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Effect of employee turnover on firm performance

By Tom Ewals

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Supervisor: Roeland Aernoudts

Abstract

This thesis conducted a panel data analysis on the relationship between employee turnover and firm performance. The goal of this thesis is to determine the strength of the relationship, testing moderators related to organizations, context, and methodologies, and based on the results, proposing directions for future research on employee turnover. Hausknecht and Trevor (2011) performed a meta-analysis on 115 articles regarding employee turnover and found mixed results. Current literature finds mixed results for the effect of employee turnover on firm performance. There is also no consensus on a possible curvilinear relationship between employee turnover and firm performance. Furthermore, there is a gap in literature on possible moderating variables, like industry, firm size and the age of the firm. The Workspace database is used for gathering data of 1423 firms over a 10 year timespan. The findings demonstrate a significant difference in the type of employee turnover. With voluntary turnover having a significant negative on firm performance, while the involuntary turnover has a positive effect on firm performance. The industry has a moderating effect on the relationship between employee turnover and firm performance, while the results of the age and size of the company are mixed and need further research.

Key words: *employee turnover; firm performance; industry; panel data*

Content

Chapter 1 Introduction

1.1 Introduction of the topic

There is a kind of the Pied Piper effect that is afflicting numerous organizations: teams or networks of individuals switching from one company to another. Employees at the centre of social networks are increasingly being recruited away from current employers, particularly if the recruiting organization believes they could bring a wealth of valuable connections with them. This practice is known as "hiring via personal networks" (Abouassi et al., 2021). Young people are more likely to switch jobs than older people. Factors like salary and job satisfaction play a key role for employees to switch jobs. As older employees prepare to exit the workforce, the composition of workforce changes to a higher percentage of employees who voluntarily switch jobs (Stuth & Jahn, 2020). This leads to the question for companies whether they wish to keep their employees and maybe pay a higher price to keep people from switching. Companies can also accept to let some of their staff go and try to attract new staff, however in today's labour market it is not that easy to employ new employees (Serenko, 2024). One of the key variables that measure the percentage of people who leave the company is named "the employee turnover".

1.2 Research problem and motivation

Employee turnover over the years has been steady. After the dot-com crisis of 2000 and the financial crisis of 2009 the employee turnover took a dip from 30% to below 20% in the USA. This has changed quite a bit, because the employee turnover has risen to above almost 40%, since 2020. In some sectors, such as Hospitality, Accommodations and Food Services, the employee turnover doubled to above 70% (Dogru, 2023). In OECD countries the same trend has occurred, with a decline of 8% between 2012 and 2019 in job tenure (the length an employee works for the same company). The expectations are that the job tenure will only decline further since young people change jobs more often (OECD, 2023). When employees voluntarily decide to quite their job, this is labelled as voluntary employee turnover. It can be hard for companies to precisely predict their voluntary employee turnover (Shaw et al., 1998). With the increase of young people who are more likely to switch jobs, the voluntary employee turnover may also increase (Abouassi et al., 2021).

Employee turnover has long been a topic of interest among management scholars and practitioners, and it remains so (Allen et al., 2010). The majority of the turnover literature focuses on individual-level factors that can lead to turnover, such as employee demographics, work satisfaction, organizational commitment, and integration (Holtom et al., 2008). The focus on predictors of turnover is most likely founded on the assumption that turnover has significant and relevant implications for companies. Research on the causes of turnover is of great importance, but it is also important to examine the impact of turnover on organizational performance, including profits, customer service, and other outcomes (Lee, 2018). A growing body of research is addressing this issue and also researching the impacts of turnover (Hausknecht & Trevor, 2011).

Allen et al. (2010) found that the belief that employee turnover is fundamentally harmful for businesses is a common managerial misunderstanding. Allen et al., (2010) state that in the current study, more than 25% of the effect sizes revealed a positive association, more than 20% of studies found evidence of moderation effects, and more than 10% found evidence of curvilinearity. These mixed results are also found by the meta-analysis study of Hausknecht and Trevor (2011), who analysed a total of 115 employee turnover studies. This shows the mixed results regarding employee turnover. One of the arguments for a positive effect of involuntary employee turnover on firm performance is that it helps the company to get rid of the worst performers. By firing the worst performers and hiring new employees, a company could become more productive and have more innovation, this is supported by findings from a study by McElroy et al. (2001).

On the other hand, there are beliefs that employee turnover has a negative impact on firm performance. According to Milanowski & Odden (2007) a company faces a large amount of costs when firing an employee. When viewed from a social and human capital point of view a company would want to invest in its employees and train them for their job. Employee turnover therefor generates higher sunk costs. Furthermore, Van Iddekinge et al. (2009) demonstrate that retention rates, the inverse of turnover rates, significantly and favourably impact the shift in unit profitability over time by testing the underlying effect of the turnover rates on firm performance.

To be able to explain why an organization with high employee turnover may perform worse, it is important to have an understanding of the relevant context. The meta-analysis studies of Hausknecht & Trevor (2011) and Hancock et al., (2011) provide an overview of context variables that have been used for current literature, but they also indicate the gap concerning context variables in the current literature.

For example, in the retail sector the employee turnover is on average higher than in most other sectors, while in the finance sector the employee turnover is on average lower than in other sectors (Bureau of Labor Statistics, 2024). The effect on firm performance may differ between industries, if employee turnover is lower than direct rivals, it may lead to a comparative advantage (Allen et al., 2010). Despite the difference that could occur between industries, the vast majority of studies (72%) on employee turnover are single-industry studies (Hausknecht & Trevor, 2011). Secondly the size of a company could be of importance, since large companies also have a larger workforce, which makes it easier for them to cover shortages by distributing roles among workers (Li et al., 2022). The age of a company may also play an important role in the employee turnover-firm performance relationship, but little research has been performed on this subject (Hancock et al., 2011).

1.3 Research Question and Objectives

The objective of this research is to investigate the effect of employee turnover on firm performance. This research aims to create a better understanding of what moderation effect the industry, age and the size of the company may have on the employee turnover – firm performance relationship.

The research question is: ***"What is the effect of employee turnover on firm performance in the finance and retail sector?"***

The impact of voluntary and involuntary turnover patterns, as well as the resulting loss of social capital, on organizational performance is uncertain. Furthermore, these problems are not sufficiently addressed by the organizational-level theory that is now in place regarding voluntary and involuntary turnover. In order to further the research of voluntary turnover and organizational performance, this thesis examines prior research, existing theories and provides multiple approaches, including a social capital and a cost-based approach.

In order to achieve this, this thesis first provides an overview of existing arguments that address the effect of (in)voluntary turnover. Secondly, the consequences of social capital losses in circumstances involving voluntary turnover is covered in this research. Thirdly a quantitative study is performed on the effects of voluntary and involuntary research on the firm performance by taking into account the possible moderation variables that exist. Through highlighting potentially productive study directions, the results presented in this thesis may serve as a starting point for future research.

1.4 Research relevance

While employee turnover has received a great deal of attention from researchers, knowledge on the relationship with firm performance is limited (Hausknecht & Trevor, 2011). The reason for this is that previous research has primarily examined the causes of employee turnover and how to prevent employees from leaving (Holtom et al., 2008) Past attempts that did study the employee turnover – firm performance relationship have either been considered too narrow, leading to studies with limited value, or too broad resulting in a loss of distinctive characteristics. An example of studies being too narrow, is the age of an company mediator. This variable has not been taken into account previously, while it may play an important role in explaining the relationship (Hancock et al., 2011). Secondly, there is also a big part of research that does not point out what the precise effects of both unvoluntary- as voluntary employee turnover are (Kuhn & Yu, 2021). Literature does points out the facts that voluntary turnover can cause companies to lose their best performers, while involuntary employee turnover might help companies to fire their worst performers (Shaw et al., 1998). This research aims to obtain a broader view of the effects of employee turnover, since it takes into account voluntary as well as involuntary turnover and also uses new moderation variables such as the industry, size and age of the company into account.

