Demographic Diversity in the Boardroom and Firm Financial Performance

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Preface

This paper investigates whether demographic diversity in the boardroom has a significant influence on the financial performance of Dutch and Malaysian firms in the financial year of 2009. It compares the Dutch results with the Malaysian and concludes whether there are differences between these countries. As a contribution to the public debate about diversity, this paper looks at the empirical evidence in a developed and in an emerging economy. I started the project at the beginning of 2011 as part of the International Research Project organized by the Financial Study Association Rotterdam. I would like to thank ass. Prof. Dr. Willem Schramade for his support and guidance during the project.

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Introduction

In today's corporate world, practitioners call for more diversity in the corporate boards. The workforce nowadays consists of more females and minorities compared to some years ago. The diversification of the workforce may impact the composition of boards of directors and subsequently corporate governance (Shrader et al., 1997). Burke (1995) suggests that the composition of the board is beginning to increasingly reflect the changes in workforce diversity. The call for more board diversity started to come up heavily in the aftermath of some large corporate scandals such as Enron, WorldCom, Parmalat and Ahold (Randøy et al., 2006). In several countries several attempts have been made to improve the board diversity. In Norway, for example, the government has implemented a quota of 40% of female representation in the board. Moreover, in the academic literature this topic has received increasing attention. Papers published in the Netherlands also discuss the status and the importance of board diversity (e.g. Ees et al., 2007 and Lückerath-Rovers, 2010a).

Board diversity, and especially gender diversity, is a growing area of research. Based on recent research by Lückerath-Rovers (2010a), it appears that the Netherlands lag behind when it comes to female board members within companies compared to other countries.[1] However, when a Dutch company has at least one woman on the board, it would have a better return on equity (Lückerath-Rovers (2010b). Also in some other countries research has been done in this area. For example Adams (2004), Campbell and Mínguez-Vera (2008) and Smith et al. (2006) discuss the impact of more women in the boardroom. The empirical evidence on the performance effect of gender diversity in the boardroom is however mixed when we look at this relation from a global perspective. Shrader et al. (1997) find a negative relationship between the percentage of female directors and the firm's financial performance in the United States. Also in Indonesia a negative relationship between female executives and firm performance has been found (Darmadi, 2010). Randøy et al. (2006) find no significant relationship between gender diversity and firm performance in Denmark, Norway and Sweden. Also Rose (2007) doesn't find a significant link between female board representation and firm performance. Gallego-Álvarez et al. (2010) shows that firms with women on the board do not outperform other firms in Spain, whereas Adler (2001) and Carter et al. (2003) find a positive performance effect from female board membership in the United States. Hussein and Kiwia (2009) find that different measures of firm performance lead to different

[1] From the 99 companies investigated in 2010, only 39 companies contain at least one woman in the executive and supervisory board. This means that of all 749 directors, only 61 are female (8.1%).

relationships with gender diversity. They argue that these different measures explain the inconclusive results from the relationship between gender diversity and firm performance.

Board diversity, however, goes beyond gender diversity. Besides gender diversity, some studies have also looked at different forms of diversity such as diversity in age or nationality. Bonn et al. (2004), for example, also looks at the effects of board size, proportion of outside directors and average age of directors on firm performance in Japanese and Australian firms. They find that for Australian firms outsiders and females were positively related with firm performance. For Japanese firms, however, a negative association between firm performance and board size and age is found. Age can be seen as a proxy for risk-taking behavior. Old executives tend to be more risk averse (Barker and Mueller, 2002). Cheng et al. (2010) indicates that older chairmen in China have significant impacts on firm performance. Ruigrok and Kaczmarek (2008) find that nationality diversity of the board and management team members is positively related to financial performance in the UK, the Netherlands, and Switzerland. Carter et al. (2008) finds that both gender diversity and ethnic diversity have a positive influence on financial performance in the United States in the period 1998-2002. Marimuthu and Kolandaisamy (2009a and 2009b) examine the effect of demographic diversity on boards and top management teams on firm performance of listed companies in Malaysia. They found no significant relationship between demographic board diversity and firm financial performance. Darmadi (2011) examines the associations between board diversity (in the form of age, nationality and gender) and financial performance for listed companies in Indonesia. He finds that both accounting measures as market measures for firm performance are negatively associated with gender diversity. Nationality has no influence on firm performance in his sample, whereas younger people in the boardroom are associated with improved financial performance.

In our research we look at board diversity in the Netherlands and in Malaysia from a demographic perspective as also have been done by for example Erhardt et al. (2003), Carter et al. (2003) and Carter et al. (2008). We look at the following aspects of demographic diversity: age, gender and nationality. In particular, gender diversity is hot in public debate. For example, a United Nations report of October 2010 argues that women are still underrepresented in leadership positions worldwide. The report shows that of the five hundred largest companies, only thirteen have a female CEO.[2] A recent report of GovernanceMetrics

[2] Source: ANP (2010), *VN ziet te weinig vrouwen in top.* Retrieved 6 April 2011, from http://www.nuzakelijk.nl/algemeen/2360836/vn-ziet-weinig-vrouwen-in-top.html

International finds that more than forty percent of the world's largest companies do not even have one woman in their boards.[3] Historically, moral and social justifications have obtained great attention in promoting board diversity. However, these arguments could not convince the directors of the companies. That is why proponents of board diversity have switched their thoughts to more business arguments (Fairfax, 2011). Arguments like better firm performance may convince directors to allow for more diversity within the boards. The proponents argue that if all of the members of the board have similar backgrounds and experiences, the company's management (and thus shareholders too) is not getting the benefits that come with having a truly diversified board.[4]

An argument against board diversity is, however, that it is not a contribution to shareholders value. Opponents of board diversity argue that board diversity and independence of thought can be damaging to the cohesion of the board, which would lead to less healthy companies.[5]

Based on the current empirical observations and on previous research papers cited above, we have derived the following research question: What is the relationship between demographic diversity in the boardroom and the firm's financial performance? So, are the arguments that proponents of more board diversity have valid from a financial point of view?

This paper contributes to the current literature in the sense that it compares a developed country (the Netherlands) with an emerging country (Malaysia), which has a different economical, legal and cultural background. By comparing these two countries, we can show whether differences in culture or economics lead to differences in board diversity and whether the impact of board diversity on firm performance is different.

The remainder of this paper is structured as follows. In the next section we will look at the theories that underlie the research questions. The third section will discuss our methodology to find out what the empirical evidence says about the relationship between board diversity and firm financial performance. Thereafter, we will discuss and analyze our data extensively before going into the characteristics of the relationships. We will compare

[3] GovernanceMetrics International (2011), *Report Finds Over 40 Percent of the World's Largest Public Companies Have ZERO Women on Their Boards*. Retrieved 6 April 2011, from http://www2.gmiratings.com/news_docs/1552wob2011_pr.pdf

[4] Romanek, Bruce (2011), *The Growing Push for Board Diversity*. Retrieved 6 April 2011, from http://www.thecorporatecounsel.net/Blog/2011/03/dfa-2.html

[5] Marcus, Lucy (2010), *Beyond Optics: Why Board Diversity Really Matters*. Retrieved 6 April 2011, from http://www.marcusventures.com/notebook/beyond-optics-why-board-diversity-really-matters

the results obtained from our Dutch dataset as well as the results from our Malaysian dataset. The final section provides the main conclusions and suggestions for further research.

Theoretical Framework

In the previous section we presented the empirical observations regarding our research question. In this section we look at the theoretical foundations behind the relationships pointed out in our research question. So, we look at the theoretical relations between demographic board diversity and firm performance. There are roughly two views that explain a theoretical relationship between board diversity and firm performance: the agency theory and the stakeholder theory (Francoeur et al., 2008). We discuss both theories below.

Agency Theory

One of the biggest challenges within the agency view is how to align shareholders' interest and the interests of the managers of a firm. Eisenhardt (1989) says that agency problems arise when there is a conflict of interest between principal and agent. In this situation it is hard for the principal to observe if the agent behaves properly. The principal and the agent may have different risk preferences what causes them to act differently. Clear corporate governance policies can converge the different interests of the agents (shareholders) and the principals (managers). According to Tirole (2001), a good corporate finance structure is the "one that selects the most able managers and makes them accountable to investors". Diverse boards – i.e. more women, external stakeholders, ethnic minorities, and foreigners – often bring a fresh perspective on complex issues, and this can help correct informational biases in strategy formulation and problem solving (Dewatripont et al., 1999; Westphal and Milton, 2000).

One of the key functions of the board is to monitor the executives. An agency rationale for diversity is then that board diversity may increase board independence, which is needed to monitor the top management to reduce agency problems (Randøy et al, 2006). So, the quality of monitoring is influenced positively by adding more women to the board. Lückerath-Rovers (2010) argues that a homogeneous board is a direct threat to an independent board. She argues that such a board brings three risks with it: excessive self-esteem, the creation of tunnel vision and a strong pressure within the group to come to an agreement.

According to Francoeur et al. (2008), having more diverse board members will bear no (i.e., neither negative nor positive) financial consequences, since it is impossible to tell whether greater diversification will lead to better corporate governance as the direction of the impact on corporate board is twofold. More diverse boards can lead to better decisions and

better monitoring, but according to their article it depends on the economic conditions which style of leadership a company needs.

Stakeholder Theory

Another key function of the board, next to monitoring, is strategic decision making. From the stakeholders' point of view, it seems that when it comes to enhancing the quality of decision making, the advantages related to the knowledge, perspective, creativity, and judgment brought forward by heterogeneous groups is superior to those related to the smoother communication and coordination associated with less diverse groups (Francoeur et al., 2008). Fondas (2000) argues that women can help the board to fulfill its strategic role. So, diversity enhances creativity and innovation inside the corporation and will lead to more effective problem-solving, since a more diverse board provides a wider variety of perspectives and, consequently, a higher number of alternatives to evaluate (Rose, 2007). Diverse directors are, indeed, individuals with unique characteristics that create additional value for shareholders (Carter et al., 2008).

