# Erasmus University Rotterdam

## Erasmus School of Economics

Master Thesis: Msc. Financial Economics

**VC exits: role of gender, firm and management characteristics in Netherlands**

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## Abstract

Venture capital exit decisions are made after meticulous evaluations, with human capital in firm management being a key qualitative factor. This paper examines the impact of management teams on exit decisions, using hand-collected data from Dutch firms. The findings reveal that factors like female management representation, firm age, and the average experience of management teams have an influence on the exit decisions. The presence of female management significantly increased IPO exit odds, aligning with Dutch regulations for female board representation. Larger firms and female founders promoted female management, while management characteristics had no significant impact on bankruptcy. Stock market conditions influenced buyout likelihood, though the effect on IPO likelihood was inconclusive. Experienced management teams favored buyouts post-2021, with female members negatively affecting this outcome. The results suggest that human capital characteristics play a role in determining exit routes, highlighting the importance of thoughtful hiring processes and gender diversity. This research also opens new avenues for further study.

Keywords: Exits, Women, Netherlands, Firm characteristics, Venture Capita

## 1. Introduction:

Entrepreneurship forms a backbone into a society's development, more firms contribute to higher job creation, more choices, and Innovation. Most often these firms are funded by venture capital (and/or private equity players), based on detailed evaluation. Entrepreneurship is highly driven by its individuals, or key persons, taking into account risk, innovation and return capabilities (Union, 2012). Harvard Business Review and practitioners, evaluates the startup by the people that run it, the entrepreneurs. Entrepreneur's inherent qualities (interest, track record, skill, and coachability) play an important role in determining their investments. (Zider, 1998). The world/area of startups and scaleups are mostly considered and observed to be male oriented and addressing these challenges are an integral part of solving market failure. Market failure is defined as the inefficiencies arising out of unequal distribution of demand and supply, and gender discrimination in labour workforce is a form of market failure. ( (KPMG, 2016) As per a recent IMF study, women in workforce could increase economic gains, GDP, improved growth from improving efficiency and productivity. (Ostry, Alvarez, EEspinoza, & Papageorgion, 2018) As per the OECD report, in 2013, women owned sole proprietary businesses accounted for 20%-40% in the OECD countries, with Netherlands having the lowest with slightly upward of 20%. Since then various initiatives were taken to bring in more women in the workforce. (Piacentini, 2013)

As Entrepreneurship is characterized by economic growth, various market players have an important stake in the firm. Venture capital and private equity players fund the budding new firms with seed capital for early stages to growth capital for more later stages, this acts as a catalyst to grow and bring in more investments and business opportunities to these firms. In the last 20 years the investments into small sized or startup firms has been over EUR 24T (Walsh & Cole, 2024). Figure 1 and 2, show that in 2023, VCs have invested almost EUR 95B in Europe and EUR 2.1B in the Netherlands, with deal volumes of 1,600 and 70 respectively (Pitchbook). Despite the slower growth in activity after the post-covid recovery fall, 2024 looks promising with deals reaching higher than 2023 within half year in Europe at EUR 98B with 1,650 deals, but the trend looks weaker for the Netherlands at EUR 1.75B with 65 deals.

One of the major decisions taken by Venture Capitals is the exit decisions from the portfolio firm, VCs generate returns based on their Exit multiple, the exit serves as the reputation and success of the VCs. (Phalippou, Rauch, & Umber, 2018). While in practice, the exit trend is majorly dominated by buyouts, trade sales and mergers, IPOs are considered to be the 'successful' exit. For 2024 Half year, In Netherlands, the deals predominantly consisted of Mergers and Acquisitions (50%), 40% secondary buyout and 10% Bankruptcy. while in Europe 7 companies faced bankruptcy, followed by 1 IPO and majority M&A at 56.

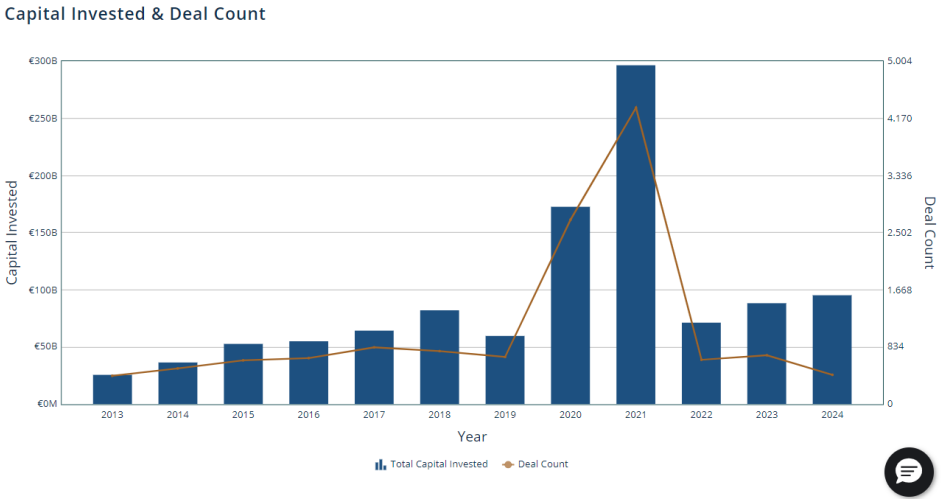


*Figure 1: Europe, VC/PE deal activity 2013 to 2024 (H1), Source: Pitchbook*

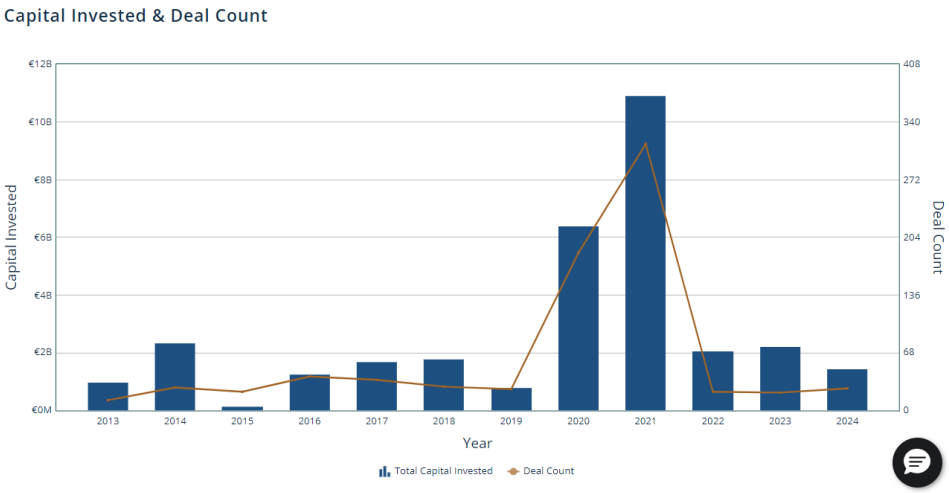


*Figure 2: Netherlands, VC/PE deal activity 2013 to 2024 (H1), Source: Pitchbook*

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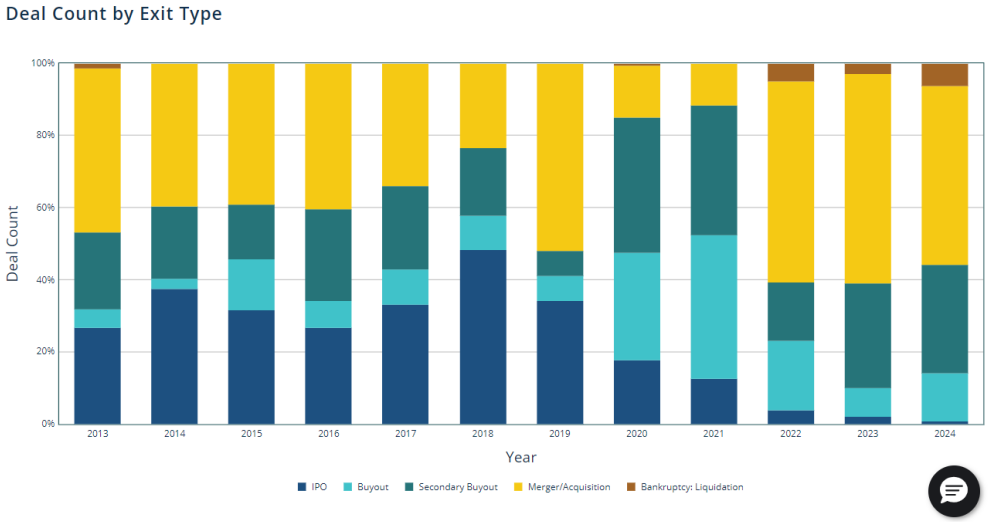


*Figure 3: Exit type: Europe, 2013 to 2024 (H1), Source: Pitchbook*


*Figure 4: Exit type: Europe, 2013 to 2024 (H1) , Source: Pitchbook*

*Note: The deal numbers may not match due to exclusion of several exit types (as per Pitchbook, there are 13 types of exits), only the types relevant to academic studies are included.*

Several theories have been studies upon for the determination of exit strategies. Jenkinson & Sousa (2015) investigated the market timing theory and concluded that 'windows of opportunities' play a major role in determining the exit. Company's intrinsic stage of development and financial characteristics (cashflows, expected or unrealized IRR) are important. (Cumming & MacIntosh, 2001) (Jenkinson & Sousa, 2015) (Wright & Robbie, 1996); (Bienz & Walz, 2007). Entrepreneur's characteristics such as Industry knowledge and minimizing information asymmetry between entrepreneur and VCs. The main aim of a venture capital firm is to achieve a positive return on investment while simultaneously enhancing the company's value. This is further amplified by the company's effective internal operations and strong corporate governance practices. (Cressy, Munari, & Malipiero, 2007) (Rigamonti, Cefis, Meoli, & Vismara, 2016)

From the academic point of view, the venture capital and its exits are studied vastly. Gompers & Lerner (1999), Schwienbacher, Giot, & Armin (2005), among others have restriced their research on venture capital exits to its financial performance. While Dimov & Shepherd (2005) attempted to capture the qualititative human characteristics such as education and work experience, their analysis was on venture capital managers. In my paper I attempt to study the human characteristics of the entrepreneurs, as discussed earlier, venture capitals invest in the entrepreneurs. (Zider, 1998). In my research, I have only found reports on Dutch female entrepreneurs through articles and company reports, which reported in 2018, there were a total of 12% startups were founded by female. (TechLeap NL, 2019). This provided me with

the opportunity to create a database of the Netherlands firms that had undergone exits and research on their human capital characteristics such as size of the management team, average experience of the managers, founder characteristics, and the gender ratio in the management team.

I formed five major hypothesis to test the significance of the managerial characteristics that could influence the exit decisions of the firms. I examined the impact of entrepreneur's diversification, skill and knowledge. I also took this opportunity to assess the women in the workforce in the netherlands for 2017-2023, in my attempt to additionally test whether women in the management team influenced the exit decisions, since this study is lacking in academia in the Netherlands. As this study focuses on the inherent qualitative aspects of firms and entrepreneurs, the financial returns generated by the exits are excluded.

To analyze the data, five hypotheses were formed. We tested whether having a female member in the management team affected the IPO exit. The results showed that having a female member increased the odds of firms exiting via an IPO, despite the small number of firms that did so. Among other firm-specific characteristics like age and management experience, having a female member had the statistically significant effect. Firms going on IPOs may be public firms and the Netherlands requires at least one third female participation in the board and management, This may spur female engagement in the future. Women in management was found to be higher when the management team size was higher and specially higher when the firm was founded by a female founder, perhaps female founder deemed it important to having a balanced team and may themselves be on the management team. We also studied the age experience of the management team members, we attempted to test whether age experience influenced any particular exit decisions such as IPO and Buyout, in our results, we found no statistical significance, however we found that the stock market prices had a significant impact on the decisions, we found industries to have a higher influence, Healthcare, information technology and telecom and media had better predictive power over buyouts indicating those industries were more prevalent during the buyout exits. Another theory we tested was whether the managers over 20 years of average experience would opt for buyout more before 2021 and after 2021. We found that the managers indeed favoured more buyouts after 2021. Perhaps the deal flows that were stuck due to covid were witnessing more traction, and as studied by Wright & Robbie (1996), buyouts are more common exit routes.

