars, each with equal likelihood. The expected utility is the following: *0,5*U(B) + 0,5*U(C) ≥ U(A)*
Which option would you choose?

Option 1☐ Option 2 ☐

Suppose that you are allowed to choose between two alternatives. In the first one, you have the chance to win 4.000€ with a probability of 80% and 0€ with a probability of 20€. In the second alternative, you get 3.000€ for sure. Which alternative would you choose?[188]

Alternative 1 ☐ Alternative 2 ☐

If your parents gave you 2000€ and asked you to invest it, would you invest it in hedge funds which imply a higher risk or rather in federal bonds which are a more secure form of investment?

Hedge funds ☐ Federal bonds ☐

You are again asked to choose between two alternatives. In the first case, you may win 5000€ with a probability of 70% and 0€ with a probability of 30%. In the second case, you have a 90% chance to win 3000€ and a 10% chance to win nothing. Which alternative do you prefer?[189]

Alternative 1 ☐ Alternative 2 ☐

[188] Kahneman/Tversky, 1979, p.266
[189] Kahneman/Tversky, 1979, p.266

Thank you very much for your participation. If you are interested in the experiment results, please write down your e-mail address: .....

5.6 Sunders´ Seven Questions[190]

Shyham Sunder has defined seven questions which should be taken into account to make sure that an experiment is actually a good one. For that reason, I will try to find and discuss possible answers to his questions regarding the designed experiment.

1. **What is the question that you would like to have answered after the experiment?**

How do women compared to men make their choices in business life?

2. **What do you know already about the possible answers to the question you have stated above?**

Most studies that I have read for my thesis, as cited in chapter one and two, have revealed that women are more risk averse as well as competition averse than men. From this point of view, women may rather opt for contract 1 than for contract 2. The decision for contract 3 depends on a person´s ambition and personal career planning. If a woman wants to become a top manager, she may opt for contract 3. Her choice in the treatment situations will probably depend upon her private life planning, so whether she is in a relationship, wants to have a family and/or children or not.

3. **What are the various possible ways of finding an answer to the question you have stated above? Include both experimental as well as any other methods you know.**

Other ways of finding an answer to my research question could be expert interviews. In this case it could not be spoken of a decision-making situation any more. Moreover, field experiments would also be possible, but difficult to implement in real life situations.

4. **What are the advantages and disadvantages of using an experiment to find an answer?**

One big advantage of an experiment is that many students can be questioned at the same time. Moreover, students are not influenced through facial expressions as it could be in the case of a personal interview. An experiment which comprises a special treatment allows comparing answers of participants with similar characteristics.

[190] http://faculty.som.yale.edu/shyamsunder/ExperimentalEconomics/Expecon.html, accessed 28th November 2012

A disadvantage of using an experiment is the fact that you cannot control answers of the participants, which means that you do not know whether they are honest or not.

5. **What are the chances that the answer you get from the experiment will surprise you or others? What are the chances that it will change someone´s mind?**

The chances of a surprising result, one which is contrary to current expectations, are according to my mind only around thirty percent, as the results of my literature review of female risk preferences are quite strong. If female participants answer the questions in a completely different way than expected, I will firstly re-think the experiment design and in the case that the results are convincing and make sense, I may even change my mind.

6. **How would you conduct the experiment?**

For the experiment design, see chapter 5.3.

7. **Is your experimental design the simplest possible design to help answer the question you have stated?**

There may be designs that are less complex than my design, but also less specific. Through this experiment, preferences of students, based upon time frames and the family-career trade-off, can be elicited. Such a sophisticated experiment gives the possibility to analyze students´ decisions with regard to different variables, which is necessary for reaching a high significance in results. Moreover, my experimental design allows comparing choices of participants in each stage.

6 Conclusion and Future Prospects

Literature research has shown that risk aversion, competition aversion and contextual factors do play a role in determining women underrepresentation in top management. They have been found to negatively influence women advancement, however to a varying degree. Consequences of risk and competition aversion are partly correlating and adversely affect promotion possibilities of women, due to a lower attraction to top management positions because of high responsibility as well as high competition. Also contextual factors such as family planning, stereotypes or role expectations negatively influence women´s chances of promotion and pose great barriers to further progress.

Although the results of the literature research are most of all unidirectional, they should still be interpreted with caution as they show tendencies of behavior but do not imply that each woman necessarily has to act in a particular manner, as certain traits differ from individual to individual. Nevertheless, I think that the identified relationships and possible solutions give new impetus in order to reduce existing inequalities at the labor market.

Future research and experimenting is needed to measure direct influences of risk and competition aversion as well as contextual factors on women advancement. The implementation of the designed experiment may already give new hints and reveal further interdependencies on the topic. The experiment is designed in order to elicit both risk and time preferences of women by means of different contractual arrangements as well as specific contextual information primarily related to the possibility of promotion. The experiment should provide reliable and meaningful results in order to be able to interpret business decisions of women and find explanations for the current situation of women underrepresentation in top management.