Furthermore, board diversity sends important positive signals to the labor market, product market, and financial market, and board diversity provides legitimacy to the corporation with both external and internal constituencies (Carter et al., 2008).

The stakeholder theory describes morals and values in managing in organizations (Philips and Freeman, 2003). According to Francoeur et al. (2008), diversity foresees business (and definitely social) benefits from actually promoting women to senior management positions, even if it doesn't enhance financial performance.

Related to this view is the resource dependency theory. A more diverse board could benefit from a greater understanding of its customers or other key stakeholders, and from a wider knowledge of the industry or the choices of access to finance (Carter et al., 2003). Stiles (2001) specifically suggests that board diversity might boost access to critical resources, such as management expertise and financial funds, which could have a positive impact on performance.

Hypotheses

Before looking at the relationship between board diversity and financial performance, we look at the differences in diversity between the Netherlands and Malaysia. Because both

countries have different economical and cultural background, we expect also differences in diversity. Because the Netherlands is a more developed country, we expect that that this country is also a step ahead in the case of board diversity. Malaysia has a more traditional culture in which we expect that there will be less board diversity. Therefore we first test:

Hypothesis 1: *Dutch companies have more diversified boards than Malaysian companies.*

Based on the theories mentioned in the previous section, we have derived the following hypotheses to investigate the relationships between demographic diversity in the boardroom and firm financial performance:

Hypothesis 2: *Companies with more diverse boards have a better financial performance.*

Hypothesis 2a: *There is a positive relationship between gender diversity of the board members and financial performance.*

Hypothesis 2b: *There is a positive relationship between nationality diversity of the board members and financial performance.*

Hypothesis 2c: *There is a positive relationship between age diversity of the board members and financial performance.*

The second set of hypotheses thus investigates the relationship between the demographic characteristics of the board members and its influence on firm financial performance. Based on the agency theory and stakeholder theory a positive relationship is expected between board diversity and firm financial performance. According to these theories, boards that are more diverse would have less agency problems and would make better strategic decisions leading to better financial performance.

We test this relationship for the three aspects of demographic board diversity separately. So we test the influence of gender, nationality and age diversity on financial performance. We expect a positive relationship between gender diversity and firm financial performance due to gender-related skills. These different skills can improve financial performance through better strategic decision making and less agency problems. Furthermore, we expect a positive relationship between nationality diversity and financial performance. Different nationalities have different backgrounds and therefore different qualities, networks

and skills that lead to less agency problems and better strategic decision making. Lastly, we expect that diversity in age have also a positive impact on financial performance. In light of the resource based view, age diversity increases the amount of capabilities and resources available, which can lead to a sustainable competitive advantage and therefore better financial performance.

Risk is another part of corporate performance that could be influenced by board diversity, because there is always a risk-return relationship. Adams et al. (2004) suggest that firms facing more variability in their stock returns have fewer women on their boards. More diverse boards may require additional mechanisms to induce cooperation such as performance pay. When performance-related pay for directors is costly, for example when there is high risk, firms will choose to have a less diverse board of directors. Therefore we also test:

Hypothesis 3: *Firm performance variability (risk) and gender diversity should be negatively related.*

Whether our research will be in line with these theories is uncertain beforehand, because previous empirical researchers found inconclusive results regarding the relationship between board diversity and firm performance. If we find a positive relationship between board diversity and a firm's financial performance, we might conclude that the finding is in line with one of the theories stated above. There are, however, also some arguments that imply a negative relationship between diversity and firm performance. One of them is that more diversity would lead to more conflicts of the heterogeneous board composition.

Methodology and Data

To test whether there are differences in board diversity between the Netherlands and Malaysia (hypothesis 1), we use an independent samples t-test to compare the means of both diversity indices (Blau-indices).

Regression analysis

In this research, we use cross-sectional regression analysis to investigate the relationship between demographic diversity in the boardroom and firm financial performance. The most common method in previous empirical research is, therefore, a simple regression model (e.g. Carter et al., 2003 and Erhardt et al., 2003). We start our research with univariate analysis between firm performance and the diversity indicators for each country. The univariate analysis analyses the distribution between the performance indicators, Tobin's Q and ROA, and the diversity indicators Age, Gender and Nationality. We do this through the use of the following equation where β_1 stands for the diversity indicator-vector:

$$Firm\ performance\ =\ \alpha_1 + \alpha_2 Diversity + \varepsilon \quad (1)$$

Next to the diversity variables, such as nationality, age and gender, we take control variables into account, such as industry and firm size. For this purpose we estimate equation (2):

$$Firm\ performance\ =\ \alpha_1 + \alpha_2 Diversity + \alpha_3 Control + \varepsilon \quad (2)$$

To test hypotheses 2a to 2c we will then perform regressions in the form of equation (2) to test whether there is a relationship between firm performance and the different kinds of diversity. We run these regressions for the Netherlands as well as for Malaysia for two measures of firm performance: ROA and Tobin's Q and use the diversity indicators separately as well as combined.

In our research we control for industry as well. Since the datasets of Malaysia en the Netherlands are too small to test them separately, we combine them and add a country-dummy. We controlled for industry with regression model (3) where β_3 stands for the industry dummy-vector and β_4 stands for the country dummy-vector:

$$Firm\ performance = \alpha_1 + \alpha_2 Diversity + \alpha_3 Control + \alpha_4 Industry + \alpha_5 \text{Country} + \varepsilon \quad (3)$$

To test the third hypothesis, we perform an univariate analysis with risk as independent variable and the Blau-indicator of gender diversity as the dependent variable. According to previous empirical research (Adams, 2004), higher variability in stock returns would imply a lower board diversity. In our model we estimate the following regression model:

$$Gender\ Diversity\ =\ \alpha_1 + \alpha_2 Risk + \varepsilon \qquad (4)$$

Again, next to the univariate analysis, we control for the same variables as in equation (2) and (3). We use equation (5) for this purpose. Just as Adams (2004), we add an industry dummy-vector to control for the influence of industry specific risk. In this equation, the performance indicators serve as a control variable. As with equation (3) we use the complete dataset and add a country dummy-vector. This gives equation (6):

$$Gender\ Diversity = \alpha_1 + \alpha_2 Risk + \alpha_3 Control + \varepsilon \qquad (5)$$

$$Gender\ Diversity = \alpha_1 + \alpha_2 Risk + \alpha_3 Control + \alpha_4 Industry + \alpha_5 Country + \varepsilon \qquad (6)$$

Mean comparison

Next to regression analysis, we use mean comparison as a tool to check for influence of different variables. To look for differences between industries we compare the sample means. To see if a variable has any significant influence, we sort the data on that specific variable. Then, we divide the dataset as a whole in four quantiles and compare the mean of the upper and lower quantile. In both methods we use a Welch's t-test for unequal variances and we estimate the degrees of freedom with the Welch-Satterthwaitch-equation.

Dependent Variables

In the regression models we use firm performance as dependent variable. In our research, we measure firm performance by Tobin's Q, a market measure of performance (used by e.g. Carter et al., 2008) or by Return on Assets (ROA), an accounting measure (used by e.g. Erhardt et al., 2003).

Tobin's Q is the firm's market value devided by its book value, previously done by Adams and Ferreira (2009). The firm's market value of assets is the book value of assets minus the book value of equity plus the market value of equity. For the market value of equity we took the share price on 31 December 2009 multiplied by the number of shares outstanding

on this date. The ROA is the ratio of net income to the firm's book value of assets. This definition of ROA has also been used in inter alia Shrader et al. (1997) and Erhardt et al. (2003).

The dependent variable, in the equation to test the third hypothesis, is the firm's gender diversity indicator. Here, we calculated a Blau-indicator. We will explain the concept of the Blau-indicator below.

Independent Variables

In equations (1) and (2), β_1 stands for the vector of the dependent variables. These are the variables that measure demographic diversity. This study uses three variables that represent demographic board diversity, namely age, gender and nationality. Because gender and nationality are non-numerical variables, Ees et al. (2007) points out that the most useful way to quantify these demographic variables is to use the Blau-indicator. The Blau-indicator is non-parametric; there are no assumptions regarding the underlying distribution. The Blau-indicator can be calculated as follows:

$$Blau_{dj} = 1 - \sum_{i=1}^{K} \left(\frac{x_{ij}}{n_j}\right)^2 \qquad (7)$$

In equation (7), x_{ij} is the number of directors regarding category i in board j. The total number of directors in board j is given by n_j. K is the number of different categories within one variable d. We also use the Blau-indicator for age to account for heterogeneity levels of this variable.

In equation (4), (5) and (6), we use risk as an independent variable. Since director pay is tied to firm performance primarily through stock ownership, we use the standard deviation of monthly stock returns as a proxy for firm performance risk, as has also been done in the literature on CEO compensation (e.g. Aggarwal and Samwick, 1999).

Control Variables

The control-vector in our regression models stands for the control variables in our regressions. These are variables that also influence the financial performance, but not by means of diversity. In our regressions we use six control variables. These are firm size (measured by the logarithm of total assets), risk, size of the board, largest shareholder

ownership, blockholder ownership, and industry (as used by e.g. Erhardt et al., 2003 and Darmadi, 2011).

The influence of firm size on firm performance is mixed. Adams and Ferreira (2009) have found a positive correlation between both variables, while Carter et al. (2003) fail to do so. Interestingly is that Haniffa and Hudaib (2006) find that in Malaysia firm size is positively related to ROA, but is negatively related to Tobin's Q. Based on the arguments of Baumol (1959), we predict that there is a positive relation between firm size and ROA in the Netherlands.