The remainder of this paper is organized follows. Section 2 summarizes the theoretical framework and related academic literature. Section 3 provides a detailed explanation of the data and variable construction. Section 4 provides the methodology and robustness checks of

the data. The results are discussed and interpreted in Section 5 and lastly, Section 6 and 7 presents the main conclusions, limitations and recommendations for future research.

## 2. Theoretical framework:

### 2.1 Financing of firms

Entrepreneurs require financing for growth and it is catalyzed by efforts and backing of venture capitals, this enables the embryonic firms to further grow, develop and influence the firms. Most firms, almost 8 out of 10 with large market capitalization in the US were initially financed by venture capitals (Lerner & Nanda, Venture Capital's Role in Financing Innovation: What We Know and How Much We Still Need to Learn, 2020), while in the Netherlands the same ratio is 10% (Pitchbook).

For centuries entrepreneurs have sought funding from external investors, while traditionally the money was given by close associates or banks, traditional methods of fundraising has since been complemented and transformed by innovative approaches such as crowdfunding, venture capital, and impact investing. Previously, the investment related to financial commitments, by banks or other financial institutions, that levied a higher rate of interest along with collateral obligations. With the advent of venture capital, financial as well as strategic interest alignment originated. In the US, some of the previously venture capital backed firms today account for the highest market capitalized firms traded publicly. (Lerner & Nanda, 2020). Levine (2004) also established the connection between financial innovations and growth in the economy, this is supported by proactive government funds directed towards small and medium sized enterprises, funds from the public pension funds that require a long holding period. (Lerner & Nanda, 2020).

For firms, at a younger stage, the receipt of financing typically caters towards research and development, capital expenditure or working capital needs. Due to lack of capital in early stages, there is often a gap in funds required and internal financing available to the firms. (Brown, Fazzari, & Petersen, 2009). A stream of literature also analyses the forms of firm financing, whether debt is more appropriate of equity, and potential reasons behind dilution of equity. (Myers, 2003). Venture Capitals invest in the company’s finances with a stake in its ownership, they can require a minority or majority shareholding, in return firms get access to industry expertise, strategic advice on product-market fit, sales and distribution channels, and corporate governance advise, which they may lack due to insufficient experience, expertise and members in the team. The idea of investment by venture capitals is not to be invested until perpetuity instead to grow the company to a size such that it can further be sold to other investors, who then add more value to the firm. (Zider, 1998)

Corporate financing is a topic of high interest from the academic community. Myers (2003) presented various theories linked to capital structure. Traditionally, the cost to the company was computed by the return it needs to generate to the investors, for debt – it's the Interest and principal payment, and for equity it is the residual value to the investors. Proponents of debt argued that debt has tax benefits and hence the firms would prefer to balance its cost of financial distress to benefits; and that the firms targeted to reach an optimal target debt ratio – trade off theory. Alternately, pecking order theory, discussed how firms would first use its internal cash, followed by financing using its assets as collateral – debt, hybrid instruments and diluting its equity would be the last option when other options have been exhausted (Shyam-Sunder & Myers, 1999). While empirical research by Chirinko & Singha (2000) proved none of the theories to be of a definite conclusion, the findings still contribute valuable insights to the ongoing discourse. Pecking order theory argues that firm's last resort is to dilute its equity, (De Jong, Verbeek, & Verwijmeren, 2010) analyzed this empirically and found that younger firms opt for external equity financing more and hence the popularity of venture capital, while this was a puzzling result, it is argued that embryonic firms have limited assets and require financing for R&D, which is highly risky for a bank due to firm's uncertainty to pay back. Hence, it's possible that even if they want banks may not agree to finance them. (Myers, 2003).

Another theory of financing leads to agency theory, financing is done in the ratio that minimizes agency costs. Agency cost related to non-alignment of interest in the business between the managers and the shareholders. Fried & Ganor (2006) argued that Venture capital investing enables reducing agency theory, due to investors having a strategic interest they can direct the managers in a specific direction either through advising or by having a clause in the shareholder's agreement for improvements in the company.

**2.2 Overview of Venture Capitals**

Venture Capitals (VC) or Private equities (PE) are a formed as a limited partnership firms, where Venture capitals buy a controlling interest in the companies by acquiring a share of the company. (Kaplan, Sensoy, & Stromberg, 2009). These are usually decentralized firms with few investment professionals and not more than 12-15 invested companies per fund. (Lerner, 1994). Usually each of these private equities have more than one fund operating at a certain amount of time. In terms of financing mandates, private equities buy a relatively higher ticket sized companies and particularly firms that in growth stages, whereas, venture capitals buy a smaller sized tickets in early to embryonic staged companies to accelerate their growth.

*Functioning of PE:*

PEs operate in a GP-LP relationship, GPs are general partners who set up the LLP and are responsible for fundraising of the firm, while the LPs are limited partners who provide the funding to the LLP. GPs earn fees (management fees, transaction fees, carried interest)1 in return for managing the capital and attempt to generate a return higher than the market. This is why this type of an organization is termed as ‘leverage buyouts’, they invest using the leverage and buyout the companies for a controlling share. Usually Private Equity’s team size is not more than 12-15 primarily consisting of partners, Investment Managers, Associates, Analysts, Portfolio Management, Legal Council, and an Accounting expert. (Andreoli & ten Rouwelaar, 2024)

Before securing the capital, GPs define the terms of the fund on the fees, mandate of the fund, fund lifespan, years for investment and divestment, approximate exit, expected IRR or Money Multiple4, type of the fund (open or closed). GPs also provide a certain percent of the fund, called committed capital (1-3%), this capital ensures that the GP has a personal stake in the company, this helps in reducing agency costs. (Gompers & Lerner, 1999) (Wright & Robbie, 1998).

In the mandate, it mentions the revenue, stage, sector, geographic focus, investment per company, specific characteristics of the company (ESG compliance, SFDR compliance) (Jenkinson & Sousa, 2015) When scouting for companies, VCs shortlist companies on these parameters. Before investing in a company, LPs follow a thorough due diligence process in which they internally and externally evaluate the entire business functions (financial models and forecasts, supply chain, key stakeholders, marketability of the product/service, legal and regulatory audits, etc.). Once they are ensured of the strength of the business, they invest their first capital. Given the volume of investments, it may take up to 4 years for invest all the money, but they usually have a hard stop at the end of holding period, post which, up to the next 4 years, they would be required to divest the companies and realize their returns. (Wright & Robbie, 1998) During the investment period, they take controlling interest of the company and run the company in a more profit-making direction by taking board and strategic roles in the investee company also called portfolio management, it promotes growth and efficiency using buy and built strategy. (Bansraj & Smit, 2017). Authors such as Cumming & Johan (2008), established that the strategy and growth the investors promote in the company, is pre-planned, and hence these are early indications of the type of exit that the venture capital targets. As much of the research find mitigating agency cost between venture capital and entrepreneur firms, the challenge is for entrepreneurs/management and venture capitals to be on the same page for exit decisions. (Wright & Robbie, 1998)

### 2.3 Exit of Venture Capitals

The GPs of private equity or venture capital, require a successful (positive IIR, and MM) exits, in order to build and retain their reputation and funding (from LPs). (Phalippou, Rauch, & Umber, 2018). When the venture capitals commit investments to the firms, the financing takes place in tranches or stages where venture capitals monitor the company and set goals in terms of milestones and monitoring (Gompers & Lerner, 1999). This is important because the exit by a venture capital takes place after a successful milestone (financial, business, management) is attained. A successful exit may involve an initial public offering (IPO), or an acquisition (sometimes referred to as a "trade sale"). A preplanned exit strategy is a reasonable expectation that the investor will want to dispose of the entrepreneurial investment either by IPO or acquisition (i.e., trade sale), and this expectation is formed prior to contracting with the entrepreneur. (Cumming & Johan, 2008)

There are several modes of exits as identified by Pitchbook - IPO, Buyouts, Trade Sales, Secondary Buyouts, Mergers, Buybacks among others. While the most preferred exits are IPO, but most common in practice is trade sales or buyouts. (Black & Gilson, 1998). While each of the exits are realized based on certain milestones, the objective is to make all the parties satisfied with the exit value (Wright & Robbie, 1996). Cumming & Johan (2008) argued that exit is determined based on several factors, such as information asymmetry and that the exit is predetermined at the time of contracting the entrepreneur. An investor tends to assert stronger control using convertibles while having a higher information symmetry leads to investor using more common equity. Apart from control rights, firm's internal characteristics such as cash flows, valuations growth opportunities, reputations among others is integral to realizing an exit. (Gompers & Lerner, 1999) (Das, Jagannath, & Sarin, 2003) (Cumming & Johan, 2008) (Stegemoller, 2008) Another stream of literature is the market timing theory, such as exits depend on Industries, some industries are faster to exit than others, this is also impacted by market timing as certain periods provide a higher value to the firms (Schwienbacher, Giot, & Armin, 2005). Lerner (1994) examined that venture capitals are able to time their IPOs when the stock prices are high and prefer private financing when stock prices are low. Venture capital's exiting though public markets when stock prices are high minimizes the dilution of the venture investor's ownership. (Barry, 1994). Venture capitals struggle most with the valuations of the firm at the time of exit, this is due to information asymmetry in the market. (Lam, 1991)

While most of the research is done on IPOs, there is a pecking order in the of exit channels with investors. (Bienz & Walz, 2007). Although IPO is the most preferred exit, trade sales are in reality the most common. (Relander, Syrjanen, & Miettinen, 1994). The reason for this is, the threshold in terms of financials is high for an IPO, it may not provide immediate liquidity

and the entrepreneur may have to sell their shareholding to another buyer. (Relander, Syrjanen, & Miettinen, 1994), (Petty, Bygrave, & Shulman, 1994). IPOs also make monitoring of the company more expensive and strict, and public investors / stakeholders require a discount on monitoring (Bienz & Walz, 2007). Jenkinson & Sousa (2015) argued that there is no preferred exit channel, instead venture capitals take advantage of pockets of opportunities and select the exit route that maximizes their investment value.

*Entrepreneur and exit*:

One of the most important criteria for venture investors while screening for investment is the entrepreneurs characteristics, such as their personality, experience, previous performance in industry expertise (MacMillan, Kulow, & Khoylian, 1989) (Wright & Robbie, 1998). There are several ways to capture the skill of the entrepreneurs, through demographic, education, experience. (Hambrick & Mason, 1984) (Becker, 1975)

One of the theories propose that greater human capital in team size, better it is for the company and more people are specialized at a particular skill. (Becker, 1975). There is a strong link between human capital and performance of the firm, as performance is strongly associated with rare, valuable, non-substitutable qualities; knowledge and experience seems to meet the conditions well. (Barney, 1991) (Spender, 1996)

In the Venture capital research, Dimov & Shepherd (2005) were one of the first authors to assess the human capital aspects (domain/industry experience) of the management team of the venture capital players, I tweak my study to further study the human capital aspects (no. of years of experience) of the management teams of the firm's. Dimov & Shepherd (2005) found that there were no significant results that explained IPO associated with experience, however, they found that managers hailing from certain industries and education sector, had a higher chances of bankruptcy. In the Netherlands, Studies show that financial and impact VC portfolios support the relevance of education and experience and seek specific entrepreneur personality traits (including soft traits). (Andreoli & ten Rouwelaar, 2024)

## 2.4 Women in Top Management

The presence and opportunities to women in workplace has improved drastically over the last 20 years, however the progression of women to the management team has been less, while there has been progress in lower managerial levels and corporate boards. (Hillman, Shropshire, & Cannella, 2007). Women invest and tend to start at the same career paths initially from education to entering the workforce as men, however after a while their careers tend to diverge. (Burke & Major, 2014). Schwartz (1992) proposes that a higher influx of women in the workforce would bring in more women, would also signal that the company

culture treats both men and women fairly. In hiring for women in the top management, they are still subject to personal biases, such as not fitting into the ‘old boys network’, priorities are viewed differently for women, it is believed that they are more family oriented and often take up the role of a caretaker, which makes them weak contender for top management spots. (Powell G. N., Handbook of Gender and Work , 1999) (Powell G. N., 2010)

Women at a top management, for other women act as a catalyst for growth. It is more inspiring to other women to see a mentor in their company and subsequently rise up the ranks. More women managers could also lead changes in the organizations, HR policies, attitude of male managers. (Dezső, Ross, & Uribe, 2013) This is now being supported individually by companies where they train women and by countries that wants to promote gender diversity in the workplace. As per TechLeap NL (2019) In the Netherlands, women founders comprise of 11.9% of the total founders, with 4% only female founders. The Hague and Nijmegen comprises of the largest presence of women founders in the Netherlands, while Arnhem, Delft, Haarlem and Leiden comprise the of the lowest number of female founders. Health and Fashion leads the industries with highest women only startups in the Netherlands. The Netherlands is also ranked 7$^{th}$ in the gender diversity in startups while Iceland leads the chart. In 2022, the Dutch company board act mandated 1/3$^{rd}$ women participation in management teams and boards in all public companies. While this is a new act passed in 2022. This may take time to implement. (Sterk & Vletter, 2023)

## 3. Data

This chapter is intended to provide an overview of this study’s sources of data and the methodology used to examine the data using dependent and independent variables. These together with research methods – regression is used to test and validate the hypothesis. It also gives insights into the data, reasoning behind exclusions and inclusions, along with the descriptive statistics of the data.