The conclusions that are drawn based on this study also have practical relevance. The conclusions can be used by managers of companies. They may be better able to judge the consequences of a certain level of employee turnover. For example, every business unit has to decide how much they are willing to spend for certain positions within the company. A vacancy can often be filled quickly by an external employee, but at a higher cost (De Varo et al., 2019). Investors may also use the knowledge into taking investment decisions about companies. They may tend to avoid companies in certain industries depending on their employee turnover, as they expect it will decrease the profits (Shaik et al., 2022).

1.5 Research Methodology

The literature review helps to determine which variables are relevant to use in this research. This thesis uses explanatory variables, moderation variables and control variables. The explanatory variable, employee turnover is the main focus of the study and is used to explain the variance in the dependent variable, firm performance. The moderation variables serves to investigate how the relationship between the explanatory variable and the dependent variable changes across levels of the moderator. The control variable help to remove the effect of confounding variables, allowing for a clearer understanding of the relationship between the explanatory variable and the dependent variable. The variables are further discussed in the literature review. The data for this study is used from Refinitiv Workspace. Workspace has a large amount of data of companies of all over the world, which aids to achieve a higher validity of the research results. The large dataset from Refinitiv Workspace is analysed using Stata. Then an ordinary least squares regression is used to determine the correlation between the employee turnover and firm performance and whether there is a moderation effect from external factors. The ordinary least squares regression serves as an indication of the relationship between employee turnover and firm performance. The OLS regression does not take into account firm specific characteristics. These characteristics are taken into account with the random- and fixed effects regressions. The OLS regression is used to test for the regression of employee turnover on firm performance between different firms, while the random and fixed effects are used to test for the regression within a firm over multiple years. The control variables, training hours, national institution and region are used in accordance with previous research (Hancock et al., 2011; Hausknecht & Trevor, 2011; Park et al., 2013) Finally, the moderation variables, industry, company age and number of employees, are tested by comparing different groups of the moderation variables with each other. This helps to obtain an understanding of the variables that are relevant and may influence the relationship between employee turnover and firm performance.

1.6 Thesis outline

This thesis contains six chapters. The next chapter provides an extended literature review. The literature review discusses the different views on employee turnover, but also list important variables that may influence the employee turnover-firm performance relationship. This aids in the formulation of the hypotheses that support answering the research question. Chapter 3, research methodology, explains the chosen variables and how the data is collected and what tests are used to analyse the data. This results in chapter 4, where the results of the data analysis is described. In chapter 5 the conclusion, discussion, limitations, and a confrontation of the findings with prior literature are discussed followed by suggestions for future research. Finally in chapter 6, the references that are used in this thesis will be shown.

Chapter 2 Literature review

The literature review starts with an explanation of the relevant concepts, the dependent and independent variables in chapter 2.1 and 2.2. It is followed by an extensive literature review on the employee turnover- firm performance relationship in chapter 2.3. In the following chapters 2.4, 2.5 and 2.6 context relevant variables are discussed that serve as moderating and control variables. The studies selected for the review were found in economic and management journals, taking into account the number of citations a study has received. The literature review results in a theoretical framework to provide an overview on the relationships and a total number of six hypotheses formulated based on the framework.

2.1 Firm performance

Measuring firm performance can be done by systematically assessing a company's ability to achieve its strategic goals and objectives, usually by evaluating both financial and non-financial indicators. Financial indicators include revenue growth, profitability ratios (for example, return on assets and return on equity), cash flow, and shareholder value creation. Non-financial variables include operational efficiency, customer happiness, market share, innovation, and employee productivity (Eccles, 2011). When examining current literature, there are different ways firm performance is measured. According to Hausknecht and Trevor (2011) the type of measurement has an influence on the effect of employee turnover on firm performance that is found. They divide the firm performance into three categories: financial performance (for example revenue, profits, and earnings per share), labor productivity (for example sales per employee or the productivity per employee), and customer service (for example wait times and customer happiness). It also needs to be taken into account that some variables that measure firm performance can be influenced by external factors. Such as the sales per employee, which can decrease when there is an economic recession. For example, when a company decides to fire many employees during an economic recession and the sales per employee also declines, because of the recession. This may make it look like a higher employee turnover causes the lower sales per employee, while in reality external factors played a role (Madhani, 2011). Variables such as profit margin and productivity per employee are less volatile for seasonal changes than sales per employee, however certain types of organization can have profit margins that are more volatile because of external factors (Rachdi, 2013).

Customer service is important to take into account as a category of firm performance, because the customer happiness can have a big impact on the sales. Especially with employee turnover, it might be the case that new employees do not have the knowledge yet to achieve the best customer happiness. In contrast to many other variables that measure the firm performance, the customer satisfaction measures non-financial data that is based on the interaction between the employees and the customer, which makes it less volatile for seasonality (Mohr, et al., 2012).

Variables with cross-sectional or short time lag designs appear to be more effective at revealing the effects of collective turnover on proximal internal process indicators than on ultimate financial performance. In general, because financial outcomes are influenced by a more complicated set of factors than productivity-related indicators, the effect of a particular component, such as turnover rates, is likely to be more difficult to separate from other factors (Hausknecht and Trevor, 2011).

2.2 Employee turnover

According to (Abbasi and Hollman, 2000): "Turnover is the rotation of workers around the labour market; between firms, jobs, and occupations; and between the states of employment and unemployment". The total turnover rate can be defined as the number of departing employees divided by the total number of employees. Employee turnover can be further divided into two categories: Voluntary and involuntary turnover. Reasons for leaving can be used to distinguish between voluntary and involuntary turnover rates; voluntary turnover rates refer to the proportion of employee departures initiated by employees, whereas involuntary turnover rates refer to the proportion of departures initiated by organizations (Shaw et al., 1998). The voluntary turnover is a function of individual quit propensities that originates from employee perceptions about the organization and the economic environment within which it resides, while involuntary turnover is a function of managerial strategies that are also influenced by the nature of the organization and management's perceptions of the economic environment (Donoghue & Castle, 2007).

There have been some fluctuations in the proportions of unvoluntary and voluntary turnover. During the start of the period of 2000 and 2010 the total employee turnover ranged between 40% and 50% in the US labour market. Voluntary turnover rates ranged from 17% to 28%, while involuntary turnover rates fluctuated between 16% and 19%. The remaining 3% to 4% constituted other separations for retirement, death, disability, or transfer. Notably, the 2009 results mark the first time the involuntary turnover rate outpaced the voluntary turnover rate. Furthermore, comparing voluntary turnover rates from 2001 to 2009 showed a 39% decrease. After 2009 the total separations were steady until March 2020 when the total separations peaked for a few months. Interesting is that the proportions of voluntary turnover has changed. The total separations The number of total separations in March 2024 was 5.2 million in the US labour market. The number of quits was 3.3 million, 1.5 million people that got fired and there are 400.000 other separations. The voluntary employee turnover is thus twice as high as the unvoluntary turnover (U.S. Department of Labor, 2024).