The second control variable, risk, has a positive correlation with ROA (Sharpe, 1964). Rationale behind this relation is that investors want a reward for the risk regarded with each investment. We calculate risk in the same way as when we use risk as an independent variable, as the standard deviation of monthly stock returns.

Board size is expected to have a negative relationship with Tobin's Q (Yermack, 1996). This relationship is also confirmed by the findings of Carter et al. (2003). For Malaysia and Singapore, Mak and Kusnadi (2005) find further evidence for this negative relationship between board size and firm performance. A board, which is too large in size, will lead to inefficient decision-making.

The fourth control variable is the ownership of the largest shareholder. This means the percentage of the total shares that the single largest shareholder owns. Haniffa and Hudaib (2006) find a positive relationship between largest shareholder ownership and firm performance in Malaysia. We expect a positive relation between firm performance and largest shareholder ownership, since larger shareholders are better able to monitor the company's executives whether they act in a way to increase shareholder value.

Next to the largest shareholder ownership, we have the blockholder ownership. Blockholders are shareholders who own more than five percent of the company's total shares. In our sample, the blockholder ownership variable measures how much percent of the total shares are held by blockholders. Empirical evidence on the relationship between concentrated ownership and firm performance shows mixed results. For Malaysia, Mak and Kusnadi (2005) find a positive relationship between blockholder ownership and firm performance. Like the largest shareholder ownership, we expect that blockholder-ownership also has a positive relationship with firm performance.

The last control variable we look at is the company's industry. We divide the Dutch and Malaysian companies into ten industries: basic materials, consumer goods, consumer services, financials, healthcare, industrial, oil and gas, technology, telecommunications and utilities[6]. We check whether the different industries have different characteristics towards board diversity and if so, whether this leads to better performances in better diversified industries.

Data

To investigate the relationship between board diversity and firm performance, we have chosen the financial year 2009 as our sample period. At the moment of writing this paper, not all companies have disclosed their annual reports of the financial year 2010. Therefore, a bias would occur if we use only the companies that have disclosed their annual reports of 2010. Our initial sample consists of the 92 largest listed Dutch firms and the top 100 listed Malaysian companies. The Dutch companies are selected based on their size. This means that the largest listed companies are selected to represent a representative sample of the Dutch economy. Of the 92 companies, 25 are listed on the AEX index, 25 are listed on the AMX index, 23 are listed on the AScX index, and the remaining 17 companies are the biggest local funds, measured in sales[7]. These companies cover the majority of the Dutch economy. Furthermore, the selected companies cover a broad range of industries, so are representative for the Dutch economy as a whole. The Malaysian companies are taken from the Bursa Malaysia Top 100 Index. This index consists of the 100 largest listed Malaysian companies, measured in market capitalization. These companies are representative for the Malaysian economy. Also this sample covers a broad range of industries. We exclude companies with incomplete data. One company had to be excluded from the dataset, because this one was indicated as outlier. Its ROA measure is more than 7 standard deviations away from the mean. Another company was deleted because its Tobin's Q was more than 9 standard deviations away from the initial mean. This selection leads to a final sample of 71 Dutch companies and 70 Malaysian companies. This is 65 and 70 percent of the initial dataset, respectively. We believe that these samples reflect the countries' economies appropriately.

[6] This industrial classification originates from NYSE Euronext.
[7] Source: http://www.behr.nl/Beurs/aex2010.html, funds that had an IPO during 2009 are excluded from the sample. 5 smaller local funds were added to the sample, so that the balance between the relative large and the relative small companies is restored, therefore excluding a 'big company bias'.

The data for the variables in the dataset, as discussed above, comes from the companies' annual reports. However, since not all the companies state their demographic data of the board members in their annual reports, we also used other resources available on the Internet, such as the AFM and VEB database or the database from ManagementScope.nl[8]. Financial data is obtained from Thomson ONE Banker and Datastream.

Table 1 presents the descriptive statistics of our sample. It reports the mean, standard deviation, median, minimum and maximum of the selected variables in our sample. The table shows that the average number of board members in the Netherlands is about 9. More than 88,2% of these board members are male. Only 37 of the 71 Dutch sample companies have at least one woman present in the board. On average there is at least one foreign board member present in the Dutch companies. These findings are in accordance with the findings of Lückerath-Rovers (2010a). The percentage of foreign board members in Dutch companies is 32.3%. This means that one out of three board members is foreign on average. The average age of the board members is about 57 years. 19 percent of all board members have an age below 50 years.

When we compare these demographic data with the Malaysian data, Table 1 shows that the average number of board members is slightly lower than in the Netherlands. The average number of board members is about 8 in Malaysia. One explanation for this slightly lower number might be that most Malaysian companies have a one-tier board structure, whereas most Dutch companies have a two-tier structure. This means that Malaysian companies have one board of directors, whereas Dutch companies have an executive board of directors and a supervisory board. The distribution between men and women is quite similar for Malaysia and the Netherlands. Also in Malaysia about 93% of the board members are male on average. In Malaysia 30 of the 71 sample companies have at least one woman present in the boardroom. The number of foreign board members is a lot lower than in the Netherlands. In Malaysia there are on average 1,39 foreign members present in the boardroom. The proportion of foreign board members in our Malaysian sample is only 18.6%, about 32% lower than in the Netherlands. The average age of the board members is in Malaysia 3 years higher than in the Netherlands. In Malaysia the board members are older on average, but the age distribution is more widespread as can be seen from the higher standard deviation.

[8] Sources: www.veb.net and www.managementscope.nl

When we compare the performance measures, Table 1 shows that the average figures for the mean ROA and Tobin's Q are -0,4 percent and 1,39 respectively for the Netherlands. The performance measures indicate that the Malaysian companies, however, have had a better financial performance than the Netherlands. The mean ROA is 5,8 percent, whereas the average Tobin's Q is 1.60. These numbers suggest that the Malaysian economy has suffered less from the financial crisis than the Dutch economy.

Table 1 also shows some figures for other variables. When we look at firm size, for example, as measured by total assets, we see that the median and average size of companies is larger in the Netherlands than in Malaysia. This can be explained by the fact that most Malaysian listed companies are former family owned companies. This can also be seen in the higher blockholder ownership and biggest shareholder ownership in Malaysia. The average largest shareholder possesses a larger part of the total shares in Malaysia than in the Netherlands. The average share of the largest shareholder is 19.71% in the Netherlands, and is 33.12% in Malaysia. In most of the cases, families, who started the companies, control this positions. In the Netherlands the largest shareholder are often financial institutions that possess these shares as part of their investment portfolio.

For testing the third hypothesis, whether the board's diversity and performance variability are negatively related, we used the monthly standard deviation of stock returns during 2009. Table 1 also shows the descriptive statistics for the data we used for our research. We got the data for the monthly stock returns from Datastream. We see, in table 1, that the average monthly deviation is higher in the Netherlands than in Malaysia. A possible explanation for this phenomenon is that the Dutch economy is more internationaly orientated. So, it was hit harder by the global economic turndown in the years 2008 and 2009.

Company Visits

A special part of this research was the company visits in both the Netherlands and in Malaysia. Next to the data research just discussed we have questioned some specialists in the area of gender diversity within boards during the company visits in the Netherlands. They gave us a more qualitative approach to the subject.

In the Netherlands, compared with Malaysia, there is a hot debate about the role of diversity in the corporate environment. As a result of this, a couple of companies we visited had their own diversity officer. PricewaterhouseCoopers even has a diversity officer at board level. Although all diversity officers named the agency- and the stakeholder-theory as a reason for this policy, we think that corporate social responsibility is the most important reason to do something with diversity. We concluded this after asking for any financial performance measures regarding their diversity policy. Neither of the companies had one and both companies didn't compare the cost of becoming more diverse with the benefits.

For both of use, the company visits in Asia were a real eye-opener. In many of the cases the companies were far from what we expected in the sense of diversity, hierarchy and work ethics.

In Malaysia there is no debate like in there is in the Netherlands. We didn't expect many females to work in Malaysian companies. This expectations arose because of the fact that we thought of the Malaysian and Singaporean community as very hierarchical, conservative, and, in the case of Malaysia, strict Islamic. In fact, the opposite was true. In both the multinational en the, of origin, national companies the level of female participation was above our expectations.

The first time we observed this was at a guided tour in the office of Ernst & Young Singapore. The native accountants were both perfectly mixed in gender. One of E&Y's seniors, a native Dutch, told us that there wasn't a special policy but that the women in Singapore just were very competitive and that they will do everything to pursue a career. At the Malaysian office of Exact, a Dutch originated software-company, we saw the same proportions in workforce. The accounting department of Exact even consists of mostly women. The senior manager said that this was mainly because women were just the best in the accounting practice. Also at Chartis, an international insurance company, the sales- and administration department were almost evenly mixed. At all the companies there was an almost perfect mix in race between

the Malay, Chinese and Indian. Although we heard from some Dutch people during an informal drink at the Dutch embassy that there are a lot of prejudices between these three groups, they seem to collaborate pretty well. One company we didn't expect a female worker at all was at the Kuwait House of Finance. The opposite in case was the fact. At this bank they even had a female trader at one of the desks.

One of other the trends we saw in Kuala Lumpur, was that in most international oriented companies foreigners were in the senior positions. At Vopak, for example, we had a discussion about that fact with the senior manager. He explained that that it was the company's policy that in the end all workers, even senior management, will be from the native county. One of the reasons for this phenomenon is that Western companies realize that less developed Asian governments and other large parties prefer to deal with people of Asian origins. Another reason is that, because of the low labor-costs, low-skilled workers always tend to be from local origin. Those low-skilled workers seem to work better under a local senior. Once you get higher in the workforce pyramid there is a tendency to fill all different levels with locals.

The third thing that amazed us was the Asian work ethics. At almost all the companies we visited the offices adopted the island like setup for the desks. Especially at the sales department of Chartis there wasn't a moment with total silence at the room. With every sell of an insurance note there was a cheer by all the sixty workers. Something we didn't expect at all.