### 3.1 Construction of Data

The preliminary data has been taken from Preqin database, which includes a large amount of private companies data including VC/PE. Preqin also provides access to download large amount of data for research purposes. The core data cover the period of 2016 to 2023, including the deals that occurred previously (2013 and after) for the same companies existing in 2017-2023. This includes a detailed information of VC/PE exit deals in the Netherlands, that is the transactions per company that took place particularly for exits. The core data consisted of 25,964 deals from Europe for 2000-2023, of which 2023 were from the Netherlands. The decision to only include Netherlands was to study the empirical evidence only from the Netherlands transaction, as this would give both academicians and practitioners the

opportunity to evaluate the market better. The data only includes the transactions for exit types - Trade sale, Buyout, Secondary Buyout, Merger and IPO. Other transactions excluded consisted of exit types that were in combination, further shortened the data from 2000-2015, excluded some companies due to data unavailability. The final data comprised of 913 transactions. The data has not been sampled as to retain the completeness.

The second set of data was taken from Pitchbook, Pitchbook is used widely by corporate and institutional Investors, as this includes detailed information on private market transactions. Pitchbook had further information of team members, along with board members, management teams and other employees. The third set of data was taken from LinkedIn open sources, Linkedin is an open source platform where one can find the work experience of people worldwide, this is useful is verifying authenticate work experience source directly from the member of the firm. This also provides the details of member's education history and other affiliations.

The M&A data was taken from Orbis M&A, it has access to global M&A deals with their characteristics including the financial information. The data taken includes the M&A volumes data monthly that would indicate whether Netherlands was following the M&A wave compared the European M&A deals. The stock market data was taken from WRDS. For both M&A and AEX stock market data, the time period used was 2010 to 2023, monthly data on the volumes of M&A and the AEX stock market prices. M&A volume and stock prices of AEX monthly was then added to the final data corresponding to the deal date of the transactions. It provided us with the opportunity to study the overall Dutch market and how it compared to the private deals taking place in the Netherlands.

For the final database used in this research, the data base was created by hand, every variable required was taken manually from various sources and put together to form it into a data base. After attaining the observation/transactions from Preqin, the next step was to search individual company on Pitchbook, identify how many times each company went through transactions, searched the team members. The team members taken particularly consisted of higher level management, the CXOs, Managing Directors, VPs, Directeurs (NL), and founders. The data includes, per company, the details of all the management team combined. The team members were then found on Linkedin through a direct link on Pitchbook, else the names were manually search on Linkedin or the company website for further information. The team members were then looked up for the work experience, after every experience (in age) was added, their average was then taken to find out the average experience. Same process was followed to gather information of whether the team members consisted of female members, if yes the cell

would be marked with 1. All of this information, along with links to each member are present in the database created.

### 3.2 Variables

*Exit:* The aim of this paper is to study the exit decisions based on human capital characteristics data particularly skill and gender. It is observed that each transaction has an unique exit type, while the same company may have undergone multiple exit types at different times, the observation is still deemed to be unique. Note that the data tests transactions, not the firms.

Exit types are categorized into the following, In the dataset, this is further categorized into numbers.

**Table 1**: *Types of Exits studies and their Definitions.*

| Exit Type | Definition |
|---|---|
| Initial Public Offering | Companies are exited and sold to investors in the public market such as stock exchanges. |
| Buyout | The firm is bought by another PE firm after the firm reaches a particular growth stage. |
| Merger | Two firms with similar business lines are merged into one, these are typically both portfolio companies of the PE funds. |
| Trade sale | The firm is sold in parts to other PE firms |
| Secondary Buyout | The firm is bought out by a secondary |
| Bankruptcy | The firm becomes insolvent and is eventually written off the investors profile. |

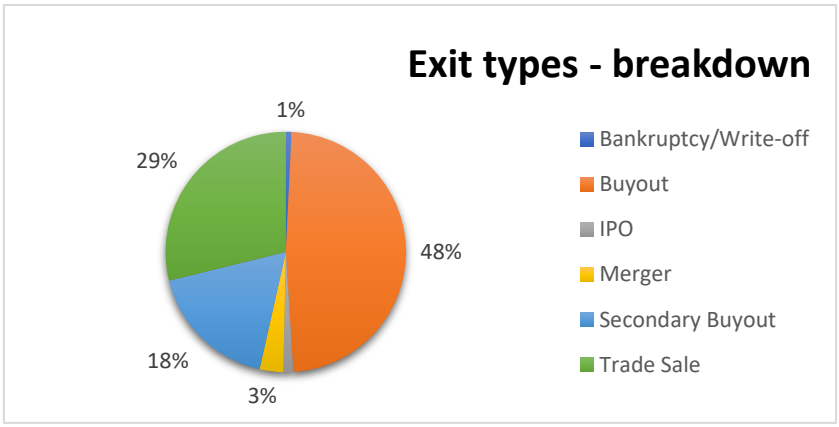


*Figure 5: Breakdown of exit types*

*Other variables*

*Female founder*: Female member in the founding team, since this is a binary variable, it denotes the presence of a female in the higher management team. Dummy Variable: 1 if females are present; or 0 if they are not present.

**Table 2**: *Female founders through 2017 to 2023*

| | **2017-2023** |
|---|---|
| Total female founders | 6.95% |

*Female MT*: Female member in the management team, since this is a binary variable, it denotes the presence of a female in the higher management team. Dummy Variable: 1 if females are present; or 0 if they are not present.

**Table 3:** *No. of firms with females in management teams*

| | **2017** | **2018** | **2019** | **2020** | **2021** | **2022** | **2023** |
|---|---|---|---|---|---|---|---|
| Firms with Female MT | 36.8% | 35% | 35.8% | 44% | 32.7% | 20% | 25.75% |

*Note: The data only pertains to the sample taken for this research*

*Experience*: Experience in terms of total age (of working experience) in the management team, This was calculated for each of the member of the management team in the firm. This was calculated as:

*Experience = year of professional first started their career ($Y_n$) – Current year up to data selection ($Y_t$ = 2023)*

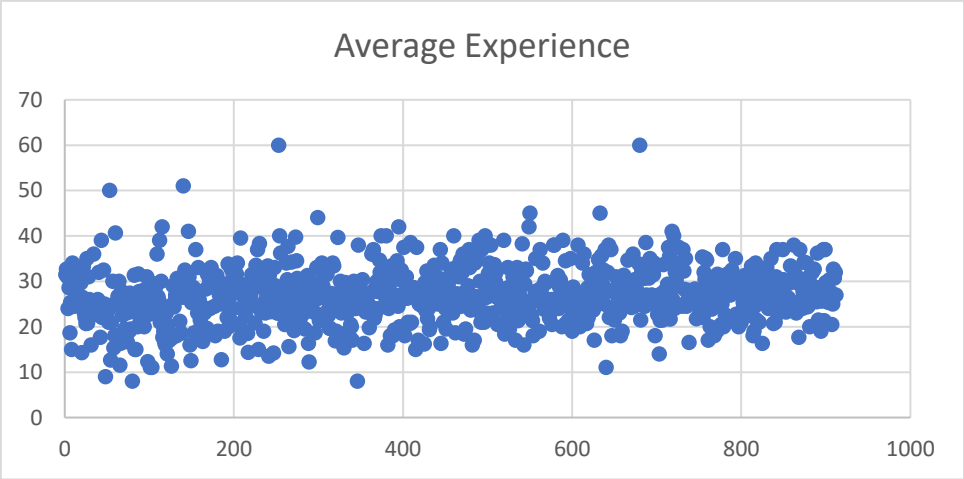


*Figure 6: average experience over observations*

*Size* of the management team: Number of professionals in the management team per firm.

*Industry:* Industry classification consists of the industry the firm pertains to, there are a total of 13 unique industries namely, Business Services, Consumer Discretionary, Energy & Utilities, Financial & Insurance Services, Healthcare, Industrials, Information Technology, Raw Materials & Natural Resources, Real Estate, Telecoms & Media,

**Table 4:** *Transactions per Industry.*

| Industries | No. of Transactions per Industry |
|---|---|
| Business Services | 120 |
| Consumer Discretionary | 152 |
| Energy & Utilities | 32 |
| Financial & Insurance Services | 31 |
| Healthcare | 78 |
| Industrials | 145 |
| Information Technology | 229 |
| Raw Materials & Natural Resources | 92 |
| Real Estate | 6 |
| Telecoms & Media | 27 |
| **Grand Total** | **912** |

*Age of the company*: The age of the company is calculated using the following:

$$Age = year\ founded\ (Y_m) - current\ year\ (Y_t = 2023)$$

*European M&A activity*: The monthly M&A deal volume data was collected for the period 2013 to 2023.

*AEX stock market activity*: The monthly stock prices of AEX was computed for the period 2013 to 2023. This was taken as a control variable due to market timing theory which states that firms raise funds when the market prices are high.

*Times acquired*: This represents the number of times the firms had undergone transactions for exit purposes.

**Table 5:** *Number of times the firms transacted.*

| No. of transacted | Total |
|---|---|
| 1 | 492 |
| 2 | 341 |
| 3 | 45 |
| 4 | 12 |
| 5 | 10 |
| 6 | 12 |
| **Grand Total** | **912** |

These represented the entire variable list that was used for to determine the hypothesis, additional, if any variables are present are interaction terms with either itself or other variables. Alternatively, fixed effect variables would also be noted in some regression models.

## 4. Methodology:

In this chapter, the overview of the strategy used to test the hypothesis is provided. In this analysis, the main objective is to study the exit types, and its relationship with firm-specific characteristics.

There are 6 different exit types that have been taken into consideration in this paper, each of the observations provide us an unique exit. For each of the exit, we construct a dummy variable that pertains to a particular exit type, following which we test our hypothesis in regards to those particular dummy – exit. Due to it being a binary variable, the regression on the depend variable would be logistical. The dependent variable construction in dummy variable terms are in line with previous research performed by Cumming & Johan, 2008 and Poulsen & Stegemoller, 2008. The dummy variable represents and identifies firms that are particular to an exit type. Since there exists a unique exit for each observation, it reduces the chances of ambiguity or misinterpretation in the data analysis.

In order to test our hypothesis, we first plot the variables on a scatter plot. This enables us to work with non-linearities and define the equations clearly. In the analysis, we begin with a description of the statistics, the data we are working with.