Overall, job satisfaction was found to be an accurate indicator of voluntary employee turnover intentions (Park & Min, 2020). For example, work satisfaction increased turnover intentions both directly and indirectly, although it had a greater impact through organizational commitment. In addition to the effect of job satisfaction on turnover, factors predicting job satisfaction were frequently addressed, including relationship quality, job accuracy, salary effects of the need-reward match on relationship quality and comparison to others, training, added role conflict, and autonomy as contributors to job satisfaction that indirectly affect organizational commitment. It can be hard for a company to satisfy an employee with all those aspects. Especially, since a company only has a certain budget and number of people that can operate in certain roles (Han, 2020).

Involuntary turnover can be caused by many factors. One of the reasons can be underperformance, resulting in involuntary turnover. Another reason is Reduction-in force (RIF). This occurs when the company decides to downsize the department and no replacement is planned. The departing employees are thus not per definition fired because of incompetence

(McElroy et al., 2001). Involuntary turnover is easier for a company to predict and manage than voluntary turnover, since the company can decide at what moment and who needs to be fired. This will lead to lower search and replacement costs and will harm the firm performance less (Li et al., 2022).

Another reason for employee turnover can be the firm performance. According to (Wang & Sun, 2020) the employee turnover has a negative effect on the firm performance, but also the firm performance has a negative effect on the employee turnover. They tested this with public elementary and middle schools and found that beginning teachers could not replace the social capital that was lost, resulting in a decrease of organizational performance. Consequently, the organizational performance also negatively effects the employee turnover. Reasons are higher pressure on the employees and especially beginning teachers did not get their probation period extended or chose to leave their current school. Within schools the employee turnover-organizational performance relationship could thus have a down spiralling effect.

2.3 Effect employee turnover on firm performance

The basic but fundamental principle of Abelson and Baysinger's theory (1984) is that organizational turnover should be assessed based on the costs it faces relative to the advantages it yields. There are however multiple views on the advantages and costs that employee turnover has.

2.3.1 Advantages employee turnover

Employee turnover helps the company by removing underperforming personnel so that the costs of replacement and retention can be swiftly offset by improved performance from the new employee. This has long been assumed to be the case since new employees should be able to replace the bad apples of the company (Holtom et al., 2008). In addition to replacing underachievers, benefits can also emerge indirectly in two ways:

1. Replacing underperforming employees can encourage others still employed by the company to perform better by sending a positive signal (McElroy et al., 2001). For example a company where the employee turnover is extremely low, the employees might get the idea that the consequences of not performing are not severe, this could result in a low

performance of the employees. This warning signal thus positively affect the firm performance according (Meier & Hicklin, 2008).

2. This may serve as a source of fresh concepts for invention and change. Even a productive employee can eventually cost the company more money than they bring in, since their salary might be relatively high (Abelson & Baysinger, 1984). It can also lead to a higher attractiveness for employees that are ambitious. A company that has a higher employee turnover also has a lot of functions that get available, paving the way for a promotion (Mawdsley & Somaya, 2016).

2.3.2 Costs of employee turnover

Employee turnover is associated with a large number of extra costs that would not have been present when there would be no employee turnover. For example, the cost of separation (Darmon, 1990), administrative costs (Hom & Griffeth, 1995), the cost of finding replacement and training the new-hire (Milanowski & Odden, 2007). These are costs that can increase with every person that departs from the company. Especially when there is a huge shortage of employees, there may be even higher replacement costs due to external employees that are necessary to fill the gaps in the organization (Hellmann, 2007).

Especially when viewed from a human capital point of view, the costs of turnover are high, but in a different way. Each employee has firm specific and more general skills and abilities that are hard to replace (Pil & Leana, 2000). Furthermore, from the standpoint of the organization, both kinds of investments are expensive, and after a decision is taken to make an investment in the employee, the business is motivated to keep the employee. The picture is more difficult, of course, when viewed from the individual's perspective, since voluntary turnover is substantially more costly when human capital is purely firm specific (Becker, 1993). Turnover is also costly when viewed from a social capital point of view. The reason for this is that “there is a loss in the levels of collective goal orientation and shared trust” (Leana & Van Buren, 1990) and it also decreases an organizational fabric (Shaw et al., 2005). This can even get to the point that companies have a very high employee turnover, signalling a low employee morale (Rainey, 2009).

According to the human and social capital theory, an increase in turnover will thus lead to higher cost, which will have a negative impact on the financial performance. When looked at literature this point of view has a lot of support. For instance, studies have revealed a negative correlation between rising turnover rates and profits, customer satisfaction (Hurley & Estelami, 2007), sales growth (Batt, 2002) and return on equity (Cannella & Hambrick, 1993). Furthermore, Van Iddekinge et al. (2009) demonstrated that by utilization of job-related selection and training the that retention rates, the inverse of turnover rates, would increase and significantly and favourably impacted the shift in unit profitability and customer service in the long run. According to (Osterman, 1987) the turnover rate at any level has a significant negative impact on organizational performance.

Hypothesis 1: The relationship between employee turnover and organizational performance is negative.

2.3.3 Curvilinear effect turnover

Hausknecht and Trevor (2011) have taken into account a total of eighteen tests that tested the relationship between employee turnover and firm performance. Six of the eighteen tests were not statistically significant, whereas four supported an inverted-U functional shape and eight indicated an attenuated negative interaction.

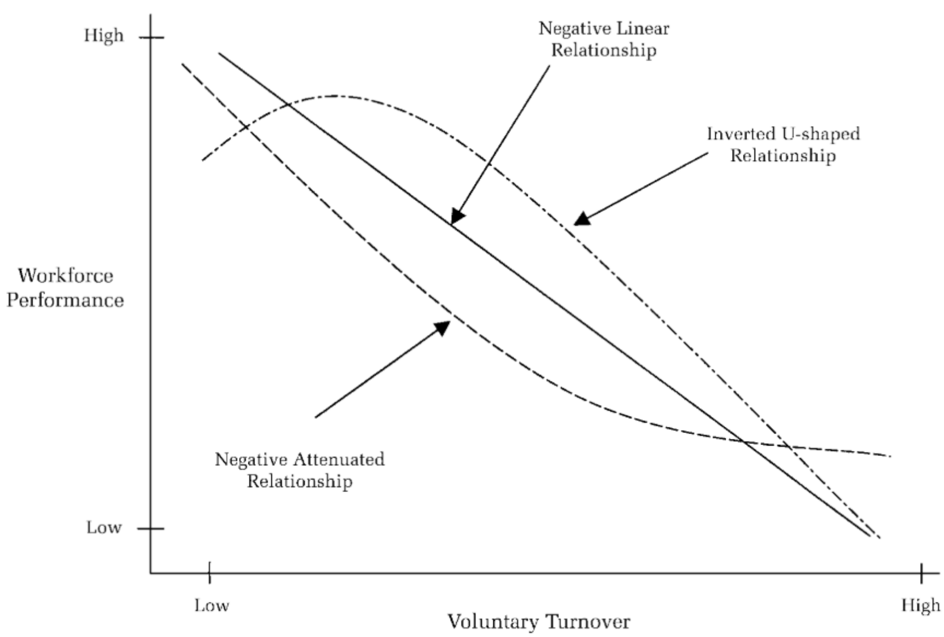


Figure 1: Alternative views on the employee turnover - workforce performance relationship. Adapted from Gupta et al. (2005).