Results

This section shows the results of our tests regarding the two sample datasets (Netherlands and Malaysia). Before we ran our regressions we computed the correlation coefficients in our dataset. The results are presented in table 2. Table 2 reveals whether we can prevent measurement error in the form of multicollinearity, which is that two independent variables actually measure the same because they are heavily correlated. Next we compare our two datasets by looking at the diversity index. This index show how diversified the boardrooms are in the Netherlands and in. Thirdly, the results of the ordinary least squares regressions are presented. These results show whether there is a significant relationship between firm financial performance and boardroom diversity and between risk and gender composition. And, in this chapter, we present the results of the mean comparison.

Correlation matrix

Table 2 presents the correlation matrix for the variables considered in our research. We see that there is a significant relationship between multiple variables at a 5 percent and at a 1 percent level. As guideline to prevent for multicollinearity is that the correlation coefficient is not higher than 0.8. In our dataset, this is the case for the relationship between the portion of shares held by the largest shareholder and the portion of shares held by the blockholders. We decided to exclude the variable for the largest shareholder because the blockholderownership presents a larger ownership in the company. So, after excluding the largest shareholder, our vector of control variables becomes:

$$Controlvector\ \ \alpha_1 + \alpha_2 Boardsize + \alpha_3 Blockholder\ ownership + \alpha_3 Total\ assets + \alpha_4 Risk + \varepsilon$$

In equation (1), (2) and (3), firm performance is measured in two ways. The accounting measure of firm performance is ROA, whereas the market measure of firm performance is Tobin's Q. The diversity variables (Gender, Age and Nationality) appear in the form of the Blau-indicator to really account for the diversity. Furthermore, we take the natural logarithm of total assets to correct for any skewness. We did not conclude the industry in which the company operates in the regression equation as a dummy variable for each country. This is because the number of observations was too low to incorporate all ten industry dummies. Only in the combined dataset we added industry dummies. We also look at the relationship between diversity and industry below by comparing the average numbers. Table 2 shows the

correlation coefficients between the variables, containing both the Dutch dataset as well as the Malaysian dataset.

Table 2 shows that ROA and Tobin's Q are significantly positive related. This makes sense, since both variables are measures for performance. ROA is an accounting measure, whereas Tobin's Q is a market-based measure. Board size is positively correlated with the diversity measures, which indicates that a larger board is also more diversified. Furthermore is board size also positively correlated with LN Assets, which indicates that larger firms have also a larger board and thus more diversity, although the correlation coefficient between LN Assets and Nationality is not significant. Furthermore there is a significant positive relationship between the company's largest shareholder and blockholder ownership. Because the largest shareholder is part of the blockholder ownership, this sign was to be expected. The coefficient is high enough that we have to exclude one of the two variables since a multicollinearity problem exists when the correlation coefficient is larger than 0,80. Furthermore, Table 2 shows that blockholder ownership is negatively correlated with board size. This indicates that larger firms have a more dispersed ownership, so are less controlled by large shareholders.

Diversity Index

The diversity index, or the Blau-indicator, shows in what way there is heteroskedasticity within one variable. So, in fact, it measures the diversity of the variable. The interpretation of the Blau-indicator is that the higher the Blau-indicator is, the more diverse the company is regarding that particular variable. The lowest score for the Blau-indicator is zero, whereas the highest score depends on the number of categories per variable. The maximum score of the Blau-indicator is calculated as follows:

$$Blau_{max} = (number\ of\ categories - 1)/(number\ of\ categories) \quad (4)$$

For example, gender has two categories (male and female), so the maximum value the Blau-indicator can take is 0.50. In our sample, the maximum Blau-indicator for age is 0.80 and for nationality it is 0.875. So, Table 3 shows that for both the Netherlands and Malaysia the companies are much more diversified in age than in gender or nationality. The figures of the Blau-indices match the figures of the dichotomous numbers discussed in the data section.

We compare the diversity indices of the two countries with an independent samples T-test. When we compare the Netherlands (NL) and Malaysia (MY), Table 4, on the next page, shows that there is no significant difference in gender diversity for both countries. The average Blau-indicator for the Netherlands is 0.13, whereas the average Blau-indicator for Malaysian firms is only slightly lower. Regarding age diversity, the difference between the Netherlands and Malaysia is only 0.03 in the advantage of Malaysia. However, again, the difference is not significant at a 5% confidence level. Nationality diversity is significantly different between both countries. The Blau-indicator gives a value of 0.36 for the Netherlands, whereas Malaysia scores only 0.14. The difference of 0,23 is therefore significant at a 0.05 level, as can be seen from Table 4. One explanation for the difference in nationality diversity might be that the Malaysian companies in the sample are more local or national focused, while the Dutch companies have an international focus.

Diversity by Industry

As mentioned earlier, we are not able to incorporate the industry dummies into our regression equations for each of the countries apart. This is because of the fact that we have not enough observations per industry to run the regressions for each country apart. In a later stage, we add an industry-dummy-vector to the model with a combined dataset of the Netherlands and Malaysia. As an alternative, we look at the relationship between industry and

diversity by comparing the average numbers per industry with the average numbers in the rest of the dataset. For this purpose, we combined the data of the Netherlands and Malaysia. The results of this analysis are shown in Table 5. We sorted the dataset on the dependent variables and on the diversity indicators. Next we compared the mean numbers for a specific industry with the mean of the rest of the industries combined. We used Welch's t-test to compare the means. With the Welch-Satterthwaite-equation, we computed the degrees of freedom.

In table 5.1, 5.2 and 5.3, we looked at the diversity indicators to see if there are significant differences between industries. In table 5.1, we looked at the age-composition of the boards. We don't see any significant differences for age composition. In table 5.2, we sorted on the gender composition of the boards. Here we see a significant lower diversity in gender in the transportation industry. A possible explanation is that transportation, traditionally, is not an industry that attracts many female directors. Again here, the low amount of observations made us took this conclusion with some precautions. In table 5.3, we sorted on the nationality composition of boards. Just as with gender, we see significantly lower nationality diversity in the transportation industry. Next to the transportation industry, we see a significant lower diversity in the utility industry. Again here, the low amount of observations made us took this conclusion with some precautions.

Regression Results

With cross-sectional regression analysis we looked at the influence of diversity on performance and of risk on gender composition. We started with a univariate regression where we look at the distribution of the dependent variable in terms of the independent variable. In these tests we used equations (1) and (4). Table 6 shows the results of the univariate regression. Next to univariate regressions we used multiple regressions analysis to control for the influence of control variables defined by previous empirical research. In our research we control for board size, total assets, blockholder ownership and risk. We controlled for these variables in equation (2) and (5). Next to the control vector we wanted to control for industry effects as well. We combined the dataset to have sufficient data and designed equation (3) and (6) to test for industry effects. Because the dataset consists of the data of two countries we added a country dummy in both cases.

Univariate regression analysis

Table 6 shows the univariate relationship between the performance indicators, as dependent variables, and the diversity indicators as independent variables. In table 6.1.1 we see the relationship between ROA and Gender for the dataset of the Netherlands, Malaysia and the combined dataset. Although the intercepts for Malaysia and the combined dataset are highly significant we don't find any significant coefficients. . In table 6.1.2 we see the relationship between ROA and Age for the dataset of the Netherlands, Malaysia and the combined dataset. Here, the same as in table 6.1.1, we don't find any significant coefficients. In table 6.1.3 we see the relationship between ROA and Nationality for the dataset of the Netherlands, Malaysia and the combined dataset. Here we find a significantly positive relationship between ROA and Nationality in Malaysia. Ruigrok and Kaczmarek (2008) documented this this relationship before for the UK, the Netherlands and Switzerland.

Also by univariate analysis, we looked at the relationship between Tobin's Q and diversity. In table 6.2.1 we see the relationship between Tobin's Q and Gender. Although we find significant intercepts, there is no significant relationship between Tobin's Q and Gender. In table 6.2.2 we look at the relationship between Tobin's Q and Age. Again here, we find no evidence for a significant relationship between Tobin's Q and Age. In table 6.2.3 we examine the relationship between Tobin's Q and nationality. Just the same as with ROA, we find a significantly positive relationship between Tobin's Q and nationality for the dataset of Malaysia and for the combined dataset. This is not a surprise because both the dependent variables, ROA and Tobin's Q, are performance measures and have significant correlation as Table 2 shows.

Multiple regression analysis

Our multiple regression analysis starts with a control vector that we add to our model. This control vector controls for the influence of blockholder ownership, boardsize, lnassets and risk. We ran equation (2) for the dataset of the Netherlands and for the dataset of Malaysia. Table 7 displays all the results from our regression analysis. As dependent variables we used the performance indicators ROA and Tobin's Q. As independent variables we used the diversity indicators age, gender and nationality, expressed as Blau indicator. We used the diversity indicators separately, as well as together.

First, we look at the influence of age on ROA and Tobin's Q, when we control for the various control variables. In none of the regressions, where we use age as a factor, is there a significant evidence of a relationship between performance and age. Next, we look at the relationship between performance and gender. Again, we don't find evidence for a significant relationship between performance and gender.

At last, we look at the relationship between performance and nationality. In table 7.1, in regression number (2), we find a negative relationship, significant at a 0,10 level, between ROA and nationality in the Netherlands. The same relationship holds when we add the other two diversity indicators age and gender in regression number (4). Besides from ROA, this relationship is the same for Tobin's Q and nationality. In table 7.3, in regression number (2), we find a negative relationship, significant at a 0,10 level, between Tobin's Q and nationality. Again, this relationship holds, at a 0,10 level, when we add the other two diversity indicators age and gender in regression number (4) in table 7.3. This relation is not according the empirical evidence by Ruigrok and Kaczmarek (2008), who proved a positive relationship. We don't find an influence of nationality in Malaysia, this is in agreement with Marimuthu and Kolandaisamy (2009a and 2009b) who investigated the relationship between demographic diversity and firm performance in Malaysia and did not find a significant relationship.