The design of the experiment allows interpretation in two dimensions. The horizontal approach which comprises the elicitation of risk preferences of women with regard to the family-career trade-off has already been explained in chapter 5.1. The vertical approach of the experiment refers to intertemporal choices of women. The idea is to elicit time preferences of women by means of the time frame between stage 1 and stage 2. This dimension includes the decision, whether or not the participants invest in a training program although they do not know whether their position will finally be confirmed by the company. The specific nature of an intertemporal decision is that the timing of costs and benefits are spread out over time. How long to attend school, whether and whom to marry, whether to have kids, how much to save for retirement and how to invest own money are

examples of decisions which have strong intertemporal elements.[191] In each case, a decision maker needs to trade off the utility of one outcome that is usually immediate with another one that is temporary distant.[192] From an experimental perspective, the analysis of intertemporal choices under uncertainty is an especially delicate issue. This is due to the fact that when intertemporal choices are investigated, people are asked to balance uncertain outcomes at different points in time which means that they are now asked about their future preferences, given an alternative at another point in time. Research on intertemporal choices by contemporary economists has primarily been based on the discounted-utility (DU) model. According to that model, people have a single unitary rate of time preference which they use in order to discount the value of future events.[193] This means that an identical outcome will be much more attractive, the closer it is to the time of decision-making.[194] As for the experiment, the DU model may help to explain the choice of a certain contract in stage 1 or stage 2, but only as long as all influence factors can be united into a single unitary discount rate. As soon as situational determinants or cognitive and emotional mechanisms[195] influence a certain decision, the DU model is insufficient to explain personal choices. The model is due to its simplicity not suitable for complex decision-making as it is the case in the presented experiment. For this reason, new models which also cover psychological aspects of decision-making need to be set up, in order to provide a better approximation of subjects´ choices.

According to a recent article in the Wirtschaftsblatt of the 9th of November, Viviane Reding, a fundamental right commissioner, presented the concept of a women quota light concerning women on supervisory boards of listed companies to the EU Commission. The idea behind it is that if there are two applicants with the same qualifications for a seat on any supervisory board, the woman should be preferred, up to the moment that a women quota of forty percent is achieved.[196] The EU Commission finally accepted Viviane Redings´ proposal to achieve a women quota of 40 percent on supervisory boards till 2020 and approved the amendment the 13th of November 2012. If the EU member states and the EU Parliament accept the amendment, the 5.000 affected companies in Europe may already face sanctions as of 2016.[197] According to my mind, this is a step forward in the

[191] Loewenstein/Thaler, 1989, p.181
[192] Soman et al, 2005, p.348
[193] Loewenstein/Read/Baumeister, 2003, p.2
[194] Soman et al, 2005, p.348
[195] Loewenstein/Read/Baumeister, 2003, p.2
[196] Wirtschaftsblatt, 9th November 2012, p.11
[197] Deutsche Presseagentur, www.tagesspiegel.de/politik/vollzug-des-prestigeprojekts-bundesregierung-lehnt-eu-frauenquote-fuer-aufsichtsraete-ab/7386684.html, accessed 17th November 2012

right direction. We will however see, whether the amendment is finally accepted and turned into law and whether the implementation of the law works as expected.

Creating an open, innovation-friendly milieu of mutual respect where women are listened to, regarded as competent colleagues and where they are given the opportunity to make suggestions and to engage in problem-solving without being immediately evaluated, is crucial if women should make their way in the future. Women quota alone may not be the solution to the current problem if women are not accepted as proficient partners by their male colleagues. Firms need to take adequate measures in order to counteract the underrepresentation of women in top management positions by means of special incentives, flexible work arrangements and more developmental job assignments.

What will happen in the future is still a mystery and I do not know whether gender equality will be achieved or when it will be achieved. But what I do know is that even if the majority of people may not be able to present their ideas to the EU Commission or implement new laws, they may very well think about their own attitudes and personally try to overcome obsolete stereotypes in order to pave the way to equal business opportunities for women.

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8 Annex

8.1 Abstract – English Version

Despite high efforts to achieve gender equality at work, large differences in the number of men and women in top management positions still exist. For this reason, risk aversion, competition aversion as well as contextual factors are analyzed regarding their influence in matters of job choice and promotion of women. All of these factors are found to determine women advancement to a certain, however varying, degree. Consequences of risk and competition aversion are partly correlating and negatively affect chances of promotion of women, due to a lower attraction to top management positions because of high responsibility as well as high competition. Also contextual factors such as family planning, stereotypes or role expectations adversely affect women´s chances of promotion and pose great barriers to further progress. Literature research reveals that the latter effects are stronger and have a higher explanatory power than risk and/or competition aversion, but are very hard to overcome as in this case, society as a whole needs to change its attitudes and prejudices towards women and companies have to come up with new solutions for ambitious working mothers. Based on these findings, an experiment design for possible empirical measurement based on the choice of different contract packages is set up in the last chapter of the thesis. The aim is to elicit preferences, both short-term but also long-term ones and to reveal how women make their business choices.