### 4.1 Descriptive statistics:

**Table 6:** *Summary statistics of variables*

| | N | Mean | Std. Dev. | Min | Max | Skewness | Kurtosis |
|---|---|---|---|---|---|---|---|
| M&A Volume | 912 | 39.921 | 24.9 | 8.181 | 124.943 | 1.571 | 5.526 |
| Stock AEX | 912 | 580.963 | 107.674 | 347.950 | 801.985 | 0.347 | 2.352 |
| Female Founder | 912 | 0.054 | 0.225 | 0 | 1 | 3.958 | 16.669 |
| Female MT | 912 | 0.311 | 0.463 | 0 | 1 | 0.814 | 1.663 |
| Average Experience | 912 | 26.891 | 6.148 | 8 | 60 | 0.406 | 5.027 |
| Management Team Size | 912 | 3.298 | 2.093 | 1 | 12 | 1.666 | 6.962 |
| Times Exited | 912 | 1.622 | 0.899 | 1 | 6 | 2.375 | 10.658 |
| Company Age | 912 | 38.666 | 37.256 | 1 | 358 | 2.361 | 11.707 |

The table reports the descriptive statistics that this paper tries to research. The observations (N), mean, standard deviation, range, skewness and kurtosis is used to study the description. Female founder in the firm was found to have an average of 0.054 which indicates that on average there was very fewer women in the founding team than men, this is also in line with counts performed in the description, out of 912, only 49 firms had women founders. Similarly, with Female in the Management team, the average is 0.311, as per the total count, firms with women in management were a total of 285. This shows that there is a significant gap in women in senior positions in the Netherlands, this includes only the data on small scaled companies and not major corporations. However, this report provides valuable insights into the market.

The average experience of the management team members were 26, the highest being 60 and the lowest being 8, this shows that majority of the companies in the Netherlands are managed by industry experts. The scatter plot also showed the average to be around similar numbers. For the team size, the average was 3.298, which as per the data was on par with major management heads being CEO, CFO and owner. These combinations were fairly common for a small sized company. The companies exits played a role in changes in the company, they either grew bigger to exit to another buyout or were merged with another company or bankrupted, there were more than 50% companies that went through more than 1 transactions, with 12 firms going through 6 transactions. The companies in the Netherlands are have existed for a longer period of time, given the industrialization first took place in the Netherlands. The data shows there were companies that were more than a 100 years old, but surprisingly embryonic firms that were founded a year ago also underwent transactions. AEX stock market has spiked over the period, with the range being EUR 347 to EUR 801, and EU M&A transaction volume in prices were ranging from EUR 8 bn to EUR 124bn. The standard deviations in the data were within the range of +/- 1 standard deviation from the mean, indicating a high degree of robustness and consistency in the data set.

**Table 7:** *Statistics for Exit Type*

| | N | No. female founders | No. Female in MT | Average experience | Avg MT size |
|---|---|---|---|---|---|
| Buyout | 440 | 31 | 120 | 27.215 | 2.80 |
| Trade Sale | 263 | 12 | 77 | 26.316 | 3.547 |
| Secondary Buyout | 161 | 4 | 63 | 27.049 | 4.093 |
| Merger | 29 | 2 | 16 | 25.925 | 3.547 |
| IPO | 12 | 0 | 3 | 26.814 | 5.833 |
| Bankruptcy | 7 | 0 | 5 | 28.585 | 2.857 |

The deal type statistics reported the trends in the industry for exits, from the data it appears that buyout is the most common form of exit, as xx mentioned that buyout requires no market movements, and is inexpensive compared to going to the public markets, it also shows the willingness of both owners and investors to keep the company intact and not have to sell it in parts (trade sale), trade sale was only 28.8% of the total, and relatively fewer companies go through an IPO (12) that is 0.013% in the last 6 years.

**Table 8:** *Pearsons Correlation Coefficient Matrix*

| | Deal type | Industry | M&A Volume | Stock AEX | Female Founder |
|---|---|---|---|---|---|
| Deal Type | 1.0000 | | | | |
| Industry | 0.0687 | 1.0000 | | | |
| M&A Volume | -0.0293 | 0.0205 | 1.0000 | | |
| Stock AEX | 0.1828 | -0.0146 | -0.0101 | 1.0000 | |
| Female Founder | -0.0592 | -0.0814 | -0.0176 | 0.0209 | 1.0000 |
| Female MT | 0.0413 | -0.0685 | -0.0151 | -0.0576 | 0.3227 |
| Avg experience | -0.0572 | 0.0065 | -0.0381 | -0.1140 | 0.0542 |

| | | | | | |
|---|---|---|---|---|---|
| MT size | 0.1955 | 0.0811 | 0.0456 | -0.0118 | -0.0542 |
| Times Exited | 0.2293 | 0.0294 | 0.0211 | -0.2000 | -0.0893 |
| Company age | 0.0258 | 0.0350 | -0.0048 | -0.1318 | -0.1100 |

| | Female MT | Avg experience | MT size | Times Exited | Company age |
|---|---|---|---|---|---|
| Female MT | 1.0000 | | | | |
| Avg experience | -0.0738 | 1.0000 | | | |
| MT size | 0.3769 | -0.0395 | 1.0000 | | |
| Times Exited | 0.0745 | 0.1255 | 0.3589 | 1.0000 | |
| Company age | -0.0209 | 0.1795 | -0.0406 | 0.1697 | 1.0000 |

The table, shows the Pearson's correlations coefficient that was conducted for this study, it reports the correlations for all the variables this paper attempts to research. The coefficients report the strength of the linear relationship between the variables, these range from -1 to +1. Generally, the caution is needed to be taken for correlations exceeding -0.7 to +0.7 as it could lead to multicollinearity and would reduce robustness (Brooks, 2019). In the data, we do not see any major correlations, with very small relationships between management team members and the number of times the company has exited, some more mild correlations exists between management size and firm with female in the management team; and female in management with female founder. These values were almost +/- 0.3 and indicated chances of some slight correlations, however, these are not high enough for the data to be concerning.

### 4.2 Regression

In order to test our hypotheses, we formulate the equations in the following manner.

*Hypothesis 1: Female in management and IPO*

To test the hypothesis that having a female member in the management team increases the probability of an exit via IPO. First the exit type data is modified into a binary data for IPO, if the firm exits via an IPO = 1, else 0. The data is studied, and since both the variable Female_MT and IPO are binary variables, we use logistical regression to test the hypothesis. To further strengthen the model, control variables such as firm age, stock market activity, experience of the management team and Industry fixed effects in order to control for variations within the industry. In this case,

$H_0$: The presence of a female member on the management team does not affect the probability of an IPO exit ($\beta_1 = 1$)

$H_1$: The presence of a female member on the management team increases the probability of an IPO exit $\beta_1 > 1$)

(1)

$$\text{Log}\left(\frac{IPO}{1-IPO}\right) = \alpha + \beta_1 Female\_MT_i + \beta_2 Firm\_age_i + \beta_3 Stock\_AEX_i + \beta_4 Avg\_exp_i + \gamma Industry\_FE + \in$$

where, IPO = 1 pertains to the binary variable, where the firm has undergone IPO exit, Female_MT = 1 is also a binary variable that indicates the presence of female in the management team. Firm_age is computed as the year firm was founded to the current year (2023), Stock_AEX is the stock prices for the Amsterdam Exchange since we are only looking at Dutch data. Avg_exp is the average of work experience of the entire management team from the date of their first job to the current year 2023. Finally, Industry_FE is the Industry fixed effects to control for industry wide variations in the data. $\in$ is the error term.

*Hypothesis 2: Female in management and Experience*

To test the second hypothesis that the firms would see a higher chances of a female member in the management team given that the team is higher experienced and the team size is higher. The theory that a bigger team size would have a more diversified team, and hence higher chances of female member is being tested in this hypothesis. To test this, we would regress the dependent variable Female_MT over the average experience of the management team (Avg_exp), and control for variables such as MT_size. Since female MT is a binary variable, we would use logistic regression.

*Hypothesis 2a*: Having a more experienced management team increases the likelihood of including a female member in the team.

*Hypothesis 2b:* Another Hypothesis related, to test would be that firms that were founded by Female, most likely has a female in the management team. To test this we

$$\text{Log}\left(\frac{\text{Female\_MT}}{1-\text{Female\_MT}}\right) = \alpha + \beta_1 Avg\_exp + \beta_2 MT\_Size_i + \beta_3 Female\_Founder_i + \in \quad (2)$$

$$\text{Log}\left(\frac{\text{Female\_MT}}{1-\text{Female\_MT}}\right) = \alpha + \beta_1 Female\_Founder_i + \beta_2 MT\_Size_i + \beta_3 Avg\_exp + \in \quad (3)$$

where, Female_MT = 1 pertains to the binary variable that indicates the presence of female in the management team. Avg_exp is the average of work experience of the entire management team from the date of their first job to the current year 2023. Female_founder = 1 indicates the presence of female in the founding team and control variable for the size of the management team (MT_Size) is included.

*Hypothesis 3: Low experience and Bankruptcy*

We test whether lower experience and a smaller team size has a higher probability of dissolution of the firm, the smaller team size is taken as a proxy for a smaller company. We

can test this using logit regression for bankruptcy = 1 when the company goes bankrupt and 0 otherwise, we regress this over MT_size and Avg_exp, this would then include Industry fixed affects for variations in the industry.

$H_0$: Smaller team size and lower experience has not effect on the probability of bankruptcy of the firm.

$H_1$: Smaller team size and lower experience increases the probability of bankruptcy of the firm. (4)

$$\text{Log}\left(\frac{Bankruptcy}{1-Bankruptcy}\right) = \alpha + \beta_1 MT\_size_i + \beta_2 Avg\_exp_i + \beta_3 Female\_MT + \gamma Industry\_FE + \in$$

*Hypothesis 4: Management experience, Exit and Stock Prices*

Here we test the hypothesis that management team would prefer an IPO exit when the stock prices are high, this hypothesis is in line with the market timing theory. Through this hypothesis, I would like to test whether experience of the management team also reflects the exits through an IPO in the Dutch market. Here, we use a logistic regression due to IPO = 1 being a binary variable. We regress it over the average experience of the team and an interaction term (Avg_exp * Stock_AEX), the purpose of the interaction term is to examine how the effect of management team experience on the likelihood of an IPO varies with changes in stock market activity.

Hypothesis 4a:

$H_0$: Experience of the management team does not affect the probability of an IPO during high market prices.

$H_1$: Higher experienced management team would prefer an IPO exit during the high stock price.

$$\text{Log}\left(\frac{IPO}{1-IPO}\right) = \alpha + \beta_1 Avg\_exp_i + \beta_2 Firm\_age_i + \beta_3 Stock\_AEX_i + \beta_4 (Avg\_exp_i * Stock\_AEX_i) + \in \quad (5)$$

Hypothesis 4b:

Contrary to the above literature, on market timing, various scholars suggest that trade sale and buyout are the more preferred as they can realize the gains sooner and without much complications and expenses. [] Hence, during higher stock prices, management team prefers Buyout exit. To test this we use logit regression and we regress buyout over the average experience and the stock market interaction variable.

$H_0$: Experience of the management team does not affect the probability of an Buyout during high market prices.

$H_1$: Higher experienced management team would prefer an Buyout exit during the high stock price.

(6)

$$\text{Log}\left(\frac{Buyout}{1-Buyout}\right) = \alpha + \beta_1 Avg\_exp_i + \beta_2 Firm\_age_i + \beta_3 Stock\_AEX_i + \beta_4 (Avg\_exp_i * Stock\_AEX_i) + \in$$

*Hypothesis 5: Management experience and Buyout*

In this Hypothesis we check whether buyout is preferred for the management team having average age over 20 years, we test this using a DiD analysis. In this analysis, we would contain the data from 2017 to 2023, as we have seen in the descriptive statistics, there was a break after 2020 due to covid shut down, and hence the deals activities resumed after 2021, in this analysis, we would identify 2017-2020 as the pre-treatment period and 2021-2023 as the post treatment period. The Dependent variable as the average age would then be dichotomize further, with Avg_exp > 20 being the treated group and Avg_exp < 20 being the control group. The independent variable would be binary variable Buyout = 1. The decision to evaluation using DiD was that I wanted to test how the exit behaviour changed from pre-covid to post-covid, and further did experience had a role to play in it. Since, DiD would show the treatment periods to be separated, the influence of age could then be studied.

H0: Management team having average age above 20 years does not have an effect on the likelihood of exit via Buyout.

H1: Management team having average age above 20 years increases the likelihood of exit via Buyout.

(7)

$$Buyout_{it} = \alpha + \beta_1 Post_t + \beta_2 Exp\_group_i + \beta_3 (Post_t * Exp\_group_i) + \gamma (Female\_MT_{it}) + \in$$

Where, $Buyout_{it}$ pertains to whether the exit was done through the buyout at observation i and time t, Post is a binary variable for the time period (1 if after a certain point, 0 if before). Exp_group is a binary variable (1 if experience ≥20 years, 0 if experience is 1-10 years). Post*Exp_Group is the interaction term that examines how the average experience on the buyout changes with changes in time period.