If we look at the statistical influence of the control variable, we find some evidence that is supported by previous empirical research or contraire to some empirical research. In all regression results we find a negative relationship of performance with risk, significant at, at least, a 0,05 level. This is not according the numerous empirical evidence that suggest the positive relationship between risk and return.

In table 7.2, in all regression numbers, there is a negative relationship between the logarithm of total assets and performance. The same holds for table 7.4. In both cases, the relationship is significant at, at least, a 0,10 level. This evidence might indicate decreasing returns to scale. The negative relationship between Tobin's Q and firm size is opposite to the evidence found in Malaysia by Haniffa and Hudaib (2006) who found a positive relationship.

In table 8 we combined the datasets of the Netherlands and Malaysia and added a country-dummy vector and a industry vector. If the value of the country dummy is one, the model only included the values of the Netherlands. If the value of all the industry dummies is

zero, the model only calculates the value of the utilities industry. The utilities industry is the only industry that we did not add as a dummy to prevent for multicollinearity.

If we look at ROA, none of the diversity variables has a positive relationship. If we look at Tobin's Q, nationality is the only variable that has a positive relationship, in both cases significant at a 0,05 level. This is if we included it in the model separately, as well as together with age and gender. If we look at the control variables, we see the same relations as in table 7, without the industry vector, negatives relations for risk and the logarithmic scale of assets. In all the regression-numbers, this relation is significant at, at least, a 0,10 level.

In table 8.1, the only industry-dummy that provides evidence for a negative relationship is healthcare. This relationship is significant, in all cases, at a 0,05 level. In table 8.2, none of the industry-dummies provides statistical evidence for a relationship with Tobin's Q.

Mean comparison

Next to regression analysis, we used mean comparison as a tool to check for influence of different variables. We show the results in Table 9. To see if a variable has any significant influence, we sorted the data on that specific variable. Then, we divided the dataset as a whole in four quantiles and compared the mean of the upper and lower quantile. We used a Welch's t-test for unequal variances and we estimate the degrees of freedom with the Welch-Satterthwaitch-equation.

Table 9 displays all results of this quantile mean comparison. Table 9.3 shows the statistics when we sorted the data on Tobin's Q. If we compare the upper and lower quantile, we see a difference, significant at a 0,10 level. According to this evidence, there is a positive relationship between nationality diversity and Tobin's Q. This is also according previous empirical research by Ruigrok and Kaczmarek (2008).

Risk

The third hypothesis we test is whether there is a relationship between a companies' performance variability and board diversity. Adams et al. (2004) suggest that firms facing more variability in their stock returns have fewer women on their boards. More diverse boards may require additional mechanisms to induce cooperation such as performance pay. When performance-related pay for directors is costly, for example when there is high risk, firms will choose to have a less diverse board of directors.

This section shows the results of our tests regarding the influence of firm's risk on gender diversity or the percentage of females in the board. We started our research with a univariate regression. Then, we controlled for control variables and industry and country effect. At last, we used upper and lower quantile mean comparison to look for differences.

Table 6.3.1 shows the results for the univariate regression between gender diversity and risk for the dataset of the Netherlands, the dataset of Malaysia, and the dataset of the Netherlands and Malaysia combined. In all cases, we don't find any evidence that there is a relation between these two variables.

Next, in table 10.2 we performed several multivariate regression analysis to look for influences of risk on gender diversity. In regression number (1), (2) and (3) we used the datasets of the Netherlands and Malaysia. In both of the datasets, we did not find any evidence for a relationship between risk and gender diversity. We did find a positive of board size on gender diversity, significant at a 0,05 level. So, larger boards tent to be more diverse. Next to the influence of board size, we find evidence for a negative influence of the industry-dummies of basic materials and consumer goods, both significant at a 0,10 level.

We performed the same analysis, as with the Blau indicator for gender, with the variable for the percentage of females on the board. Table 10.2 displays the results. As dataset we used the combined dataset of the Netherlands and Malaysia. In the univariate regression analysis, we did not find any evidence for a relationship between risk and percentage of females. In the control-variables, the logarithmic scale of Total assets is the only variable that shows any evidence for a positive relationship, significant at a 0,10 level. Bigger companies have a larger percentage of females in their boards. Board-size does not show evidence for a relationship with percentage of females although there is a correlation between board-size and the logarithmic scale of total assets.

Next, we added a country-dummy-vector and an industry-dummy-vector to control for country and industry effects in regression number 1 in table 10.2. Surprisingly, compared with the Blau indicator for gender, in this case, almost all of the industry-dummies provide us evidence for a negative relationship, significant at a 0,05 level. So, compared with the utilities industry, all other industries have lesser females in their boards.

At last, we sorted the dataset on risk. Table 9.7 and 9.8 show that there is no significant difference between the upper and lower quantiles. These facts combined reject the

hypothesis that there is a relationship between risk and board gender diversity. The obtained coefficients are not significantly different from zero. So, the empirical result from our research isn't in agreement with the empirical result from Adams and Ferreira (2004).

Conclusions

This study examines the relationship between the diversity of gender, nationality, and age of the board members and firm financial performance in the Netherlands and in Malaysia. A number of such studies have already been done in the context of developed countries and mainly in the context of gender diversity. This study makes the contribution to the existing literature in that it investigates also age and nationality diversity for both a developed and an emerging country. Both countries have different economical and cultural environments.

We investigate 71 listed Dutch companies and 70 listed Malaysian companies for the year 2009. We addressed the demographic characteristics of the board members of these companies. We saw that one difference in the board structure is that most Dutch companies have a two-tier structure, so a supervisory and an executive board, whereas most Malaysian companies have a one-tier structure. Despite the differences in economics and cultures, Malaysian companies are almost equally diversified as the Dutch companies. The boardroom of Dutch companies is, however, more diversified regarding nationality than Malaysian companies. This result indicates that the Netherlands lags behind the extent to which the boardroom is diversified, whereas Malaysia has taken a leading position compared to the emerging with respect to board diversity. Next to small differences between the two countries, we also did not find any significant differences in board diversity between industries.

Furthermore, as our regression results show, there is no univariate relationship between firm performance and diversity except for Nationality on Tobin's Q in Malaysia. This is evidence for a confirmation of the stakeholder theory. In the multivariate regression we found evidence for a negative relationship between nationality and Tobin's Q in Malaysia and evidence for a negative relationship between ROA and Nationality in the Netherlands. Both of these facts provide evidence for a rejection of the stakeholder theory. After adding a country-dummy-vector and an industry-dummy vector, we find evidence for a positive relation between Tobin's Q and nationality.

Next to regression analysis we used mean comparison. This provides us with evidence for a positive relationship between nationality diversity and Tobin's Q. We also looked at the influence of industry on board composition. Mean comparison provided evidence that only the transportation and the utility sector have a negative influence on nationality diversity.

So, we had mixed results out of our research. None of the age and gender diversity measures had a significant relationship with firm performance. This means that no evidence is found for the agency theory and stakeholder theory regarding these variables. This is in accordance to some previous studies (e.g. Randøy et al. (2006), Rose (2007), Marimuthu and Kolandaisamy (2009a and 2009b), and Gallego-Álvarez et al. (2010)) while it contradicts other studies that did find significant relationships between firm performance and boardroom diversity (e.g. Carter et al. (2003)).

We also investigate the relationship between risk and diversity. Francoeur et al. (2008) argue that firms in different times with different risk exposure need different leadership. In our sample we find, however, no significant relationship between risk and diversity. These findings are also not in line with the findings of Adams and Ferreira (2004), but are in agreement with the other findings that there is no significant relationship between board diversity and return, since there is always a risk-return relationship. We did find significant influence of some industries on the percentage of females in board composition.

This study is subject to some limitations, which are expected to overcome by future studies. First, this study uses ordinary least squares regressions to examine the effects of board diversity on firm financial performance. However, there are also other effects of firm performance and some other firm characteristics on board diversity, which are not encountered in the regression equations. Second, this study only looks at one time period (year 2009). Other financial periods, e.g. pre-crisis, might give other results, that makes it hard for this study to generalize these results for other periods. Further research on longer time periods may better generalize the relationship between firm financial performance and board diversity.

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Appendix

Table 1

This table shows the descriptives of the data we used in our research.