Two studies that are often referred to when it comes to the curvilinear effect of employee turnover are Abelson and Baysinger (1984) and Price (1977). The Abelson and Baysinger (1984) argument is that there is an inverted U-shaped curved relationship between turnover and organizational performance. This is in contrast to the negative attenuated relationship from Price (1977). Abelson and Baysinger (1984) state that turnover rates are beneficial at low levels but costly at high levels, resulting in a curvilinear relationship between the employee turnover–firm performance. The reasoning behind their perspective is that organizational performance is often enhanced by low to moderate levels of turnover because they attract fresh talent and better-trained staff; however, these advantages diminish as turnover rises. Any more turnover after a certain point results in larger expenses than advantages and thus negatively affects the company performances. This conceptualization of the relationship has been tested by researchers, but for the inverted U-shaped relationship there is no conclusive evidence. Price's theory (1977) is that the turnover rate has a disruptive effect at low and moderate levels, while the effect diminishes at high levels. The reason for this is that companies that have a higher turnover rate on average have employees that have worked for a shorter amount of time for the company. Those employees have lower human capital costs to replace. So for companies with a low employee turnover rate, there are more employees that have worked for a longer time for the company, resulting in higher human capital costs to replace them.

There have also been studies that try to find the optimal level of employee turnover. According to De Witte et al. (2018) the employee turnover increases the labour productivity when at a low level. When the employee turnover reaches medium to high levels it will have a negative effect on the labour productivity. The optimal turnover for every company is different and they also state that companies have more trouble when there is more volatility in the employee turnover. Also the study of Meier and Hicklin (2007) supports the inverted U-shaped standpoint. They found that in the Texas school districts the turnover at low levels was positively related to the scores, while there was a negative relationship for higher turnover rates. On the other hand, according to Siebert and Zubanov (2009) there is no inverted U-shaped relationship in the commitment work system, while there is an inverted U-shaped relationship in the secondary work system. The production process determines which of these two system is dominant. The commitment system is attributed to managers' inability to monitor or thoroughly evaluate worker behaviour, so the commitment system contain jobs that are more complex to perform and control. In contrast, the control system emerges when operations are routine and low-cost. In the commitment context, cautious selection, career development, and reliance on the organization's internal labour market are all critical. In contrast, the secondary system places minimal emphasis on selection and career growth, and it is dependent on the external labour market. An example of a company that has both a commitment work system and a secondary work system is a retail company. Within he secondary system, there are the part-time workers that help with the simple task, like the stock clerk. They are easy to replace. There is also a group of people in the company that are part of the commitment system. These are the core full-time workers, like the managers. These functions require more selection and human capital to fulfil. The employee turnover of the commitment system is linear negative, since there has been a careful selection and there is a higher human capital loss.

It is difficult to identify any study-level factors that could explain the disparities in outcomes, as no obvious pattern emerges when comparing sample kinds, turnover types, or dependent variables across research. For example, both of the studies of Siebert and Zubanov (2009) and Ton and Huckman (2008) apply their model on the retail sector, yet the results differ. Siebert and Zubanov (2009) find an inverted U-shape relationship between the turnover of part-time employees and firm performance. While the study of Ton and Huckman (2008) finds an attenuated negative relationship between the employee turnover and firm performance. What is important to note is that these studies have a different type of measuring the firm performance and the employee turnover. Siebert and Zubanov (2009) measures the effect of employee turnover on labour productivity (store sales divided by the total annual hours worked). While the study of Ton and Huckman (2008) measures the profit margin (operating income divided by sales). Another big difference is that the study of Ton and Huckman (2008) does not particularly look at the difference of the part-time and full-time turnover. The results of Ton and Hackman (2008) do show however that the effect of full-time turnover is significantly negative, while the effect of part-time turnover is not. The slope and curvilinearity of either full- and part-time turnover is not mentioned however.

Hypothesis 2: The relationship between employee turnover and organizational performance is curvilinear*.*

2.3.4 voluntary and involuntary effect turnover

Researchers have frequently indicated that voluntary and involuntary turnover might have distinct outcomes (Hausknecht & Trevor, 2011). Employees that are highly competent and perform well may be more inclined to depart freely due to external employment prospects (Trevor, 2001). Voluntary resignations are frequently unexpected and difficult for a company to manage. Key employees of the company can leave and it can be hard to replace them (Shaw et al., 1998). Voluntary turnover does have the costs mentioned in chapter 2.3.2 (Darmon, 1990; Hom & Griffeth, 1995; Milanowski & Odden, 2007), while the advantages of employee turnover mentioned in 2.3.1 are more applicable on involuntary turnover than on voluntary turnover (Holtom et al., 2008; Abelson & Baysinger, 1984). Thus, voluntary turnover rates are expected to be negatively correlated with organizational effectiveness. Despite all these theories on the effect of voluntary turnover on firm performance the meta-analysis of Hancock et al., (2011) states that there is no empirical evidence that voluntary turnover does have a significant negative effect on firm performance.

Although there are hypotheses that poor performer turnover and involuntary turnover are functional (McElroy et al., 2001; Meier & Hicklin, 2008), there is less empirical evidence that involuntary turnover leads to positive firm performance. However, contrary to popular belief, there are solid reasons to believe that involuntary turnover rates will have negative consequences. First, the operational disturbance argument for voluntary turnover rates is also applicable to involuntary turnover rate implications, perhaps to a lesser extent. As a result, involuntary turnover can reduce productivity since a changing labour base diverts attention away from activities that contribute to the creation of products and services. While the erosion of productivity is projected to be greater for voluntary leavers, the employee relocation itself, especially when linked with less valuable (involuntary) leavers, indicates that operational disruption will occur. Furthermore, even when bad performers are replaced with average performers, human capital theories indicate that involuntary turnover rates can cause performance issues in specific scenarios (Shaw et al, 2012). The second perspective, which suggests a negative association between involuntary turnover rates and firm performance, is based on a closer look at what involuntary turnover rates actually capture. At the individual level, the bad performer will leave and will be replaced by an average employee. A single leave, however, reveals little about the overall workforce. In contrast, involuntary turnover rates indicate the severity of employee quality issues. When all of the involuntary turnover is taken into account, the amount of replacement that is also worst performance does not disappear. A high involuntary turnover rate may simply indicate a low-quality workforce and the low productivity that this group is expected to deliver. Importantly, such a workforce could be the result of a range of issues, including labour market limits and ineffective HR management methods (Li et al., 2022).

One of the gaps in literature concerning the employee turnover is the possible curvilinearity of either voluntary and unvoluntary employee turnover. The current studies that do test curvilinearity only take look at the total employee turnover (Abelson and Baysinger, 1984; Price, 1977; De Witte et al., 2018; Meier and Hicklin, 2007; Siebert and Zubanov, 2009; Ton and Huckman, 2008). The studies that claim that there is an inverted U-relationship, argument that it is beneficial for the company to fire the worst performers. This hypotheses thus only supports this relationship for the involuntary employee turnover, since voluntary turnover can also cause best performers to leave the company. Also the negative attenuated relationship from Price (1977) focuses on the total employee turnover. The big impact that low and medium levels of employee turnover have on firm performance, follows the length that employees work for the company. This perspective seems to focus more on the voluntary employee turnover, since it would not be logical for companies to fire employees, with a high human capital, who have already worked for a long time for the company.

Hypothesis 3: The negative impact of voluntary employee turnover on organizational performance is greater than the negative impact of involuntary employee turnover on organizational performance.