8.2 Abstract – German Version

Trotz hoher Anstrengungen, eine Gleichstellung von Männern und Frauen im Berufsleben zu erreichen, gibt es immer noch große Unterschiede in der Anzahl der Frauen und Männer an der Führungsspitze, dem Topmanagement. Aus diesem Grund werden Risikoaversion, Wettbewerbsaversion sowie kontextabhängige Faktoren in Bezug auf ihren Einfluss auf die Berufswahl und die Beförderung von Frauen untersucht. Laut diversen Forschungsergebnissen beeinflussen alle diese Faktoren die Förderung von Frauen zu einem gewissen, jedoch variierenden, Grad. Die Konsequenzen von Risiko- und Wettbewerbsaversion sind teilweise korrelierend und beeinflussen die Promotionschancen von Frauen negativ und zwar aufgrund einer geringeren Attraktivität von Führungspositionen wegen hoher Verantwortung und hohem Wettbewerb. Auch kontextabhängige Faktoren wie Familienplanung, Stereotype und Rollenerwartungen beeinflussen die Chancen auf Beförderung und stellen große Barrieren zu weiterem Fortschritt dar. Eine umfassende Literaturrecherche hat ergeben, dass die letzteren Effekte stärker sind und eine höhere Aussagekraft als Risiko- und/oder Wettbewerbsaversion haben, jedoch nur schwer überwunden werden können, da die Gesellschaft dazu ihre Einstellungen und Vorurteile gegenüber Frauen ändern müsste und Unternehmen neue Möglichkeiten für ambitionierte, arbeitende Mütter schaffen müssten. Basierend auf diesen Ergebnissen wird im letzten Teil der These ein Experiment zur möglichen empirischen Messung auf Basis der Wahl von verschiedenen Vertragspaketen entworfen. Das Ziel besteht darin, den ExperimentteilnehmerInnen sowohl lang- als auch kurzfristige Präferenzen zu entlocken und folglich herauszufinden, wie Frauen ihre geschäftlichen Entscheidungen treffen.

Curriculum Vitae

Personal Data

Name: **Mittl Elisabeth, BSc (WU)**
Citizenship: Austria

Education

10/2012 - **Master program "Business Education" (Vienna University of Economics and Business)**

10/2010 - **Master program „International Business" (University of Vienna)**
Personnel & Organisation, International Management
Papers:
- *"Non-Rational Drivers of Economic Behavior: Fairness and Corruption" (2012)*
- *"Gender in Organizations" (2012)*
- *"Distributional and Efficiency Impacts of Increased US Gasoline Taxes" (2011)*
- *"Knowledge Transfer between Headquarters and Subsidiaries" (2011)*
- *"Factors Influencing Reciprocity in Negotiation Processes" (2011)*

2006-2010: **Bachelor program „International Business" (Vienna University of Economics and Business)**
Bachelor thesis: *"Wirtschaftsmediation und ihre Auswirkungen auf die Konfliktkosten in Unternehmen"*
(in English: "Business Mediation and its effects on conflict costs in companies")
– Degree: May 2010

Spring 2009: Exchange Semester in Rome

1998-2006: High School in Oberschützen
Graduation with excellent success

1994-1998: Primary school in Deutsch-Schützen

Internships (fulltime)

08-09/2009: **Chamber of Commerce of Vienna (WKW):** Book, Print and Media Management
Tasks:
- Collaboration in the organization of seminars
- Wide data research on the net

08/2008: **ÖBB:** Human Resources

Tasks:

- Holiday planning of the employees
- Collaboration on a project concerning different role models in the company

Work experience

02/2011 - **MELECS Holding GmbH:** HR assistant (15 hours per week)

Tasks:

- Administrative work
- Management of Applicants
- Appointment coordination
- Reporting, diverse Analyses
- Application database
- Trainings Evaluation

04-09/2010: **ISG Personalmanagement:** fulltime internship

Collaboration on different Personnel Consulting Projects:

- Candidate search in the database
- Evaluation and pre-selection of candidates by phone
- Collaboration in the composition of job ads
- Participation at structured job interviews
- Composition of status reports on the applicants
- Organisational as well as administrative work
- Reporting

Autumn 2009: Temporary work at the Reception of the **Deutsche Bank** (8 hours per week)

Command of Languages

German – native language
English – fluent
French - advanced
Italian – advanced

Language study travel to Canterbury, England in 2004 – **„Upper Intermediate Level“**
Participation at the Foreign Language Competition of Burgenland in French (5th place)

Additional information

Driving license B

IT knowledge

MS Office

Elisabeth Mittl

Vienna, March 2013 **Elisabeth Mittl**

Erklärung zum selbständigen Verfassen der Arbeit

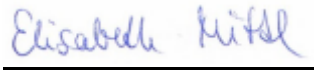
Ich versichere, dass

1.) ich die vorliegende Masterarbeit „Risk aversion, competition aversion and contextual factors as determinants of the underrepresentation of women in top management“ selbständig verfasst, andere als die angegebenen Quellen und Hilfsmittel nicht benutzt und mich auch sonst keiner unerlaubten Hilfe bedient habe.

2.) ich diese Masterarbeit bisher weder im In- noch im Ausland in irgendeiner Form als Prüfungsarbeit vorgelegt habe.

22.02.2013

Datum



Unterschrift