Table 1.1. Descriptives for the dataset of the Netherlands.

n=71

Dependent variables	**Mean**	**Std. dev**	**Minimum**	**Median**	**Maximum**
ROA (%)	-0,004	0,190	-0,803	0,019	0,683
Tobin's Q	1,388	0,683	0,554	1,166	4,553
Stock Return (%)	0,121	0,059	0,041	0,107	0,272
Independent variables	**Mean**	**Std. dev**	**Minimum**	**Median**	**Maximum**
Board Members	9,386	3,560	3	8	19
Male	8,28/88,2%	2,970	3	8	17
Female	0,81/11,8%	0,960	0	0	4
Age	56,878	3,517	46,33	57,275	62,29
Nationalities	2,810	1,700	1	2	8
Blau indicator age	0,602	0,099	0,278	0,611	0,875
Blau-indicator gender	0,127	0,141	0	0,124	0,653
Blau indicator nationality	0,365	0,283	0	0,407	0,809
Control variables	**Mean**	**Std. dev**	**Minimum**	**Median**	**Maximum**
Total Assets (x1,000,000)	11315,788	39060,918	9,076	1479,415	292181,000
Ln(assets)	7,260	2,076	2,206	7,293	12,585
Largest Shareholder (%)	0,177	0,142	0,000	0,124	0,664
Blockholder Ownership (%)	0,358	0,201	0	0,359	0,728
Net Income (x1,000,000)	225	1452,200	-1566,500	20,100	12518,000

Table 1.2. Descriptives for the dataset of Malaysia.

n=70

Dependent variables	**Mean**	**Std. dev**	**Minimum**	**Median**	**Maximum**
ROA (%)	0,058	0,105	-0,316	0,049	0,528
Tobin's Q	1,596	1,430	-0,211	1,109	9,280
Stock Return (%)	0,101	0,069	0,022	0,077	0,340
Independent variables	**Mean**	**Std. dev**	**Minimum**	**Median**	**Maximum**
Board Members	8,329	2,185	5	8	15
Male	7,73/92,8%	2,040	4	7	14
Female	0,63/7,2%	0,850	0	0	3
Age	59,271	4,375	49,286	59,444	67,857
Nationalities	1,580	0,850	1	1	5
Blau indicator age	0,636	0,121	0	0,655	0,816
Blau-indicator gender	0,116	0,147	0	0	0,469
Blau indicator nationality	0,136	0,192	0	0	0,688

Control variables	Mean	Std. dev	Minimum	Median	Maximum
Total Assets (x1,000,000)	3268,143	6294,655	26,766	1086,373	31614,222
Ln(assets)	6,990	1,513	3,287	6,990	10,361
Largest Shareholder (%)	0,331	0,164	0,069	0,309	0,795
Blockholder Ownership (%)	0,525	0,159	0,167	0,510	0,898
Net Income (x1,000,000)	271,800	573,500	-391,400	0,512	3275,600

Table 1.3. Descriptives for the combined dataset of the Netherlands and Malaysia.

n=141

Dependent variables	Mean	Std. dev	Minimum	Median	Maximum
ROA (%)	0,035	0,164	-0,803	0,042	0,683
Tobin's Q	1,491	1,119	-0,211	1,162	9,280
Stock Return (%)	0,112	0,065	0,022	0,098	0,340

Independent variables	Mean	Std. dev	Minimum	Median	Maximum
Board Members	8,760	2,995	3	8	19
Male	8,04/91,8%	2,592	3	7	17
Female	0,71/8,2%	0,914	0	0	4
Age	58,064	4,120	46,330	57,857	67,857
Nationalities	2,253	1,506	1	2	8
Blau indicator age	0,619	0,111	0	0,625	0,875
Blau-indicator gender	0,121	0,143	0	0	0,653
Blau indicator nationality	0,249	0,267	0	0,198	0,809

Control variables	Mean	Std. dev	Minimum	Median	Maximum
Total Assets (x1,000,000)	7251,440	28070,099	9,076	1273,825	292181,000
Ln(assets)	7,127	1,808	2,206	7,150	12,585
Largest Shareholder (%)	0,253	0,171	0	0,198	0,795
Blockholder Ownership (%)	0,441	0,199	0	0,452	0,898
Net Income (x1,000,000)	246,005	1141,678	-1566,500	33,271	12518,000

Table 2

This table shows the correlation table of the variables considered in this research.

Legenda
(1) = Tobin's Q
(2) = ROA
(3) = Risk
(4) = Blau indicator Gender
(5) = Blau indicator Age
(6) = Blau indicator Nationality
(7) = lnassets
(8) = Board size
(9) = Largest shareholder
(10)= Blockholder ownership

Table 2.1. The correlation matrix for the dataset of the Netherlands

	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)
(1)	1									
(2)	0,373**	1								
(3)	-0,254*	-0,359**	1							
(4)	0,999**	0,369*	-0,104	1						
(5)	0,01	0,036	0,136	0,021	1					
(6)	0,149	-0,202	0,112	0,273*	0,152	1				
(7)	-0,086	0,14	-0,196	0,389*	0,325**	0,288*	1			
(8)	,281*	0,177	0,093	0,283*	0,307**	0,580**	0,684**	1		
(9)	0,467**	0,291*	0,167	0,466**	0,275*	-0,068	0,035	0,118	1	
(10)	0,252*	0,227*	0,173	0,250*	0,038	-0,270*	-0,408**	-0,231*	0,606**	1

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

Table 2.2. The correlation matrix for the dataset of Malaysia

	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)
(1)	1									
(2)	0,697**	1								
(3)	-0,383**	-0,438**	1							
(4)	-0,046	-0,064	0,043	1						
(5)	-0,067	0,014	-0,111	-0,039	1					
(6)	0,361**	0,357**	-0,315**	-0,182	0,001	1				
(7)	-0,156	-0,028	-0,334**	0,063	0,250*	-0,185	1			
(8)	-0,067	-0,065	-0,213	0,166	0,246*	-0,044	0,230	1		
(9)	0,054	0,041	-0,065	0,105	-0,012	-0,011	0,035	0,320**	1	
(10)	-0,001	-0,018	-0,022	0,111	0,008	-0,076	0,017	0,317**	0,984**	1

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

Table 3

This table gives the descriptives of the Blau-indicators for age, gender and nationality.

Dataset	Variable	Mean	Standard Deviation	Minimum	Median	Maximum
Netherlands	Gender	0,126	0,141	0	0,124	0,653
	Age	0,604	0,099	0,278	0,611	0,875
	Nationality	0,360	0,284	0	0,406	0,809
Malaysia	Gender	0,116	0,147	0	0	0,469
	Age	0,636	0,121	0	0,655	0,816
	Nationality	0,136	0,192	0	0	0,688
Combined	Gender	0,121	0,143	0	0	0,653
	Age	0,619	0,111	0	0,625	0,875
	Nationality	0,249	0,267	0	0,198	0,809

Table 4

This table compares the means, of the Blau indicators, of the two countries.

Variable	Mean NL	Mean MY	Difference	T-value	df
Gender	0,126	0,116	0,009	0,391	1,966
Age	0,604	0,636	-0,032	-1,718	1,896
Nationality	0,360	0,136	0,225	5,504*	1,739

* Difference is significant at a 0,05 level (2-tailed).

Table 5

This table compares the mean of a specific industry with the mean of the combined dataset of the Netherlands and Malaysia, excluding the specific industry.

Legenda
(1) = Technology
(2) = Consumer Services
(3) = Industrials
(4) = Consumer Goods
(5) = Chemicals
(6) = Financials
(7) = Telecommunications
(8) = Basic Materials
(9) = Transportation
(10) = Utilities
(11) = Healthcare

Table 5.1 Age mean comparison

	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)
Size industry	13	14	44	22	2	22	2	10	2	5	5
Size all other industries	128	127	97	119	139	119	139	131	139	136	136
Industry average	0,097	0,148	0,123	0,087	0,109	0,143	0,204	0,115	0,090	0,191	0,109
Average in rest group	0,125	0,120	0,121	0,129	0,123	0,119	0,121	0,123	0,123	0,120	0,123
Industry's standard deviation	0,131	0,153	0,152	0,139	0,155	0,135	0,289	0,134	0,127	0,179	0,126
Rest group standard deviation	0,145	0,142	0,140	0,144	0,144	0,145	0,142	0,144	0,144	0,142	0,144
t-value	-0,742	0,649	0,068	-1,300	-0,122	0,773	0,404	-0,175	-0,364	0,877	-0,236
df	1,149	1,104	1,636	1,321	0,512	1,343	0,503	1,058	0,518	0,837	0,877

Table 5.2 Gender mean comparison

	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)
Size industry	13	14	44	22	2	22	2	10	2	5	5
Size all other industries	128	127	97	119	139	119	139	131	139	136	136
Industry average	0,593	0,583	0,612	0,644	0,609	0,659	0,626	0,692	0,587	0,674	0,650
Average in rest group	0,632	0,633	0,637	0,624	0,628	0,622	0,628	0,624	0,629	0,626	0,627
Industry's standard deviation	0,085	0,090	0,131	0,106	0,022	0,087	0,020	0,305	0,010	0,080	0,357
Rest group standard deviation	0,142	0,141	0,140	0,143	0,139	0,145	0,139	0,119	0,139	0,139	0,129
t-value	-1,458	-1,827	-1,029	0,772	-0,970	1,628	-0,109	0,707	-3,069*	1,265	0,138
df	1,413	1,402	1,785	1,534	1,057	1,744	1,172	0,921	1,451	0,980	0,808

* This difference is significant at a 0,05 level (2-tailed)

Table 5.3 Nationality mean comparison

	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)
Size industry	13	14	44	22	2	22	2	10	2	5	5
Size all other industries	128	127	97	119	139	119	139	131	139	136	136
Industry average	0,345	0,292	0,176	0,328	0	0,236	0,240	0,414	0	0,056	0,443
Average in rest group	0,242	0,247	0,284	0,239	0,255	0,255	0,252	0,240	0,255	0,259	0,246
Industry's standard deviation	0,275	0,256	0,217	0,297	0	0,254	0,339	0,353	0	0,124	0,303
Rest group standard deviation	0,265	0,268	0,281	0,259	0,267	0,270	0,267	0,257	0,267	0,268	0,264
t-value	1,288	0,616	-2,482	1,313	-11,293	-0,318	-0,049	1,525	-11,293*	-3,383	1,437
df	1,095	1,151	1,928	1,218	0,993	1,338	0,509	0,973	0,993	1,071	0,845

* This difference is significant at a 0,05 level (2-tailed)

Table 6

This table shows the univariate relationship between the performance - and the diversity indicato

Table 6.1.1. The univariate relationship between ROA and Gender

Regression number	1		2		3	
Dataset	NL		ML		Complete	
R2	0,009		0,004		0,004	
n	71		70		141	
Dependent variable	ROA		ROA		ROA	
	Coëfficiënt	Probability	Coëfficiënt	Probability	Coëfficiënt	Probability
Intercept	-0,020	(0,512)	6,365	(0,000)	3,210	(0,000)
Gender	0,129	(0,427)	-4,646	(0,602)	-2,969	(0,530)