2.4 The age and size of a company

According to the meta-analyses of Hancock et al. (2011) there has been very few research done on the effect of the age of a company on the employee turnover – firm performance relationship. There has been research done on the reason why an employee might leave a young company. According to Domurath et al. (2023) young people are more willing to leave young companies over time. Especially for people that have no prior experience with start-ups and employees working for low-growth ventures. Mature organizations are better able to communicate organizational knowledge to new hires due to their expertise and established procedures. Mature enterprises are also likely to have better recognition in the labor market, which expands their application pool and makes it easier to hire skilled replacements (Baron et al. 2001).

Young firms are smaller, less productive and less profitable, but in their early years they experience higher growth rates in terms of sales, productivity and profits. Older firms are better able to convert sales growth into subsequent profits and productivity (Coad et al., 2013; Farinas & Moreno, 2000). The study that does captures the effect of company age on the relationship of employee turnover and firm performance is Li et al., (2022). They find a significant effect moderating effect of the company age, with young companies having a significant greater negative effect of employee turnover on firm performance (-0.0375) than mature companies have (-0.0123). The company age in the study of Li et al., (2022) is only divided into young and mature and it is not specificized at what age a company becomes a mature company.

Hypothesis 4: Hypothesis: The negative impact of employee turnover on firm performance is greater for young companies than for older companies.

There is uncertainty on how entity size affects the employee turnover- firm performance relationship. Some argue that larger companies will face a smaller impact of employee turnover because bigger organizations can cushion turnover disturbances (Li et al., 2022). Others, however, claim that larger firms will have more negative turnover-performance connections because smaller entities can handle socializing and adjustment processes more efficiently.

According to Hausknecht et al. (2009) larger companies struggled more with the customer service when there was a higher employee turnover, where the smaller companies could handle the process better. Large companies also have a larger workforce, which makes it easier for them to cover shortages by distributing roles among workers. Additionally, turnover is more expensive in small businesses because organizational expertise about one specific aspect of the business is more likely to be concentrated among a limited number of employees. The firm size can be measured by the total number of employees (Li et al., 2022). According to Freifeld (2023), the investment in employee trainings differ a lot between smaller and larger companies. The larger companies have a size advantage which might help to get lower costs per employee on trainings. However, also the total amount of hours spent on trainings is higher for smaller firms, which makes it even more costly to have a high employee turnover. The way the firm performance is measured will be important in determining the effect of the employee turnover. The effect of employee turnover might not be as strong for bigger companies when measuring the profitability. According to Li et al. (2022) the negative effect of the employee turnover on the return of assets is greater for small firms (-0,0343) than for large firms (-0,0164). It is however not specified at what number of employees a firm is counted as a large firm. When measuring the customer service, the employee turnover might have a bigger effect on large organizations (Hausknecht et al., 2009). Thus, entity size is a crucial moderator; nevertheless, the direction and magnitude of the influence are uncertain. The factors stated above show stronger support for the believe that there will be a stronger negative correlation between turnover and performance in small businesses compared to large businesses.

Hypothesis 5: The negative impact of employee turnover on firm performance is greater for small companies than for large companies.

2.5 Industry

Allen et al. (2010) argued that it is important to take the organizational context and industry norms into account with the employee turnover- firm performance relationship. The organization context is important to measure since there are factors like organization size and growth that could influence the capability of the organization to find replacements. The industry norm matters, since a relatively high turnover may be considered low for the type of industry. If the employee turnover is lower than direct rivals, it might be a comparative advantage. When viewed form the human and social capital point of view, the type of industry might affect the employee turnover – firm performance relationship. Research of Hancock et al. (2013) finds that there are differences between industries in how strong the effect of employee turnover is on the firm performance. Manufacturing and transporting industries have a significantly higher employee turnover -firm performance effect than the retail and food service industries, which have a lower knowledge requirement. Also, the financial and technology industries show a stronger relationship between the employee turnover – firm performance. It is unclear however what the varied industries category consists of. This makes it unclear whether this trend can also be seen in other industries.

According to Park et al. (2013), organizational decision makers tend to place less value on developing human capital and more emphasis on leveraging investments in technology, equipment, and physical resources in high capital intensity industries like manufacturing. Employees play an important part in the operation of other industries, therefore human capital losses caused by high turnover rates can have a significant negative impact on performance. Therefore, it is reasonable to predict that the relationship between turnover rates and organizational performance will be stronger in industries where human capital leveraging is more significant than in those with high capital intensity. This claim is in line with the research of Shaw et al. (2012). They discovered that the negative connection between turnover rates and organizational performance was strengthened by businesses that spent significantly in human capital.

According to the Dangermond et al. (2019) the sectors food preparation and serving, personal care and service, and sales and related are considered low-skilled sectors. The high skilled sectors consist of management, business and financial operations, sciences and engineering. Dangermond et al. (2019) also states that jobs with a higher work level (highly skilled) have a significantly lower percentage of people working part time. Job level 1 has a part time job percentage of above 60%. The average part-time job percentage between job level 5 and

12 is only 10%. This might also have an effect the consequences that the employee turnover has on the firm performance. When a company has a high employee turnover of part time workers, it will require less Full Time Equivalent that needs to be replaced.

There are two industries that stand out from the other industries based on the employee turnover, training costs and replacement costs. These industries are the finance and the retail industry. The finance industry has a relative low employee turnover with high training investments and replacement costs. The retail industry has a high employee turnover with low training investments and replacements costs (Bureau of labor statistics, 2024; Freifeld, 2023; McConnell, 2011). These industries are thus very different from each other in key aspects, which makes them a good reference point to determine how the employee turnover-firm performance relationship could differ between industries. There are also other industries that could have been taken into account, like the IT-industry, but those industries did not have the supporting data on replacement cost and training investments. But also, a lot of industries that did have corresponding data, did not differ as much between employee turnover rates, replacement cost and training investments (Bureau of labor statistics, 2024; Freifeld, 2023; McConnell, 2011).

2.5.1 Retail

As stated by Shaw et al. (2005), the industry to which an organization belongs may have an impact on the effects of turnover because loss of human and social capital is probably more problematic in environments with high skill levels or knowledge requirements than in environments with standardized systems and technologies. In certain businesses, such as retail or food service, human capital could not offer much of a competitive edge.

The retail industry might be seen as a low-skilled industry, due to the relatively simple task that need to be completed. According to Siebert and Zubanov (2009), within the retail sector the chances of finding an inverted U-shaped turnover-performance relationship is higher than in other sectors. The reason for this is that the human capital loss for every employee that leaves is too high in most other sectors. There also are a lot of part time workers within the retail sector. This makes the impact that each employee has smaller. This is not taking into account yet with the employee turnover-firm performance relationship as it measures per employee (Siebert & Zubanov, 2009). According to the Bureau of Labor Statistics (2024) the employee turnover is above average in the USA retail sector. This can be seen as the monthly separation rate during 2023 and 2024 until march is 30% higher than average in the retail sector. Especially the voluntary turnover rate is higher than average, with the unvoluntary turnover in the retail sector equalling the average unvoluntary turnover rate.

Following Siebert and Zubanov (2009), there are two types of systems, the commitment and the control system. The production process determines which system is dominant. On the one hand, the commitment system might be attributed to managers' inability to monitor or thoroughly evaluate worker behaviour. In contrast, the control system emerges when operations are routine and low-cost. In the commitment context, cautious selection, career development, and reliance on the organization's internal labor market are all critical. In contrast, the secondary system places minimal emphasis on selection and career growth, and it is dependent on the external labor market. The retail sector is a typical example of a control system. Under the control system, thorough selection is less profitable, hence higher turnover is required to filter out undesirable employees. The costs of dysfunctional turnover per separation are lower, and human capital losses are obviously less significant. According to (Kuhn & Yu, 2021) the costs of employee turnover amount to 23% of the labor cost of the employee in the retail sector.