### 4.3 Robustness Check:

To test the robustness of the model, we tested the same data using year fixes effects and industry fixed effects. For hypotheses 1 and 3, we added year fixed effects to the equation. In

Hypothesis 1 (Table 14), we still did not see any other variable to be significant, the Pseudo R^2 was found to be lower at 0.1709 after adding the fixed effects. The number of observations also decreased to 371. The only significant variable was female in management but the coefficient did not differ that much compared to the models tested in analysis. For Hypothesis 3 (Table 16), again we found no significance, and the number of observations reduced to 289, the Pseudo R^2 however improved to 0.1172. However, the coefficients of the control variables did not deviate significantly.

We also tested the model using transforming the control variables into log terms and polynomial terms in all the models however, we did not find much variation is our model.

Another test was performed that was the subsample test for the years 2021 and 2022. This was tested for Hypothesis 2 and 4. There were 202 data points in these two years. The result of the same are follows. For Hypothesis 2 (Table 15), the subsample model showed that the average age was significant at 10%, however the coefficients remained around the same value. The Pseudo R^2 was 0.263 which was slightly higher than the model tested. Hence it can be concluded that although we found a significant variable, it is due to marginal change effects. For Hypothesis 4(Table 17), we found average experience again to be significant at 10% and the square of average age significant at 5%, while again there was not much variation in the coefficient, they were still significant. It is possible that a smaller sized sample with a larger number of buyouts (79 between 2021-22), may have explained the variations better than a larger data.

Appendix to robustness test is given at the end, Table 14 to 16.

## 5. Results and discussion

In this chapter, we provide the detailed analysis for the hypothesis that we tested. The finding followed logistic and OLS regressions, and the results are as follows.

### 5.1 Findings for Hypothesis 1:

Table 9 presents the results of four regression models that aim to explain the likelihood of a firm exiting via an Initial Public Offering (IPO). The independent variables include gender diversity in management, firm age, managerial experience, stock market conditions (AEX stock prices), and industry dummies. Due to small number of IPOs more characteristics could not be tested, however to control for the Industry wide variations, Industry fixed affects were added in the analysis. The analysis tests the robustness of these variables across different specifications and samples.

Model 1, tests the firms and stock price specific controls. For female in management the odds ratio is greater than 1 at 6.738, indicating that firms with female representations in

management increases the odds of an IPO exit by a factor of 6.730 in the Netherlands. Over models 2-4, the odds ratio for female is consistently positive but is falling, and therefore the statistical significance is lower in model 4 compared to model 1 ($p<0.05$). however, the consistency of significance indicated the robustness of the variable for IPO exit. The firms age coefficient suggests that older firms are less likely to go public however it is not statistically significant, the coefficient – odds ratio slightly below one (0.993 to 0.998) indicates a slightly negative relationship. The odds ratio of close to 1 for average experience indicates that by itself, it has no significance on the IPO exit, while in the model 4, where the equation also includes interaction terms of average experience, the odds ratio is unusually high with higher standard error, it indicates uncertainty or multicollinearity in the estimate. The Interaction term Average experience times average experience, had an odds ratio of close to 1, which again indicates perhaps the experience is not an effective criteria for IPO exit, it opens to a possibility of a more linear impact. Similarly, AEX stock price and other industry dummies all have an odds ratio of close to 1, and also does not have a statistical significance, therefore, those variables may not best be the right predictors for IPO exit. The financial Industry dummy has an odds ratio of close to 2, indicating a higher likelihood of IPO exit compared to the reference category, however the coefficient is not statistically significant, confirming that Industry alone is not a strong reviewndicator of ReviewPO outcomes.

The model fit for Model 1 was lower at 0.0799 however, we noticed an increase in the model fit as we included Industry fixed effects, which increased the Pseudo R^2 to 0.2204. while the model reduced the sample size from 911 to 497, it helped in increasing the model fit. Pseudo R^2 or 0.2204 indicates that the model explain 22.04% of the variance in IPO exit.

The analysis indicates that gender diversity in management, particularly the presence of women in management roles, significantly increases the odds of a firm exiting via an IPO. This relationship holds across all model specifications and suggests a robust positive association. On the other hand, firm age and market conditions (AEX stock prices) show little to no effect on IPO outcomes, while managerial experience has an uncertain impact, particularly in Model 4, which requires further investigation. The inclusion of industry fixed effects improves the model's explanatory power slightly, but the low pseudo $R^2$ values indicate that much of the variation in IPO exits is still unexplained. Future research should consider additional variables, such as year fixed effects or other firm-specific characteristics, to better capture the dynamics influencing IPO exit.

**Table 9:** *Female in management and IPO*

*This table reports the logistic regressions output using 4 different model. The dependent variable is a binary variable for IPO – whether the firm had an IPO exit and explanatory variable includes female in management, firm age and other individual firm characteristics. Industry fixed affects are the only fixed affects used to test the model. The significance of the coefficients is portrayed by the stars (* p < 0.10 ** p < 0.05 and *** p < 0.01. Standard errors are in parentheses.*

| | Dependent variable: IPO exit | | | |
|---|---|---|---|---|
| | (1) | (2) | (3) | (4) |
| Female in Management | 6.738** | 6.447** | 6.267 | 5.473* |
| | (4.545) | (4.619) | (4.485) | (3.888) |
| Firm's age | 0.998 | 0.994 | 0.994 | 0.993 |
| | (0.008) | (0.009) | (0.009) | (0.009) |
| Average experience (MT) | 1.011 | 1.014 | | 138.887 |
| | (0.054) | (0.061) | | (373.5) |
| Average experience * Average experience | | | 0.999 | 0.912 |
| | | | (0.001) | (0.046) |
| AEX stock prices | 0.998 | 0.998 | 0.998 | 0.998 |
| | (0.003) | (0.003) | (0.003) | (0.003) |
| Industry | | | | |
| Consumer discretionary | | 0.350 | 0.354 | 0.535 |
| | | (0.364) | (0.369) | (0.554) |
| Financial services | | 1.940 | 1.903 | 1.948 |
| | | (0.966) | (1.929) | (1.960) |
| Healthcare | | 1.004 | 0.985 | 1.521 |
| | | (1.003) | (0.986) | (1.533) |
| Industrial | | 0.547 | 0.565 | 0.826 |
| | | (0.563) | (0.581) | (0.862) |
| Constant | 0.009 | 0.037 | 0.063 | 1.530 |
| | (0.022) | (0.102) | (0.141) | (5.480) |
| Industry FE | No | Yes | Yes | Yes |
| Year FE | No | No | No | No |
| Observation | 911 | 911 | 497 | 497 |
| Pseudo $R^2$ | 0.0799 | 0.1346 | 0.1342 | 0.2204 |

### 5.2 Findings for Hypothesis 2:

The table 10, shows the results of the hypothesis to test whether average experience in the management increases the chances of having a female member in the team. The table here presents three models, and the dependent variable is tested to analyze whether the a more experienced management team predict having women in the management team. The coefficients are reported as odds ratios, which describe the multiplicative change in the odds of having female management associated with a one-unit change in each predictor variable.

The average experience has coefficients below but close to 1, this indicates slightly negative but indicates overall no significant effect on having a female in the team. This in itself would not be the right predictor for the analysis. Management team size. However, has odds ratio of 1.6, and is also statistically significant across the models at $p < 0.01$, which indicates that each additional member of the management team increases the odds of having female representation by about 62% to 63%. The odds ratio for female founder is exceptionally high, indicating that if the founder is a female, they would appoint an female manager in the team. The firms with a female founder have odds of having female management that are over 63 times higher than those without a female founder and this over the model increases to 68 times. The significant being at $p<0.01$ adds to the robustness of the variable. Firm age and Interaction terms were not significant or had odds to predict the female member's in the team. Indicating the age of the two are not best predictors, but the inherent other qualities are.

The model fit for the analysis ranging from Model 1 to 3, is relatively low at pseudo R^2 ranging from 0.2083 to 0.2095. This suggests that the models explain around 20.83% to 20.95% of the variance in the likelihood of having female management. This suggests additional elements, such industry or year fixed effects, could be influencing the model.

The regression study shows elements influencing the existence of female management in companies. Most importantly, the strongest indicator is the presence of a female founder, therefore greatly raising the chances of female management. Larger management teams are also linked to more female representation, which emphasizes how team dynamics could help to promote gender diversity. Conversely, managerial experience and firm age seem to have no appreciable effect on female management presence, implying that these elements are less important in this setting.

**Table 10:** *Female in management and Experience*

*This table reports the logistic regressions output using 3 different model. The dependent variable is a binary variable for Female in Management – whether the firm had a women in its management team and explanatory variable includes average experience, female founder, firm age and other individual firm characteristics. No fixed affects have been used to test the model. The significance of the coefficients is portrayed by the stars (* p < 0.10 ** p < 0.05 and *** p < 0.01. Standard errors are in parentheses.*

| | Dependent variable: Female in Management | | |
|---|---|---|---|
| | (1) | (2) | (3) |
| Average experience (MT) | 0.974 | 0.971 | |
| | (0.014) | (0.014) | |
| Management team size | 1.623*** | 1.625*** | 1.618 |

| | | | |
|---|---|---|---|
| | (0.077) | (0.077) | (0.076) |
| Female Founder | 63.189*** | 66.941*** | 68.102 |
| | (39.074) | (41.572) | (42.381) |
| Firm's age | | 1.003 | 1.003 |
| | | (0.002) | (0.002) |
| Average experience * Average experience | | | 0.999<br>(0.000) |
| Constant | 0.139*** | 0.136*** | 0.095 |
| | (0.061) | (0.059) | (0.027) |
| Industry FE | No | No | No |
| Year FE | No | No | No |
| Observation | 912 | 911 | 911 |
| Pseudo $R^2$ | 0.2083 | 0.2094 | 0.2095 |

**5.3 Findings for Hypothesis 3:**

The table 11 presents the result of the hypothesis that tests whether smaller team size and lower experience contribute to higher chances of bankruptcy. The table presents 4 models that tested the hypothesis including control variables such as female in management, interaction terms, firms age and more. The regression used was logistic regression, which produced odds ratios for the coefficients.

The odds ratio for Management Team Size is consistently below 1, indicating that larger management teams have lower odds of bankruptcy. However, this relationship is not statistically significant across any of the models. Female in management has varying odds ratios, ranging from 1.090 in Model 1 to 1.407 in Model 4, those are not statistically significant either. Firm age and average experience is around 1, which indicates low predicting power of the variable. The team size was taking in the interaction term because it increased the Pseudo R^2. Average experience has a slightly above 1 odds ratio, suggesting a small positive association between managerial experience and bankruptcy likelihood. Both the interaction terms by themselves show a negligible effects on bankruptcy, suggesting, perhaps more or other factors such as debt ratios, and financial structure is of more importance than firm and human capital specific factors.

Interaction terms show negligible non-linear effects of average experience on bankruptcy likelihood, suggesting that experience does not have complex, non-linear impacts on the probability of bankruptcy. Even higher-order non-linearities in experience do not have a meaningful impact on bankruptcy risk. Management team size has a minor non-linear effect, with increases in management team size slightly decreasing the odds of bankruptcy. Firm age is consistently below 1, suggesting that older firms are less likely to go bankrupt.

The model fit and controls do not include industry or year fixed effects, which could leave out important sources of variation affecting the dependent variable. The sample size remains stable across models, with a slight drop from 912 observations in Models 1 and 2 to 911 in Models 3 and 4. The pseudo $R^2$ values are low but increased over models (0.0096 to 0.0563), which indicates that there is more scope to the variabilities in the model. However, it suggests that the models explain only a small fraction of the variance in bankruptcy likelihood, indicating that many other unmeasured factors may be at play.