Table 6.1.2. The univariate relationship between ROA and Age

Regression number	1		2		3	
Dataset	NL		ML		Complete	
R2	0,001		0,000		0,004	
n	71		70		141	
Dependent variable	ROA		ROA		ROA	
	Coëfficiënt	Probability	Coëfficiënt	Probability	Coëfficiënt	Probability
Intercept	-0,045	(0,750)	5,055	(0,460)	0,085	(0,962)
Age	0,068	(0,768)	1,219	(0,908)	4,533	(0,453)

Table 6.1.3. The univariate relationship between ROA and Nationality

Regression number	1		2		3	
Dataset	NL		ML		Complete	
R2	0,041		0,127		0,000	
n	71		70		141	
Dependent variable	ROA		ROA		ROA	
	Coëfficiënt	Probability	Coëfficiënt	Probability	Coëfficiënt	Probability
Intercept	-0,134	(0,092)	3,190	(0,030)	2,826	(0,003)
Nationality	-2,969	(0,530)	19,483	(0,002)	0,272	(0,914)

Table 6.2.1. The univariate relationship between Tobin's Q and Gender

Regression number	1		2		3	
Dataset	NL		ML		Complete	
R2	0,000		0,002		0,000	
n	71		70		141	
Dependent variable	Tobin's Q		Tobin's Q		Tobin's Q	
	Coëfficiënt	Probability	Coëfficiënt	Probability	Coëfficiënt	Probability
Intercept	1,378	(0,000)	1,664	(0,000)	1,524	(0,000)
Gender	0,078	(0,894)	-0,456	(0,707)	-0,221	(0,742)

Table 6.2.2. The univariate relationship between Tobin's Q and Age

Regression number	1	2	3
Dataset	NL	ML	Complete

R2	0,000		0,004		0,000	
n	71		70		141	
Dependent variable	Tobin's Q		Tobin's Q		Tobin's Q	
	Coëfficiënt	Probability	Coëfficiënt	Probability	Coëfficiënt	Probability
Intercept	1,346	(0,010)	2,099	(0,026)	1,675	(0,002)
Age	0,070	(0,932)	-0,791	(0,582)	-0,296	(0,729)

Table 6.2.3. The univariate relationship between Tobin's Q and Nationality

Regression number	1		2		3	
Dataset	NL		ML		Complete	
R2	0,022		0,130		0,030	
n	71		70		141	
Dependent variable	Tobin's Q		Tobin's Q		Tobin's Q	
	Coëfficiënt	Probability	Coëfficiënt	Probability	Coëfficiënt	Probability
Intercept	1,259	(0,000)	1,232	(0,000)	1,311	(0,000)
Nationality	0,360	(0,214)	2,686	(0,002)	0,724	(0,041)

Table 6.3.1. The univariate relationship between Risk and Gender

Regression number	1		2		3	
Dataset	NL		ML		Complete	
R2	0,011		0,002		0,000	
n	71		70		141	
Dependent variable	Risk		Risk		Risk	
	Coëfficiënt	Probability	Coëfficiënt	Probability	Coëfficiënt	Probability
Intercept	12,763	(0,000)	9,929	(0,000)	11,315	(0,000)
Gender	-4,395	(0,389)	2,020	(0,730)	-0,877	(0,822)

Table 7

This table shows the relationship between performance and diversity, controlled for control variables.

Table 7.1 The relationship between ROA and Diversity in the Netherlands, controlled for control variables

Regression number	1		2		3		4	
Dataset	NL		NL		NL		NL	
R2	0,168		0,211		0,168		0,213	
n	71		71		71		71	
Dependent variable	ROA		ROA		ROA		ROA	
	Coefficient	Prob	Coefficient	Prob	Coefficient	Prob	Coefficient	Prob
Intercept	-0,053	0,728	-0,016	0,890	-0,029	0,815	-0,040	0,791
Diversity indicators								
Age*	0,060	0,802					0,078	0,746
Gender*					0,010	0,952	0,054	0,759
Nationality*			-0,174	0,063			-0,177	0,064
Control variables								
Blockholder ownership	0,190	0,133	0,180	0,138	0,195	0,121	0,012	0,279
Boardsize	0,003	0,781	0,012	0,226	0,003	0,779	0,164	0,199
lnassets	0,010	0,548	0,006	0,719	0,010	0,505	0,003	0,833
Risk	-0,012	0,003	-0,012	0,003	-0,012	0,004	-0,012	0,004

* We compute a Blau indicator for this variable

Table 7.2 The relationship between ROA and Diversity in Malaysia, controlled for control variables

Regression number	1		2		3		4	
Dataset	ML		ML		ML		ML	
R2	0,232		0,227		0,227		0,237	

n	70		70		70		70	
Dependent variable	ROA		ROA		ROA		ROA	
	Coefficient	Prob	Coefficient	Prob	Coefficient	Prob	Coefficient	Prob
Intercept	0,320	0,003	0,343	0,001	0,354	0,000	0,296	0,014
Diversity indicators								
Age*	0,085	0,470					0,104	0,427
Gender*					0,027	0,776	0,038	0,697
Nationality*			0,022	0,776			0,025	0,761
Control variables								
Blockholder ownership	0,000	0,985	0,000	0,993	0,000	0,954	-0,007	0,340
Boardsize	-0,007	0,322	-0,006	0,398	-0,006	0,401	0,000	0,994
lnassets	-0,022	0,026	-0,020	0,053	-0,021	0,039	-0,022	0,046
Risk	-0,009	0,000	-0,008	0,001	-0,009	0,000	-0,009	0,001

* We compute a Blau indicator for this variable

Table 7.3 The relationship between Tobin's Q and Diversity in the Netherlands controlled for control variables

Regression number	1		2		3		4	
Dataset	NL		NL		NL		NL	
R2	0,102		0,143		0,092		0,155	
n	71		71		71		71	
Dependent variable	Tobin's Q		Tobin's Q		Tobin's Q		Tobin's Q	
	Coefficient	Prob	Coefficient	Prob	Coefficient	Prob	Coefficient	Prob
Intercept	1,925	0,001	2,181	0,000	2,256	0,000	1,883	0,001
Diversity indicators								
Age*	0,821	0,362					0,846	0,349
Gender*					0,200	0,759	0,181	0,782
Nationality*			0,688	0,051			0,674	0,059
Control variables								

Blockholder ownership	-0,231	0,622	-0,077	0,864	-0,169	0,719	-0,026	0,518
Boardsize	0,014	0,674	-0,020	0,597	0,015	0,672	-0,191	0,688
lnassets	-0,088	0,143	-0,055	0,342	-0,077	0,191	-0,071	0,244
Risk	-0,036	0,018	-0,035	0,018	-0,034	0,028	-0,036	0,016

* We compute a Blau indicator for this variable

Table 7.4 The relationship between Tobin's Q and Diversity in Malaysia, controlled for control variables

Regression number	1		2		3		4	
Dataset	ML		ML		ML		ML	
R2	0,249		0,274		0,248			
n	70		70		70		70	
Dependent variable	Tobin's Q		Tobin's Q		Tobin's Q		Tobin's Q	
	Coefficient	Prob	Coefficient	Prob	Coefficient	Prob	Coefficient	Prob
Intercept	5,369	0,000	4,490	0,000	5,228	0,000	4,673	0,001
Diversity indicators								
Age*	-0,265	0,846					-0,475	0,750
Gender*					0,094	0,932	0,302	0,788
Nationality*			1,335	0,138			1,345	0,154
Control variables								
Blockholder ownership	0,010	0,810	0,015	0,716	0,010	0,816	-0,069	0,405
Boardsize	-0,073	0,365	-0,071	0,357	-0,077	0,346	0,013	0,759
lnassets	-0,278	0,016	-0,228	0,050	-0,276	0,017	-0,216	0,080
Risk	-0,105	0,000	-0,089	0,001	-0,106	0,000	-0,090	0,002

* We compute a Blau indicator for this variable

Table 8

This table shows the relationship between diversity and performance controlled for control variables and industry and country effects.

Table 8.1. The relationship between ROA and diversity

Regression number	1		2		3		4	
Dataset	Total		total		total		total	
R2	0,245		0,253		0,246		0,256	
n	141		141		141(139*)		141(139*)	
Dependent variable	ROA		ROA		ROA		ROA	
	Coefficient	Prob	Coefficient	Prob	Coefficient	Prob	Coefficient	Prob
Intercept	0,172	0,183	0,192	0,088	0,205	0,089	0,190	0,170
Independent variables								
Diversity indicators								
Age*	0,034	0,787					0,040	0,766
Gender*					0,032	0,749	0,036	0,718
Nationality*			-0,075	0,232			-0,077	0,233
Control variables								
Blockholder ownersh	-0,001	0,839	-0,002	0,709	-0,001	0,823	-0,002	0,696
Boardsize	0,000	0,964	0,004	0,536	0,000	0,964	0,003	0,598
lnassets	-0,010	0,299	-0,011	0,249	-0,010	0,293	-0,012	0,226
Risk	-0,009	0,000**	-0,009	0,000**	-0,009	0,000**	-0,010	0,000**
Countrydummies								
Malaysia	0,047	0,111	0,035	0,256	0,049	0,101	0,033	0,300
Industrydummies								
Basic materials	0,002	0,983	0,012	0,886	-0,011	0,903	0,000	0,997
Chemicals	-0,004	0,975	-0,011	0,931	-0,020	0,885	-0,026	0,851
Consumer goods	-0,003	0,969	0,011	0,883	-0,016	0,850	-0,003	0,972
Consumer services	0,014	0,872	0,017	0,843	-0,003	0,977	0,002	0,980
Financials	0,005	0,949	0,006	0,939	-0,008	0,928	-0,009	0,915
Healthcare	-0,227	0,032**	-0,215	0,041**	-0,241	0,032**	-0,225	0,0482**
Industrials	-0,007	0,923	-0,005	0,951	-0,022	0,794	-0,018	0,829
Technology	-0,008	0,928	0,004	0,959	-0,021	0,820	-0,009	0,928
Telecommunications	0,076	0,552	0,097	0,450	0,059	0,658	0,080	0,554
Transportation	-0,055	0,667	-0,066	0,608	-0,071	0,600	-0,077	0,572