2.5.2 Finance

According to the Bureau of Labor Statistics (2024) the employee turnover is above average in the USA financial sector. This can be seen as the total monthly separation rate was more than 25% lower than average in the financial sector during 2023 and up to march 2024. The gap with the retail sector is even higher as the total separation rate is twice as high in the retail sector. This huge difference occurs only in the voluntary employee turnover rate, indicating a higher number of people in the retail sector that want to switch jobs. Both the unvoluntary turnover rate as the voluntary turnover rate is twice as high in the retail sector as in the finance sector. On the other hand, the cost of employee turnover is higher than average. In comparison with the retail sector the cost of employee turnover is 40% higher in the finance sector (McConnell, 2011). The sectors that are high skilled like, healthcare, finance and IT have a higher number of professionals. The high knowledge requirement also demands a higher level of education and training. This can be seen by the total amount that is spent on trainings per industry. Within the finance sector the amount that is spent on trainings is almost double the amount that is spent on trainings in the retail sector (Freifeld, 2023). This can also be seen when looked at the total amount spent on research and development. The amount that is spent on R&D in the finance sector is almost twice as high for every employee as is spent in the retail sector. Especially in the UK this is notorious as the amount of employee in the retail and wholesale is almost 5 times as high as in the financial services sector (OECD, 2024). The human and social capital that is lost for every employ is greater for these high skilled sectors than for low skilled sectors (Pil & Leana, 2000). The inverted U-shaped seems to be more likely to occur in retail sectors instead of financial sectors, since the human and social capital seems to be stronger for financials sectors.

Hypothesis 6: The negative relationship between employee turnover and firm performance is greater for companies in the finance sector than for companies in the retail sector.

2.6 Location and national institutional

There are many differences between countries in terms of company culture, national policies and regulations. A company in the US may observe a negative relationship between employee turnover and firm performance, due to high costs of separation. A company in a developing country may observe a positive relationship between employee turnover and firm performance, since the wage effects are smaller (Hijzen, 2013). The majority of study into the relationship between turnover and firm performance took place in the United States. As a result, it is probable that the underlying theoretical arguments were formed with a Western mindset, or that there are key structural differences between countries and cultures that alter the relative effect of costs and human and social capital losses (Hausknecht & Trevor, 2011).

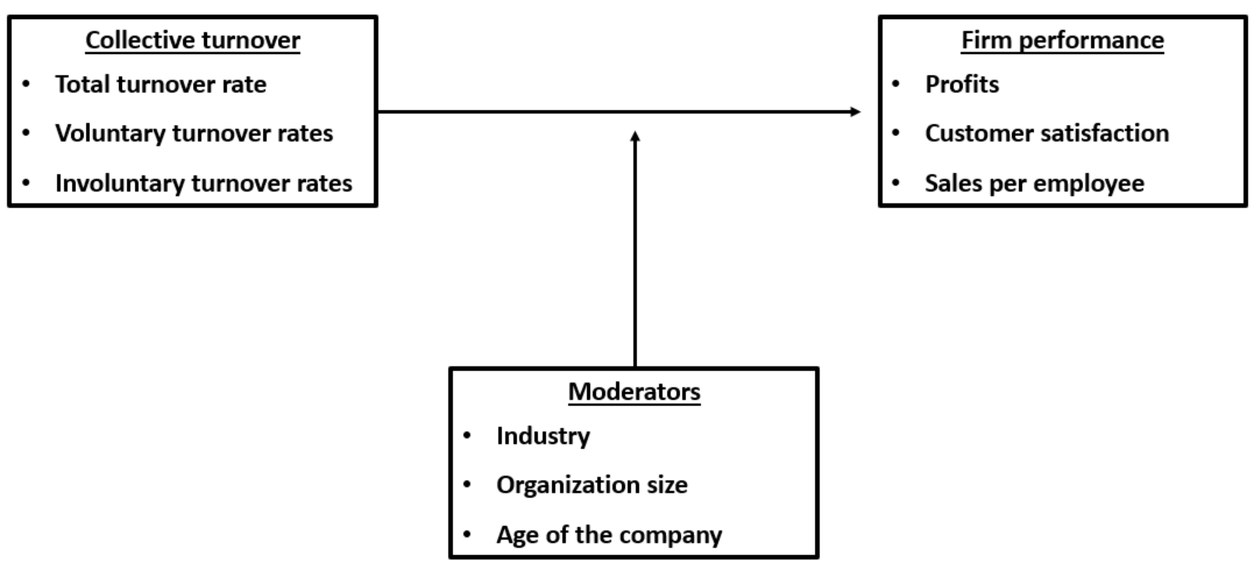
Besides the cultural differences between countries, the national institute of the country may also influence effect of employee turnover on firm performance. Countries with a Liberal market economy (LME), such as the United states and the United Kingdom are more categorized by a self-orientated culture with financial incentives based on individual success (Walker, 2018). As a result, higher levels of cooperation and collaboration among CMEs, such as Germany and

Japan, may enable firms in such economies to better adapt to the replacement of expertise and abilities lost due to turnover.

2.7 Theoretical framework

The relationship that is being discussed can be seen in figure 2. The collective turnover can be measured by the total employee turnover or more specifically the (In)voluntary employee turnover rates. The firm performance can be measured by profits, customer satisfaction and sales per employee. The hypothesis of this research is that the firm performance is impacted by the collective employee turnover. This relationship is also moderated by the type of industry, organization size and the age of the company. The hypothesis follows the literature review, which describes how the relationship might look like.

Figure 2: Theoretical model



Chapter 3 Methodology

This chapter covers the research design, data collection, analysis, reliability, and validity, which serve as the foundation for empirical analysis. The research design chapter provides an overview of the analysis that is done in this thesis. The chapter 3.2 gives insight in what databases and literature where used and the reason why they were used. The following chapter 3.3 gives insight to the variables that are used and the method that is used to measure the variables. Finally chapter 3.4 will provide the data analysis that is used in this thesis.

3.1 Research design

This thesis studies the effect of employee turnover on firm performance. While there is prior research on some aspects of employee turnover, there is no prior research that covers the in depth effects of (in)voluntary turnover on firm performance in two different industries. In Chapter 2, a literature review is used to develop a theoretical framework. A theory-supported inductive research process is ideal for developing a new theory on employee turnover, as it develops knowledge within a theoretical framework (Storberg-Walker, 2007).

This thesis adopts a panel data analysis. This technique allows for studying certain entities or phenomena in their natural surroundings over a longer period (Hsiao, 2022). To investigate the effect of employee turnover for a short and a longer term, the data of the last 10 years is used. Using a longer time period may increase the missing data points (Bai, 2009). To make the analysis more in-depth, two industries have been chosen to study: finance and retail. As explained in chapter 2.5, these industries are chosen based on multiple selection criteria. The retail industry and the finance industry differ from each other based on average employee turnover, training costs and replacement costs (Bureau of labor statistics, 2024; Freifeld, 2023; McConnell, 2011). The retail sector has very high employee turnover with low training- and replacement costs. The retail industry also has some relevant literature, which gives a better comparison (Siebert and Zubanov, 2009; Ton and Huckman, 2008). Data collecting methods included accessing the online database of Workspace Refinitiv and a literature search. These methodologies provided industry specific insights, which are explained on in the following paragraph.