**Table 11:** *Low experience and Bankruptcy*

*This table reports the logistic regressions output using 4 different model. The dependent variable is a binary variable for Bankruptcy – whether the firm had undergone dissolution and explanatory variable includes average experience, female in management, management team size and other individual firm characteristics. No fixed effects have been used to test the model. The significance of the coefficients is portrayed by the stars (* p < 0.10 ** p < 0.05 and *** p < 0.01. Standard errors are in parentheses.*

| | Dependent variable: Bankruptcy | | | |
|---|---|---|---|---|
| | (1) | (2) | (3) | (4) |
| Management team size | 0.895 | | | |
| | (0.202) | | | |
| Female in Management | 1.090 | 1.136 | 1.405 | 1.407 |
| | (0.967) | (0.995) | (1.295) | (1.300) |
| Average experience (MT) | 1.037 | | | |
| | (0.057) | | | |
| Average experience * Average experience | | 1.000 | 1.0011 | |
| | | (0.000) | (0.000) | |
| Average experience*3 | | | | 1.000 |
| | | | | (0.000) |
| Firm's age | | | 0.964 | 0.962 |
| | | | (0.027) | (0.0267) |
| Management team size * Management team size | | 0.9841 | 0.987 | 0.988 |
| | | (0.029) | (0.028) | (0.028) |
| Industry | | | 1.048 | 1.049 |
| | | | (0.172) | (0.173) |
| Constant | 0.004** | 0.005*** | 0.006*** | 0.008*** |
| | (0.007) | (0.004) | (0.008) | (0.010) |
| Industry FE | No | No | No | No |
| Year FE | No | No | No | No |

| | | | | |
|---|---|---|---|---|
| Observation | 912 | 912 | 911 | 911 |
| Pseudo $R^2$ | 0.0096 | 0.0143 | 0.0521 | 0.0563 |

**5.4 Findings for Hypothesis 4a:**

Table 12 presents the results for hypothesis that aim to explain the likelihood of a firm undergoing an IPO given the management team has expertise and the stock prices are high. The results present 4 logistic regression models using control variables and Industry fixed effects. The analysis tries to test the causal relationship between these variables and their robustness. The coefficient are computed as odds ratios.

The average reviewe in the management team over the model remains non-significant, with Model 1 the odds ratio being 0.856, it indicates that with each unit increase in average experience, the odds of a firm going public decrease by approximately 14.4%. In Model 2, this ratio becomes 0.792 and finally in Model 4 its 0.995 which bring the odds of a firm going public decrease by 0.5%. This is again statistically insignificant. Firm age also remain statistically insignificant throughout the models with odd ratios being closer to 1. It suggests that the firm's age has a negligible effect on the likelihood of an IPO. With AEX stock market price, The odds ratio of 0.991 in Model 1 indicates that higher AEX stock prices slightly decrease the likelihood of an IPO by about 0.9%. since its closer to 1, it has no significant impact on the exit route of IPO, this is continued till Model 4. This is a surprising outcome since as per market timing theory, it is empirically observed that IPOs target high stock market prices when going public. It is possible that due to limited data on IPO in the Netherlands, this may not be a complete result. The Interaction variable average experience and AEX stock prices were created to capture the interaction term to examine the effect of management team experience on the likelihood of an IPO varies with changes in stock market activity. This too however was not statistically significant and resulted in coefficients of ~ 1.000 (from Model 1 to Model 4), this indicates that the interaction has negligible effects on the likelihood of IPO exits. For Industry dummies, consumer discretionary firms (similar to Industrial firms) had the odds ratio of 0.543 in Model 3 and 0.610 in Model 4, indicating a lower likelihood of going public compared to the base category. Financial services and healthcare, had odds ratios higher than 1, indicating those firms are more likely to go public. However, despite the odds being farther away from 1, none of the dummies were statistically significant and hence could not have a predicting power over IPO exits.

The Pseudo $R^2$ values range from 0.0068 to 0.1036, indicating that the models have a relatively low explanatory power, while the models were robust with Industry fixed effects, perhaps more data on IPO is required to find significant results.

In conclusion, the findings suggests that while the odds are in favor of some variables, there is a lack of statistical significance in the models. This indicates that we need to find more characteristics such as financial indicators, firm performance indicators, or have a larger dataset for the entire Europe for a larger and robust dataset. Firm characteristics (human capital) cannot alone explain the likelihood of firms going for public funding.

**Table 12:** *Management experience, IPO and Stock Prices*

*This table reports the logistic regressions output using 4 different model. The dependent variable is a binary variable for IPO – whether the firm had undergone to exit in the public market and explanatory variable includes average experience, firm's age, AEX stock prices and other market characteristics. Industry fixed effects have been used to test the model. The significance of the coefficients is portrayed by the stars (* p < 0.10 ** p < 0.05 and *** p < 0.01. Standard errors are in parentheses*

| | Dependent variable: IPO | | | |
|---|---|---|---|---|
| | (1) | (2) | (3) | (4) |
| Average experience (MT) | 0.856 | | 0.792 | |
| | (0.239) | | (0.241) | |
| Firm's age | 0.998 | 0.998 | 0.994 | 0.995 |
| | (0.008) | (0.008) | (0.009) | (0.0095) |
| AEX stock prices | 0.991 | 0.966 | 0.987 | 0.965 |
| | (0.0127) | (0.018) | (1.000) | (0.019) |
| Average experience * AEX stock prices | 1.000 | 1.002 | 1.000 | 1.000 |
| | (0.000) | (0.000) | (0.000) | (0.000) |
| Average experience * Average experience | | 0.987 | | 0.986 |
| | | (0.007) | | (0.007) |
| Industry | | | | |
| Consumer discretionary | | | 0.534 | 0.610 |
| | | | (0.547) | (0.626) |
| Financial services | | | 4.382 | 4.500 |
| | | | (4.236) | (4.365) |
| Healthcare | | | 1.542 | 1.685 |
| | | | (1.500) | (1.650) |
| Industrial | | | 0.589 | 0.672 |
| | | | (0.600) | (0.685) |
| Constant | 2.889 | 565.174 | 62.033 | 2023.75 |
| | (22.113) | (3147.97) | (515.75) | (12138.12) |
| Industry FE | No | No | Yes | Yes |
| Year FE | No | No | No | No |
| Observation | 911 | 912 | 497 | 497 |
| Pseudo $R^2$ | 0.0068 | 0.0143 | 0.0703 | 0.1036 |

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**5.5 Findings for Hypothesis 4b:**

Table 13 presents the results for hypothesis that aim to explain the likelihood of a firm undergoing a buyout given the management team has expertise and the stock prices are high. The results present 4 logistic regression models using control variables and Industry fixed effects. The analysis tries to test the causal relationship between these variables and their robustness. The coefficient are computed as odds ratios.

The odds ratios reveal that average management team experience has an odds ratio of 0.895 in Model 1, indicating that a one-unit increase in experience slightly decreases buyout likelihood by 10.5%, though this result is not statistically significant ($p > 0.10$). Firm age, with an odds ratio of 0.997, shows a statistically insignificant effect at the 1% level ($p < 0.01$), hence its impact is minimal. AEX stock prices consistently show a negative association with buyout likelihood across models, with odds ratios ranging from 0.991 to 0.966, significant across all models at the 1% level, implying that higher stock prices slightly reduce the probability of a buyout, which may indicate that the shares are overvalued and may need to wait for the share prices to reduce. The models also include interaction effects, particularly between management team experience and AEX stock prices. The interaction term shows an odds ratio of 1.000 across models and is statistical insignificance. A quadratic term for average experience is introduced in Model 4, showing an odds ratio of 0.998, and is not statistically significant suggesting a very slight nonlinear relationship between experience and buyout likelihood. Industry fixed effects reveal that healthcare, information technology and telecom and media firms are significantly less likely to be bought out, with an odds ratio ranging from 0.2 to 0.67, these are all statistically significant at 5% and 10% (Healthcare and Telecom and media).

The models' explanatory power reviews limited and it is indicated by Pseudo $R^2$ with values ranging from 0.0223 to 0.0383. These values suggest that the models explain only a small portion of the variation in buyout likelihood, although Industry fixed effects have been introduced in the models and some factors, such as firm age, AEX stock prices and industry dummies are statistically significant, their practical impact is minimal. The analysis requires further exploration of other variables (financial data, firm level data, operational and other market data such as interest rates and debt benefits) that might better explain the dynamics of buyout decisions, as the current models leave much of the variation unexplained.

**Table 13:** *Management experience, Buyout and Stock Prices*

*This table reports the logistic regressions output using 4 different model. The dependent variable is a binary variable for Buyout – whether the firm had undergone to exit in the private market and explanatory variable includes average experience, firm's age, AEX stock prices and other market characteristics. Industry fixed effects have been used to test the model. The significance of the coefficients is portrayed by the stars (* p < 0.10 ** p < 0.05 and *** p < 0.01). Standard errors are in parentheses.*

| | Dependent variable: Buyout | | | |
|---|---|---|---|---|
| | (1) | (2) | (3) | (4) |
| Average experience (MT) | 0.895 | | 0.886 | |
| | (0.0587) | | (0.060) | |
| Firm's age | 0.997 | 0.996 | 0.996 | 0.996 |
| | (0.001) | (0.001) | (0.002) | (0.002) |
| AEX stock prices | 0.991** | 0.966* | 0.991** | 0.995* |
| | (0.003) | (0.001) | (0.003) | (0.001) |
| Average experience * AEX stock prices | 1.000 | 1.000 | 1.000 | 1.000 |
| | (0.000) | (0.000) | (0.000) | (0.000) |
| Average experience * Average experience | | 0.999 | | 0.998 |
| | | (0.001) | | (0.000) |
| Industry | | | | |
| Consumer discretionary | | | 0.635 | 0.629 |
| | | | (0.160) | (0.158) |
| Energy and Utility | | | 0.500 | 0.503 |
| | | | (0.207) | (0.208) |
| Financial services | | | 0.461 | 0.457 |
| | | | (0.194) | (0.192) |
| Healthcare | | | 0.410** | 0.401** |
| | | | (0.125) | (0.122) |
| Industrial | | | 0.882 | 0.871 |
| | | | (0.227) | (0.225) |
| Information Technology | | | 0.617* | 0.611* |
| | | | (0.143) | (0.142) |
| Natural Resources | | | 0.652 | 0.651 |
| | | | (0.190) | (0.190) |
| Real Estate | | | 1.566 | 1.532 |
| | | | (1.421) | (1.37) |
| Telecom and Media | | | 0.240** | 0.254** |
| | | | (0.113) | (0.119) |
| Constant | 112.635** | 6.389** | 268.19** | 11.736*** |
| | (226.102) | (4.973) | (505.22) | (7.877) |
| Industry FE | No | No | Yes | Yes |
| Year FE | No | No | No | No |
| Observation | 911 | 911 | 911 | 911 |
| Pseudo $R^2$ | 0.0245 | 0.0223 | 0.0407 | 0.0383 |

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**5.6 Findings for Hypothesis 5:**

Table 13 presents the results for hypothesis that aim to explain the likelihood of a firm undergoing an buyout given the management team having average age over 20 years, we test this using a DiD analysis and create variables that are differentiated in the control and treatment groups. The results present 4 regression models using control variables and year fixed effects. The analysis tries to test the causal relationship between these variables and their robustness.

The dependent variable, experience group is a binary variable (1 if experience ≥20 years, 0 if experience is 1-10 years). This variable is regressed and indicates that after the intervention (Post), firms with higher average experience have a 0.138 unit decrease in the log-odds of undergoing a buyout compared to firms with lower average experience. The variable is statistically not significant at 10%. The variable post that indicates an intervention indicates that it consistently reduces the likelihood of a buyout, with statistically significant negative coefficients across all models with -0.275 in Model 1 and -0.369 in Model 4. Post*experience group is the interaction term that examines how the average experience on the buyout changes with changes in time period. The model finds statistically significant result at coefficients around 0.23, this shows that the log-odds of undergoing a buyout changes for ages above 20 with the changes in time period. There were more buyouts made by over 20 years of experience after the cut off point at 2021. This can perhaps be explained by deals that were yet to be completed but halted due to covid-19. Females in management also played a role in buyouts, in model 4, this variable was statistically significant, after adding the year fixed effects. This shows that much of the variation can still be explained by further explanation and additions of variables. Females in management reduced the likelihood of firms exiting via buyouts by 0.080 units decrease in log-odds compared to firms without female in management.