* For this variable we compute a Blau indicator.
** This relationship is significant at a 0,05 level

Table 8.2. The relationship between Tobin's Q and diversity

Regression number	5		6		7		8	
Dataset	Total		total		total		total	
R2	0,247		0,252		0,274		0,278	
n	141		141(139*)		141		141(139*)	
Dependent variable	Tobin's Q		Tobin's Q		Tobin's Q		Tobin's Q	
	Coefficient	Prob	Coefficient	Prob	Coefficient	Prob	Coefficient	Prob
Intercept	2,793	0,0018	3,009	0,003	2,766	0,0003	3,019	0,0015
Independent variables								
Diversity indicators								
Age*	0,024	0,978					-0,140	0,877
Gender*			-0,010	0,988			-0,031	0,963
Nationality*					0,906	0,034	0,874	0,044
Control variables								
Blockholder ownersh	-0,006	0,857	-0,006	0,856	0,004	0,905	0,003	0,916
Boardsize	0,034	0,354	0,034	0,371	-0,005	0,905	-0,003	0,947
lnassets	-0,128	),055***	-0,127	0,058	-0,112	,087**	-0,110	0,104
Risk	-0,067	0,000**	-0,068	0,000**	-0,063	0,000**	-0,064	0,000**
Countrydummies								
Malaysia	0,070	0,729	0,077	0,699	0,232	0,269	0,237	0,272
Industrydummies								
Basic materials	-0,327	0,574	-0,531	0,407	-0,467	0,417	-0,648	0,311
Chemicals	-0,870	0,327	-1,081	0,245	-0,800	0,359	-0,995	0,281
Consumer goods	0,462	0,382	0,286	0,629	0,287	0,584	0,136	0,819
Consumer services	0,201	0,728	-0,002	0,998	0,144	0,799	-0,040	0,950
Financials	-0,288	0,590	-0,486	0,411	-0,293	0,576	-0,468	0,424
Healthcare	0,483	0,498	0,286	0,706	0,307	0,662	0,128	0,866
Industrials	-0,111	0,826	-0,313	0,579	-0,156	0,753	-0,338	0,547
Technology	0,121	0,837	-0,074	0,907	-0,035	0,952	-0,206	0,746
Telecommunications	0,109	0,213	0,885	0,329	0,832	0,337	0,660	0,466
Transportation	-0,874	0,322	-1,086	0,239	-0,782	0,366	-0,984	0,285

* For this variable we compute a Blau indicator.
** This relationship is significant at a 0,05 level
*** This relationship is significant at a 0,10 level

Table 9

This table compares the mean of the upper and lower quantile when the dataset is sorted on a specific variable.

Legenda
(1) = Blau indicator gender
(2) = Blau indicator age
(3) = Blau indicator nationality

Table 9.1 Mean comparison for the dataset of the Netherlands, sorted on Tobin's Q

	(1)	(2)	(3)
average upper quantile	0,129	0,641	0,304
average lower quantile	0,161	0,600	0,448
n upper quantile	17	17	17
n lower quantile	17	17	17
stdev upper quantile	0,122	0,079	0,310
stdev lower quantile	0,162	0,077	0,263
t	-0,636	1,536	-1,461
df	1,748	1,881	1,834

Table 9.2 Mean comparison for the dataset of Malaysi, sorted on Tobin's Q

	(1)	(2)	(3)
average upper quantile	0,125	0,645	0,063
average lower quantile	0,119	0,596	0,242
n upper quantile	17	17	17
n lower quantile	17	17	17
stdev upper quantile	0,152	0,096	0,153

stdev lower quantile	0,149	0,178	0,217
t	0,123	0,987	-2,7781585
df	1,882	1,447	1,694

Table 9.3 Mean comparison for the dataset of the Netherlands and Malaysia combined, sorted on Tobin's Q

	(1)	(2)	(3)
average upper quantile	0,117	0,632	0,116
average lower quantile	0,133	0,594	0,335
n upper quantile	35	35	35
n lower quantile	35	35	35
stdev upper quantile	0,148	0,099	0,197
stdev lower quantile	0,153	0,134	0,254
t	-0,449	1,336	-4,037*
df	1,941	1,789	1,832

*Significant at a 0,10 level

Table 9.4 Mean comparison for the dataset of the Netherlands, sorted on ROA

	(1)	(2)	(3)
average upper quantile	0,078	0,639	0,435
average lower quantile	0,103	0,579	0,276
n upper quantile	17	17	17
n lower quantile	17	17	17
stdev upper quantile	0,114	0,087	0,267
stdev lower quantile	0,136	0,100	0,274
t	-0,589	1,862	1,707
df	1,826	1,847	1,881

Table 9.5 Mean comparison for the dataset of Malaysia, sorted on ROA

	(1)	(2)	(3)
average upper quantile	0,109	0,660	0,118
average lower quantile	0,114	0,595	0,226
n upper quantile	17	17	17
n lower quantile	17	17	17
stdev upper quantile	0,161	0,105	0,208
stdev lower quantile	0,139	0,160	0,230
t	-0,103	1,384	-1,426
df	1,844	1,628	1,864

Table 9.6 Mean comparison for the dataset of the Netherlands and Malaysia combined, sorted on ROA

	(1)	(2)	(3)
average upper quantile	0,105	0,631	0,310
average lower quantile	0,092	0,602	0,211
n upper quantile	35	35	35
n lower quantile	35	35	35
stdev upper quantile	0,121	0,096	0,290
stdev lower quantile	0,124	0,132	0,230
t	0,448	1,058	1,578
df	1,942	1,772	1,848

Table 9.7 Mean comparison for the dataset of the Netherlands, sorted on Risk

	(1)	(2)	(3)
average upper quantile	0,175	0,616	0,415
average lower quantile	0,114	0,653	0,471
n upper quantile	17	17	17

n lower quantile	17	17	17
stdev upper quantile	0,131	0,079	0,275
stdev lower quantile	0,113	0,097	0,265
t	1,448	-1,235	-0,604
df	1,842	1,808	1,880

Table 9.8 Mean comparison for the dataset of Malaysia, sorted on Risk

	(1)	(2)	(3)
average upper quantile	0,103	0,635	0,246
average lower quantile	0,100	0,621	0,059
n upper quantile	17	17	17
n lower quantile	17	17	17
stdev upper quantile	0,152	0,086	0,236
stdev lower quantile	0,162	0,184	0,133
t	0,053	0,298	2,838
df	1,876	1,335	1,487

Table 9.9 Mean comparison for the dataset of the Netherlands and Malaysia combined, sorted on Risk

	(1)	(2)	(3)
average upper quantile	0,133	0,629	0,274
average lower quantile	0,114	0,633	0,271
n upper quantile	35	35	35
n lower quantile	35	35	35
stdev upper quantile	0,153	0,089	0,245
stdev lower quantile	0,138	0,140	0,293
t	0,542	-0,146	0,042
df	1,923	1,648	1,882

Table 10

This table shows the relationship between risk and gender

Table 10.1 The relationship between the Blau indicator Gender and risk, controlled for control variables, and industry and country ef

Regression number	**1**		**2**		**3**	
Dataset	Complete		NL		ML	
R2	0,150		0,219		0,040	
n	141(139*)		71		70	
Dependent variable	Gender**		Gender**		Gender**	
	Coefficient	Prob	Coefficient	Prob	Coefficient	Prob
Intercept	0,077	0,484	-0,108	0,217	-0,030	0,803
Independent variable						
Risk	0,000	0,917	-0,003	0,277	0,002	0,480
Control variables						
Blockholder ownership	0,002	0,655	0,014	0,031	0,010	0,268
Board size	0,012	0,016	0,124	0,159	0,002	0,627
Ln assets	0,007	0,410	0,013	0,241	0,006	0,665
Countrydummies						
Malaysia	-0,006	0,833				
Industrydummies						
Basic materials	-0,155	0,070***				
Chemicals	-0,107	0,393				
Consumer goods	-0,142	0,075***				
Consumer services	-0,090	0,290				
Financials	-0,110	0,167				
Healthcare	-0,154	0,132				
Industrials	-0,107	0,157				

Technology	-0,118	0,170				
Telecommunications	0,010	0,934				
Transportation	-0,146	0,240				

*** Number of observations after adjustment**
**** Used as a Blau indicator**
***** Significant at a 0,10 level**

Table 10.2 The relationship between the percentage females and risk, controlled for control variables, and industry and country effect

Regression number	**1**		**2**		**3**	
Dataset	Complete		Complete		Complete	
R2	0,157				0,004	
n	141		141		141	
Dependent variable	Perc. Fem.		Perc. Fem.		Perc. Fem.	
	Coefficient	Prob	Coefficient	Prob	Coefficient	Prob
Intercept	0,187	0,067	-0,032	0,586	0,099	0,000
Independent variable						
Risk	0,000	0,850	0,000	0,851	-0,001	0,486
Control variables						
Board size	0,005	0,326	0,002	0,606		
Blockholder ownership	0,001	0,771	0,002	0,714		
Ln assets	0,009	0,294	0,014	0,094		
Countrydummies						
Malaysia	0,017	0,511				
Industrydummies						
Basic materials	-0,253	0,001				
Chemicals	-0,237	0,045				
Consumer goods	-0,203	0,004				
Consumer services	-0,204	0,008				

Financials	-0,219	0,002			
Healthcare	-0,239	0,012			
Industrials	-0,232	0,001			
Technology	-0,221	0,005			
Telecommunications	-0,149	0,198			
Transportation	-0,263	0,025			