3.2 Data collection methods

The literature review and data analyses are used to answer the research question. The literature study was undertaken using supplementary data and the keywords 'employee turnover' and/or 'firm performance' to look for relevant papers. To conduct a systematic literature search, two major databases are used: WorldCat and Google Scholar. All sources are research papers sourced from reputable journals or books. To get an overview of relevant academic articles, meta-analysis studies on employee turnover were used (Shaw et al., 2013; Hausknecht and Trevor, 2011; Hancock et al., 2011).

The data is collected from Workspace Refinitiv. It provides access to real time market data, news, fundamental data, analytics, trading and messaging tools. It provides data in 190 countries on asset classes including foreign exchange, money markets, fixed income, equities, commodities, funds, and real estate. (Refinitiv, 2024). The data from Refinitiv Workspace has a range of 50 years back, so it can be used for time series. The data is collected via banks, national resources, and exchanges. To check for the reliability of the company age, this thesis also uses the database of Orbis. The Orbis database contains financial and business information on approximately 200 million companies worldwide, based on annual reports. It is the largest database of its kind (Bajgar et al., 2020). Orbis does not cover data on employee turnover, but it can be used to compare the number of employees. This thesis does not only use the data of a specific region. The reason for this is to achieve a higher external validity, but also since it leads to a higher sample that can be examined. Refinitiv has a lot of data of a broad range of companies all over the world. The downside however is that the collection of data of smaller and local companies is much more limited than that of larger companies (Bo & Galiani, 2021).

3.3 Measurements

3.3.1 Dependent variables

This research determines the effect of employee turnover on the dependent variable firm performance. The variable are measured in the dataset of Workspace. Following Laursen and Foss (2003), the following variables are used: profit margin, customer happiness and sales per employee. Each of these variables measures a different type of organizational performance. The profits measures if the company is still as profitable and could change with a higher or lower employee turnover. For example, a company with a higher employee turnover could face higher cost for finding replacement and training the new hire (Milanowski & Odden, 2007). The profit margin is measured by dividing the net profits by the revenue times 100. The reason that the customer happiness is measured, is because it can have a big impact on the future sales and it gives a direct reflection of the performance of employees. It gives a perspective of how the customers view the competence of the employees (Mohr, et al., 2012). The customer satisfaction is measured on a scale of 0 to 100, with 100 being the perfect score. The sales per employee is a measurement for the productivity of each employee. The sales per employee is measured by dividing the total sales of the company by the amount of employees expressed in full time equivalent.

3.3.2 Independent variables

The independent variable is the employee turnover. The total employee turnover can be measured by dividing the number of employees who left by the average number of employees, then multiplying by 100. This research makes a further division between voluntary employee turnover and involuntary employee. As stated above the total turnover rate can be divined as the number of departing employees divided by the total number of employees. Reasons for leaving can be used to distinguish between voluntary and involuntary turnover rates; voluntary turnover rates refer to the proportion of employee departures initiated by employees, whereas involuntary turnover rates refer to the proportion of departures initiated by organizations (Shaw et al., 1998). One of the shortcomings of measuring employee turnover is that is does not consider how many hours a person works per week. Replacing two part time employees who work 20 hours per week with one full time employee increases employee turnover, while retaining the same amount of hours worked. The database that is used, Workspace, does not provide variables that control for the total amount of hours worked. Dangermond et al. (2019) also states that jobs with a higher work level (highly skilled) have a significantly lower percentage of people working part time. This might also have an effect the consequences that the employee turnover has on the firm performance. When a company has a high employee turnover of part time workers, it will require less Full Time Equivalent that needs to be replaced.

3.3.3 Moderating variables

The moderating variables used in this research are the industry, number of employees and age of the company. Allen et al. (2010) argued that it is important to take the organizational context and industry norms into account with the employee turnover- firm performance relationship. The industry norm matters, since a relatively high turnover may be considered low for the type of industry. If the employee turnover is lower than direct rivals, it might be a comparative advantage. When viewed form the human and social capital point of view, the type of industry might affect the employee turnover – firm performance relationship. An industry that is high skilled will have a higher human and social capital that is lost for every employ turnover (Pil & Leana, 2000). The two industries that this research will further investigate are the retail and finance sector. The reason those two sectors are chosen is because there are some key differences and both sectors big enough to find enough data. For example, the retail sector on average has a much higher employee turnover (Bureau of Labor Statistics, 2024). Companies in the retail sector might perform well with a relative low employee turnover to other retail companies. The employee turnover in the finance sector is on average much lower, but the sector is also higher skilled. This might lead to a higher human and social capital loss for every employee turnover (McConnell, 2011).

The second moderating variable is the number of employees. There is uncertainty on how entity size affects the employee turnover - firm performance relationship. Some argue that larger companies can cushion turnover disturbances better (Li et al., 2022). Others, however, claim that smaller entities can handle socializing and adjustment processes more efficiently leading to higher customer service (Hausknecht et al., 2009). This study uses the U.S. Small Business Administration (SBA) size standards, as it used in other research like Dilger (2012). This standard is more applicable on publicly traded companies, since they tend to be bigger than the average company. The categories of size are:

- Micro-Cap Companies: < 100 employees.
- Small-Cap Companies: between 100 and 999 employees.
- Medium-Cap Companies: between 1,000 and 9999 employees.
- Large-Cap Companies: ≥ 10,000 employees.

The third moderation variable is the age of the company. According to (Hancock et al., 2011) there has been very few research done on the effect of the age of a company on the employee turnover – firm performance relationship. According to Domurath et al. (2023) young people are more willing to leave young companies over time. As stated in the literature review, mature organizations are better able to communicate organizational knowledge to new hires due to their expertise and established procedures. Mature enterprises are also likely to have better recognition in the labour market, which expands their application pool and makes it easier to hire skilled replacements (Baron et al. 2001). The moderating variables age of the company and the company size might have some overlapping result, since young companies often need time to grow to a larger company size. However, there are companies, like some family companies, that are old that did not grow to a large company size. This study uses the age categories used in the studies of Coad et al. (2013) and Farinas and Moreno (2000). The companies are divided in categories from 0 until 10 years old, 11 until 20 years old, 21 until 50 years old and older than 50 years.

Another variable that could be used as an moderator variable is the percentage of part-time turnover. When a company has a high employee turnover of part time workers, it will require less Full Time Equivalent that needs to be replaced (Dangermond et al, 2019). The study of Siebert and Zubanov (2009) even suggest that the part-time turnover has a positive effect on the firm performance for low and medium values, while the full-time employee turnover has a negative linear relationship with firm performance. This is a variable that is not often used in other researches (De Witte et al., 2018; Ton and Huckman, 2008; Hancock et al., 2011). One of the reasons for this is that is data on employee turnover is always publicly available and especially data on full and part-time data is not common (Kleinberg et al., 2001). This study tried to find include the part-time turnover variables, but unfortunately the Workspace dataset does not have any data about this variable. There were also no similar variables available, like percentage of part-timers, that could be used for analyses.

3.3.4 Control variables

This thesis developed a set of control variables based on organizational-level research on employee turnover (Shaw et al., 2013; Hausknecht and Trevor, 2011; Hancock et al., 2011). The control variables used are: training hours, region of origin and national institution.

The first control variable is training hours and is measured as the average hours of training per employee per year. This way the cost advantage per employee that big companies may have does not play a role. Controlling for training hours also helps to determine the moderation effect of industries. The average hours trained in the finance industry is higher than the average hours trained in the retail industry. Controlling for hours trained helps to understand what the influence of training is on the relationship between employee turnover and firm performance. (Freifeld, 2023; McConnell, 2011).