The $R^2$ values range from 0. 0.0133 to 0.0383, indicating that the models have a relatively low explanatory power, while the models were robust with year fixed effects, we do notice a gradual increasing R^2 over the models, this indicates that the model requires more variables that can explain buyouts after 2021 (post), and by firm's human characteristics.

In conclusion, the findings suggests that while the coefficients are in favor and are statistically significant for some variables, there is a lack of explanatory power in the models. This indicates that we need to find more characteristics such as financial indicators, firm performance

indicators, or have a larger dataset for the entire Europe for a larger and robust dataset. Firm characteristics (human capital) cannot alone explain the likelihood of firms going for an exit.

**Table 13:** *Management age and Buyout*

*This table reports the DiD regressions output using 4 different model. The dependent variable is a binary variable for Buyout – whether the firm had undergone to exit in the private market and explanatory variable includes difference before 2021 and after, with age differences of 20 years between the two groups. Year fixed effects have been used to test the model. The significance of the coefficients is portrayed by the stars (* p < 0.10 ** p < 0.05 and *** p < 0.01). Standard errors are in parentheses.*

| | Dependent variable: Buyout | | | |
|---|---|---|---|---|
| | (1) | (2) | (3) | (4) |
| Experience group (MT) | -0.138 | -0.165 | -0.158 | -0.160 |
| | (0.0.723) | (0.074) | (0.0746) | (0.074) |
| Post | -0.275*** | -0.372** | -0.366** | -0.369** |
| | (0.095) | (0.118) | (0.119) | (0.118) |
| Post * Experience group | 0.2103* | 0.243* | 0.2322* | 0.232* |
| | (0.103) | (0.105) | (0.106) | (0.007) |
| Female in Management | | | -0.075 | -0.080* |
| | | | (0.038) | (0.038) |
| Industry | | | | -0.011 |
| | | | | (0.007) |
| Year | | | | |
| 2017 | | | | |
| 2018 | | -0.043 | -0.044 | -0.041 |
| | | (0.059) | (0.059) | (0.059) |
| 2019 | | -0.107 | -0.106 | -0.107 |
| | | (0.062) | (0.062) | (0.619) |
| 2020 | | -0.159* | -0.150* | -0.145* |
| | | (0.065) | (0.066) | (0.066) |
| 2021 | | -0.022 | -0.018 | -0.123 |
| | | (0.075) | (0.074) | (0.075) |
| 2022 | | 0.029 | -0.025 | 0.034 |
| | | (0.082) | (0.082) | (0.083) |
| Constant | 0.608*** | 0.702*** | 0.718*** | 0.776*** |
| | (0.068) | (0.083) | (0.040) | (0.089) |
| Industry FE | No | No | No | No |
| Year FE | No | Yes | Yes | Yes |
| Observation | 781 | 781 | 781 | 781 |
| $R^2$ | 0.0133 | 0.0227 | 0.0274 | 0.0383 |

## 6. Limitations and Further Research

The major limitation of this research is the data collection, each of the data point consists of an average of 4 management team members, whose data had to be collected by hand. This was an intense time taking process and after 2-3 months of collection, only 912 data points

were collected. Permitted more time, the intention was to collect the data for all 20 years with over 2000 data points. This can be further explored in future research. Along with the amount of data, the type of data collected could be more, an addition of education qualifications of the management team members could be beneficial into providing more insights into the team's expertise. Our data consisted of 4 key parameters, that were hand collected, more information on firm's financial characteristics could make the data both quantitative and qualitative robust. Some of the exit types were smaller in numbers than others, such as IPOs, perhaps a more complete data on all of the IPOs in the Netherlands, or a data on IPOs across Europe for a particular time frame could give us more insights into the firm-human capital characteristics in relation to IPO. Therefore, in future a wider array of variables can be studied, although venture capital and private equity is still evolving and only growing, there is ample of opportunities to conduct more studies.

## 7. Conclusion

This paper researches the impact the characteristics that the management teams possess of the private firms that aim for an exit. The research is particularly conducted using the Netherlands data, and the aim was to explore insights into the country's activities. This paper aims to contribute to existing research on firm characteristics on exit determinants. This paper, as per the author's knowledge is the first paper to have been researched with the data within the Netherlands. Hence, with some path forward, there are many limitations and future opportunities that this paper foresees. To determine the firm level qualitative characteristics, a detailed hand collected database was developed. The main research question that the paper attempts to construct remains, how do these firm characteristics influence the exits of the private firms. Along the research, the women in finance, took a major spotlight in the paper, as during the data collection, it was noted that fairly fewer women held seats at the management table in small scale private companies, and even fewer had founded them. Women in finance is a topic of interest across the media or research houses, however it is a topic that is very limited in research in academia and more so in the Netherlands. Hence this paper, attempts to shed light on the current scenario of business which require further support to women to grow into further management positions in the Netherlands.

Further to examine the data, several hypothesis were formed, the first hypothesis tested whether having a female member in the management team had an impact on the IPO exit, the results showed that having a female member increased the odds of firms exiting via an IPO, despite the small number of firms that underwent IPO, among other firm specific characteristics such as firm age, management experience, having a female member in the management had the statistically significant odds of an IPO exit. This may warrant further

information on what the other indicators are for explaining the IPO exit, however, it is possible that firms going on IPOs are public firms and by law Netherlands requires at least one third female participation in the board and management, the bill related to Article 2:166/267 Dutch Civil Code for large NVs and BVs. Perhaps this may act as a catalyst to increase the female participation in the coming years. Hypothesis 2, also relates to having women in the management team. It studies whether a larger firm size and having a female member in the founding team increases the participation of women in the management, this was statistically significant and indeed the two factors played a positive role for women in management.

Hypothesis 3, tested the exit type: bankruptcy, whether having a smaller team and lower aged experience in the management team contributed to bankruptcy. The result showed no positive or significant effect was found with respect to these variables. Perhaps, bankruptcy is a more financial exit than having influence of other factors. Monetarily distressed companies would benefit from studying the financial ratios for the bankruptcy related exits. Hypothesis 4, tested the exit type IPO and Buyout, and examined whether higher experienced management team would opt for the respective exits when stock market activity in the Netherlands was high. The results indicated that for IPO, experience and higher stock market levels did not hold a statistical significance, while the odds ratios were in favor of some variables. While for Buyout too experience did not prove to affect the exit, however the stock market levels were significant in explaining the positive impact on buyout, this was also noticed in some industry dummies such as healthcare and telecom and media. For hypothesis 5, we tested the likelihood of a firm undergoing an buyout given the management team having average age over 20 years, we found that after 2021, indeed more firms opted for buyout. The results were also significant for experienced managers over the age of 20, participated in more deals after 2021. This was also significant for female members, though it had a negative association.

In conclusion, the paper provided some insights on the exit behaviour given some of the firm level characteristics, female members indeed had more explanatory power, and experience of over 20 years was noted to be playing a part in the exit process after 2021. The size of the management team also indicated the participation of female members and exit decisions. By acknowledging the limitations and providing some insights on the data collected and analyzed, the author hopes that research would contribute to the existing theories in finance and gender studies for academicians, and bring attention to balancing teams for the investors and firms.

## References

Andreoli, J. J., & ten Rouwelaar, J. A. (2024). Venture capital investment selection: an exploratory assessment of the role of entrepreneur personality traits. *Venture Capital, Volume 26, Issue 2,*, 163 - 189.

Bansraj, D. S., & Smit, H. T. (2017). Optimal conditions for buy-and-build acquisitions. . *Erasmus School of Economics, Preliminary version*, 1-45.

Barney, J. (1991). Firm resources and sustained competitive advantage. *Journal of Management, 17(1)* , 99-120.

Barry, C. (1994). New Directions in Research on Venture Capital Finance. *Financial Management,Vol. 23, No. 3*, 3-15.

Becker, G. (1975). Human Capital. *Chicago Univ. Press, Chicago, IL* .

Bienz, C., & Walz, U. (2007). The Evolution of Control Rights in Venture Capital. *unpublished*.

Black, B., & Gilson, R. J. (1998). Venture capital and the structure of capital markets: banks versus stock markets. *Journal of Financial Economics, 47, (3),* , 243-277.

Brown, J. R., Fazzari, S. M., & Petersen, B. C. (2009). Financing Innovation and Growth: Cash Flow, External Equity, and the 1990s R&D Boom. *The Journal of Finance, Vol. 64*, pp. 151-185.

Burke, R. J., & Major, D. A. (2014). Advancing women's careers: Why men matter. *Edward Elgar Publishing.*, 11–52.

Chirinko, B., & Singha, A. R. (2000). Testing static tradeoff against pecking order models of capital structure: a critical comment. *Journal of Financial Economics, 58, (3)*, 417-425.

Cressy, R., Munari, F., & Malipiero, A. (2007). Playing to their strengths? Evidence that specialization in the private equity industry confers competitive advantage . *Journal of Corporate Finance,13, (4),* , 647-669.

Cumming, D., & Johan, S. (2008). Preplanned exit strategies in venture capital. *European Economic Review, 52, (7),* , 1209-1241.

Cumming, D., & MacIntosh, J. G. (2001). Venture capital investment duration in Canada and the United States, . *Journal of Multinational Financial Management, 11, (4-5),* , 445-463.

Das, S., Jagannath, M., & Sarin, A. (2003). Private Equity Returns: An Empirical Examination of the Exit of Venture Backed Companies. *Journal Of Investment Management, Vol. 1, No. 1, First Quarter 2003*.

De Jong, A., Verbeek, M., & Verwijmeren, P. (2010). The impact of financing surpluses and large financing deficits on tests of the pecking order theory. *Financial Management*, 733-756.

Dezső, C. L., Ross, D. G., & Uribe, J. (2013). Why Are There So Few Women Top Managers? *Harvard Business School*.

Dimov, D. P., & Shepherd, D. A. (2005). Human capital theory and venture capital firms: exploring “home runs” and “strike outs”. *Journal of Business Venturing, Volume 20, Issue 1*, 1-21.

Fried, J. M., & Ganor, M. (2006). AGENCY COSTS OF VENTURE CAPITALIST. *University of California, Berkeley*.

Gompers, P. A., & Lerner, J. (1999). What Drives Venture Capital Fundraising? *National Bureau of Economic Research working paper 6906*.

Hambrick, D., & Mason, P. (1984). Upper echelons: the organization as a reflection of its top managers. *Acad. Manage. Rev, 9 (2)* , 193-206.

Hillman, A., Shropshire, C., & Cannella, A. (2007). Organizational predictors of women on corporate boards. *Academy of Management Journal*, 941-952.

Jenkinson, T., & Sousa, M. (2015). What determines the exit decision for leveraged buyouts? *Journal of Banking & Finance*, 399-408.

Kaplan, S. N., Sensoy, B. A., & Stromberg, P. (2009). Should Investors Bet on the Jockey or the Horse? Evidence from the Evolution of Firms from Early Business Plans to Public Companies. *The journal of Finance*.

KPMG. (2016). *Workplace Gender Equality Gency, Australia.*

Lam, S. (1991). Venture Capital Financing: A Conceptual Framework. *Journal of Business Finance & Accounting, Vol. 18, No. 2*, 137-149.

Lerner, J. (1994). The Syndication of Venture Capital Investments, . *Financial Management, 23, (3)*.

Lerner, J., & Nanda, R. (2020). Venture Capital's Role in Financing Innovation: What We Know and How Much We Still Need to Learn. *The Journal of Economic Perspectives*, 237-261.

Levine, R. (2004). FINANCE AND GROWTH: THEORY AND EVIDENCE. *NBER WORKING PAPER SERIES, Working Paper 10766*.

MacMillan, I., Kulow, I., & Khoylian, D. (1989). Venture Capitalists Involvement in Their Investments: Extent and Performance. *Journal of Business Venturing, Vol. 4*, 27-47.

Myers, S. C. (2003). Chapter 4 - Financing of Corporations. In *Handbook of the Economics of Finance, Vol 1, Part A* (pp. 215-253). Sloan School of Management, MIT.

Ostry, J., Alvarez, J., EEspinoza, R., & Papageorgion, C. (2018). Economic Gains from Gender Inclusion, New Mechanisms, New Evidence. *IMF Staff Discussion Note - SDN/18/06*.

Petty, J., Bygrave, W., & Shulman, J. (1994). Harvesting the Entrepreneurial Venture: A Timefor Creating Value. *Journal of Applied Corporate Finance, Vol. 7*, 48-58.

Phalippou, L., Rauch, C., & Umber, M. (2018). Private equity portfolio company fees. *Journal of Financial Economics*, 559-585.

Piacentini, M. (2013). Women Entrepreneurs in the OECD: Key Evidence and Policy Challenges. *OECD Social, Employment and Migration Working Papers, No. 147, OECD Publishing, Paris*.

Powell, G. N. (1999). Handbook of Gender and Work . *Thousand Oaks, CA: Sage Publications*.

Powell, G. N. (2010). Women and Men in Management. *London: Sage, Fourth Edition*.

Powell, G. N. (2010). Women and Men in Management . *London: Sage, Fourth Edition*.

Relander, K.-E., Syrjanen, A.-P., & Miettinen, A. (1994). Analysis of the Trade Sale as a Venture Capital Exit Route. *W. Bygrave, M. Hay and J. Peeters (eds.), Realizing Investment Value(FT-Pitman, London)*.

Rigamonti, D., Cefis, E., Meoli, M., & Vismara, S. (2016). The Effects of the Specialization of Private Equity Firms on their Exit Strategy. *Journal of Business Finance and Accounting, Volume 43, Issue 9-10*, 1420-1443.

Schwartz, F. N. (1992). *Breaking with Tradition: Women and Work: The New Facts of Life.* New York, NY: Warner.

Schwienbacher, Giot, P., & Armin. (2005). IPOs, trade sales and liquidations: modelling venture capital exits using survival analysis, No 2005013, LIDAM Discussion Papers CORE,. *Université catholique de Louvain, Center for Operations Research and Economics*.

Shyam-Sunder, L., & Myers, S. C. (1999). Testing static tradeoff against pecking order models of capital structure. *Journal of Financial Economics, 51, (2)*, 219-244.

Spender, J. (1996). MAKING KNOWLEDGE THE BASIS OF A DYNAMICTHEORY OF THE FIRM. *Strategic Management Journal, Vol. 17(Winter Special Issue)*, 45-62.

Stegemoller, A. B. (2008). Moving from Private to Public Ownership: Selling Out to Public Firms versus Initial Public Offerings. *Financial Management, 37, (1),* , 81-101.

Sterk, R., & Vletter, B. (2023). How Dutch Companies Are Responding to the Gender Diversity Requirement for Supervisory Boards. *https://www.gtlaw-amsterdamlawblog.com/*.

TechLeap NL. (2019). *TechLeap NL.* Opgehaald van https://borskifund.com/wp-content/uploads/2019/10/Gender-Diversity-in-the-Netherlands-5.pdf

Union, E. (2012). *Entrepreneurship determinants:.* Opgehaald van Eurostat: https://ec.europa.eu/eurostat/documents/3217494/5748437/KS-31-12-758-EN.PDF

Walsh, B., & Cole, A. (2024). *Are you harnessing the growth and resilience of private capital?* Opgehaald van EY: https://www.ey.com/en_gl/insights/private-business/are-you-harnessing-the-growth-and-resilience-of-private-capital

Wright, M., & Robbie, K. (1996). Venture Capitalists and Unquoted Equity Investment Appraisal. *Accounting and Business Research, Vol 26, No. 1*, 153-168.

Wright, M., & Robbie, K. (1998). VENTURE CAPITAL AND PRIVATE EQUITY: AREVIEW AND SYNTHESIS. *Journal of Business Finance & Accounting, 25(5) & (6),* , 0306-686.

Zider, B. (1998). *How Venture Capital Works.* Harvard Business Review.

Zider, B. (1998). *How Venture Capital Works.* Opgehaald van Harvard Business Reveiw: https://hbr.org/1998/11/how-venture-capital-works

## Appendix for Robustness Checks:

**Table 14:** *Hypothesis 1: Year fixed effects*

Logistic regression — Number of obs = 371
LR chi2(13) = 18.11
Prob > chi2 = 0.1533
Log likelihood = -43.922962 — Pseudo R2 = 0.1709

| deal_type_dummy3 | Odds ratio | Std. err. | z | P>\|z\| | [95% conf. | interval] |
|---|---|---|---|---|---|---|
| Female_MT | 6.520769 | 4.814051 | 2.54 | 0.011 | 1.534218 | 27.71472 |
| Co_age | .9960391 | .0093776 | -0.42 | 0.673 | .9778279 | 1.014589 |
| Stock_AEX | .9968384 | .0105834 | -0.30 | 0.766 | .9763096 | 1.017799 |
| Avg_Exp_2 | .9997317 | .0011945 | -0.22 | 0.822 | .9973932 | 1.002076 |
| Industry_C | | | | | | |
| Business Services | 1 | (empty) | | | | |
| Consumer Discretionary | .3914451 | .4169828 | -0.88 | 0.379 | .0485218 | 3.157944 |
| Energy & Utilities | 1 | (empty) | | | | |
| Financial & Insurance Services | 2.994391 | 3.253585 | 1.01 | 0.313 | .3559811 | 25.18779 |
| Healthcare | 1.325551 | 1.371247 | 0.27 | 0.785 | .1745226 | 10.06796 |
| Industrials | .7435113 | .7839727 | -0.28 | 0.779 | .0941378 | 5.872337 |
| Information Technology | 1 | (empty) | | | | |
| Raw Materials & Natural Resources | 1 | (omitted) | | | | |
| Real Estate | 1 | (empty) | | | | |
| Telecoms & Media | 1 | (empty) | | | | |
| year | | | | | | |
| 2013 | 1 | (empty) | | | | |
| 2014 | 1 | (empty) | | | | |
| 2015 | 3.088659 | 8.253465 | 0.42 | 0.673 | .0164136 | 581.2156 |
| 2016 | 1 | (empty) | | | | |
| 2017 | .5573265 | 1.257529 | -0.26 | 0.796 | .006691 | 46.42232 |
| 2018 | .8999637 | 1.815985 | -0.05 | 0.958 | .0172439 | 46.96943 |
| 2019 | .5554782 | 1.173256 | -0.28 | 0.781 | .008847 | 34.87679 |
| 2020 | .9619481 | 1.834051 | -0.02 | 0.984 | .0229219 | 40.36946 |
| 2021 | 1 | (omitted) | | | | |
| 2022 | 1 | (empty) | | | | |
| 2023 | 1 | (empty) | | | | |
| _cons | .1298617 | .9938678 | -0.27 | 0.790 | 3.97e-08 | 424585.9 |

Note: _cons estimates baseline odds.

**Table 15:** *Hypothesis 2: Subsample 2021-2022*

Logistic regression — Number of obs = 202
LR chi2(3) = 61.64
Prob > chi2 = 0.0000
Log likelihood = -86.456308 — Pseudo R2 = 0.2628

| Female_MT | Odds ratio | Std. err. | z | P>\|z\| | [95% conf. | interval] |
|---|---|---|---|---|---|---|
| Avg_Exp | .9354316 | .0314754 | -1.98 | 0.047 | .8757311 | .999202 |
| MT_Size1 | 1.84456 | .2057114 | 5.49 | 0.000 | 1.482396 | 2.295206 |
| Female_founder | 25.03499 | 19.45706 | 4.14 | 0.000 | 5.457553 | 114.841 |
| _cons | .1367816 | .1188351 | -2.29 | 0.022 | .0249177 | .7508391 |

Note: _cons estimates baseline odds.

**Table 16:** *Hypothesis 3: Year fixed effects*

Logistic regression — Number of obs = 286
LR chi2(11) = 6.83
Prob > chi2 = 0.8129
Log likelihood = -25.708342 — Pseudo R2 = 0.1172

| deal_type_dummy1 | Odds ratio | Std. err. | z | P>\|z\| | [95% conf. | interval] |
|---|---|---|---|---|---|---|
| MT_Size1_2 | .9953361 | .026216 | -0.18 | 0.859 | .9452574 | 1.048068 |
| Avg_Exp_3 | 1.000019 | .0000176 | 1.09 | 0.277 | .9999846 | 1.000054 |
| Female_MT | 2.462511 | 2.444531 | 0.91 | 0.364 | .3518775 | 17.23316 |
| Industry_C | | | | | | |
| Business Services | 1 | (empty) | | | | |
| Consumer Discretionary | .8706543 | 1.135361 | -0.11 | 0.915 | .0675852 | 11.21605 |
| Energy & Utilities | 4.738876 | 6.348289 | 1.16 | 0.245 | .3430753 | 65.45778 |
| Financial & Insurance Services | 1 | (empty) | | | | |
| Healthcare | 1 | (empty) | | | | |
| Industrials | 2.622282 | 2.939763 | 0.86 | 0.390 | .291355 | 23.60132 |
| Information Technology | 1 | (omitted) | | | | |
| Raw Materials & Natural Resources | 1 | (empty) | | | | |
| Real Estate | 1 | (empty) | | | | |
| Telecoms & Media | 1 | (empty) | | | | |
| Co_age | .9597937 | .0262659 | -1.50 | 0.134 | .9096697 | 1.01268 |
| year | | | | | | |
| 2013 | 1 | (empty) | | | | |
| 2014 | 2.755873 | 4.174017 | 0.67 | 0.503 | .1415918 | 53.63895 |
| 2015 | 1 | (empty) | | | | |
| 2016 | 1 | (empty) | | | | |
| 2017 | 1 | (empty) | | | | |
| 2018 | .7162012 | .9109177 | -0.26 | 0.793 | .0592126 | 8.662757 |
| 2019 | .4288236 | .6270827 | -0.58 | 0.563 | .0244084 | 7.533876 |
| 2020 | 1 | (empty) | | | | |
| 2021 | 1 | (empty) | | | | |
| 2022 | .5261281 | .799128 | -0.42 | 0.672 | .0268049 | 10.32687 |
| 2023 | 1 | (omitted) | | | | |
| _cons | .0282777 | .0411845 | -2.45 | 0.014 | .0016283 | .4910891 |

Note: _cons estimates baseline odds.

**Table 17**: *Hypothesis 4: subsample 2021-2022*

Logistic regression — Number of obs = 201
LR chi2(12) = 19.26
Prob > chi2 = 0.0824
Log likelihood = -124.61132 — Pseudo R2 = 0.0717

| deal_type_dummy2 | Odds ratio | Std. err. | z | P>\|z\| | [95% conf. | interval] |
|---|---|---|---|---|---|---|
| Avg_Exp | .3641904 | .1458256 | -2.52 | 0.012 | .1661494 | .7982859 |
| Co_age | .9956045 | .0062276 | -0.70 | 0.481 | .9834732 | 1.007885 |
| Stock_AEX | .9617367 | .0147893 | -2.54 | 0.011 | .9331828 | .9911644 |
| Avg_Exp_StockAEX | 1.001484 | .0005683 | 2.61 | 0.009 | 1.000371 | 1.002598 |
| Industry_C | | | | | | |
| Consumer Discretionary | 1.063159 | .6369873 | 0.10 | 0.919 | .3285519 | 3.440267 |
| Energy & Utilities | .2211602 | .2577565 | -1.29 | 0.195 | .0225244 | 2.171503 |
| Financial & Insurance Services | 1.424603 | 1.099548 | 0.46 | 0.647 | .3138434 | 6.466579 |
| Healthcare | .4858655 | .328671 | -1.07 | 0.286 | .1290352 | 1.829465 |
| Industrials | 1.314653 | .8235321 | 0.44 | 0.662 | .3851209 | 4.487717 |
| Information Technology | .9906284 | .5066717 | -0.02 | 0.985 | .363539 | 2.69942 |
| Raw Materials & Natural Resources | .603535 | .4268906 | -0.71 | 0.475 | .1508805 | 2.414192 |
| Real Estate | 1 | (empty) | | | | |
| Telecoms & Media | .3167854 | .3805397 | -0.96 | 0.339 | .0300785 | 3.33637 |
| _cons | 2.84e+11 | 3.07e+12 | 2.44 | 0.015 | 185.0886 | 4.37e+20 |

Note: **_cons** estimates baseline odds.