The second control variable is the region of origin. The region of origin is categorized in 7 different groups: Africa, Asia, Europe, Middle East, North America, Oceania and South America. The willingness to switch jobs differs between regions. Employees in North America are more willing to switch jobs in the near future than employees in Asia (Sousa, 2004). There may also be other factors that differ between regions that could influence the relationship between employee turnover and firm performance (Hausknecht and Trevor, 2011). It should be noted that the region of origin is different from the regions a firm is active. Companies that have been founded in North America can also be active in the European market. Since there was no data available for the regions where the firms are active, the region of origin is used as a control variable.

The national institution is categorized in three different groups. Countries with a CME are Austria, Belgium, Denmark, Finland, Germany, Japan, Netherlands, Norway, Sweden and Switzerland. Countries with a LME are Australia, Canada, Ireland, New Zealand, United Kingdom and United States (Schneider & Paunescu, 2012). The other countries were categorized as "other". A list of the countries can be found in the appendix.

3.4 Data analysis

Before the raw data of Workspace will be analysed, there first will be a control on the validity of the data. Companies with double data entry or crucial missing data will be sorted out of the analyses. The first analyses that will be done is a descriptive analysis, this will help to get a better overview of the data and to determine what are some common outputs. Secondly, the data will be tested on their normality by looking at the distributions. Finally, there will be a multiple linear regression to test for the regression between the variables. This test will look at the strength of the relationship between the independent and dependent variable, but also on the strength of the moderation variables. It is important to also look for a possible curvilinear regression between the variables. This will be controlled when doing the regression analysis in Stata (Carter et al., 2017). The four assumptions of the multiple linear regression are:

- *Homogeneity of variance* (homoscedasticity): the size of the error in our prediction doesn't change significantly across the values of the independent variable.
- *Independence of observations*: the observations in the dataset were collected using statistically valid sampling methods, and there are no hidden relationships among variables.
- *Normality:* The data follows a normal distribution.
- *Linearity*: the line of best fit through the data points is a straight line, rather than a curve or some sort of grouping factor.

The normality and linearity will be tested a described above. The homogeneity of variance will be tested using the Levene's test (Zhou, 2023). The Levene's test uses an F-test to test the null hypothesis that the variance is equal. The independence of observation will first be taken into account with the Libby Boxes framework. This framework represents casual constructs and their proxy measure. It helps to determine what are the actual cause and effects between multiple variables (Bloomfield, 2015). The independence of observation will be further checked by plotting the residuals against any time, spatial and other variables present. A pattern that is not random suggest lack of independence.

The relationship between employee turnover and firm performance may be moderated by several research design factors such as unit of analysis (unit-level vs. organization-level), data structure (panel vs cross-sectional vs. lagged), and source of turnover rate information (Shaw et al., 2013). Hausknecht and Trevor (2011) identified that distinguishing between cross-organization samples (with different policies, procedures, and organizational types) and cross-unit samples (with similar policies, procedures, and organizational types) could help researchers better understand the relationship between turnover rates and organizational performance. To start off with the unit of analysis, cross-organization samples offer certain benefits since the variation in turnover rates and firm performance can be large. These samples also allow researchers to investigate potential contextual moderators such as market conditions and staffing and employment policy differences. Cross-unit studies, as opposed to cross-organization samples, can be more effective at addressing causality issues because they keep more variables constant, which is good for internal validity.

Secondly the data structure is important to take into account. Data structure, including cross-sectional, lagged, and panel data structures, could also be a design moderator. Reverse causality concerns may be more problematic when employee turnover and firm performance are measured simultaneously than when a time-lag performance indicator is used. Panel data is another alternative data structure. Panel data may be useful for addressing reverse causality in regression-based data analysis since they allow researchers to compensate for any confounding factors (Park et al., 2013).

Finally, the source of information on turnover rates may influence research design. Unit-level research frequently draws on archive sources or key informants. One difficulty with using key informants is that not many individuals can effectively provide organizational facts such as employee turnover and the firm performance. Additionally, the accuracy and dependability of organizational information will be harmed by informants who lack the necessary knowledge and are not motivated to offer accurate data (Kim & Daniel, 2020).

At the same time, the existence of firm-specific unmeasured variables such as management skill and store location could undermine the reliability of our estimation results. These criteria are difficult to quantify, since the necessary data is not available. If such firm-specific unobservables have any relationship with regression variables, they will create an omitted variable bias. For example, straightforward economic reasoning suggests that more skilled managers are more likely to run larger stores and hire more people (Zhang, 2017). Thus, failing to adjust for managerial competence will result in an overestimation of the influence of the employee input on firm performance. Likewise, if employee labor is correlated with employee turnover, failing to control for store management will lead to inaccurate turnover estimates. There are also other unobservables firm specific variables that can influence the employee turnover firm performance relationship. This problem primarily occurs when using cross-sectional data. The 10 year time frame this study uses, makes it possible to do a within-unit analyses, which addresses the problem of the unobservables.

The first hypothesis is tested using multiple linear regression. The formula used will be:

$$Firm\ performance_{it} = B_o + B_1 Emp\ Turnover_{it} + B_2 Firm\ size_{it} + B_3 Age\ firm_i + B_4 Industry_i + B_5 Trainging\ Hours_{it} + B_6 Firm\ region_i + B_7 National\ institution_i + Firm\ specific\ error_i + Ordinary\ error_{it}$$

The firm performance is measured by the Profit margin, Sales per employee and the customer satisfaction. ß0j measure the intercept of the relationship. “I” stands for the identity of the firm, with each firm being numbered from 1 to 1423. “T” stands for the time, which is measured from 2014 until 2023. The independent variable employee turnover is controlled for the size, age, industry, training hours, firm region and the national institution. The age, industry, region and national institution were added as dummy variables.

To test the second hypothesis the squared employee turnover is added to the formula above. This will show the possible curvilinear effect the employee turnover has on firm performance. Beforehand a look for systematic patterns in the residuals is done. Curvilinear patterns may appear as a systematic deviation from the linear fit. The formula above is adopted with a small change to test the third hypothesis regarding the effect of (in)voluntary turnover. The formula looks as follows:

$$Firm\ performance_{it} = B_o + B_1 Invol.Turnover_{it} + B_2 Vol.Turnover_{it} + B_3 Firm\ size_{it} + B_4 Age\ firm_i + B_5 Industry_i + B_6 Trainging\ Hours_{it} + B_7 Firm\ region_i + B_8 National\ institution_i + B_9\ Sq.Invol.Turnover_{ij} + B_{10}\ Sq.vol.Turnover_{ij} + Firm\ specific\ error_i + Ordinary\ error_{it}$$

The remaining hypotheses are also tested with the help of the formulas above. For example the industry dummy variable is used to determine the difference of the effect of employee turnover on firm performance in the finance and retail industry.

This study followed the theory of the study of Siebert and Zubanov (2009) regarding choosing the right regression test. According to Siebert and Zubanov (2009) it is necessary to identify the unobservables and the conventional error factor separately in order to estimate the productivity equation accurately. If the firm-specific unobservable were associated with any of the independent variables, the ordinary least squares (OLS) estimator might yield contradictory results since it treats the two separate rate error terms as one. By looking at data of a firm over time the fixed-effects technique yields "within-store" effects. Fixed effects could sometimes not be the most effective estimator, though. OLS is more effective in the absence of unobservables because it wouldn't need to estimate 1423 firm averages.

Furthermore, the random effects is preferable even in the presence of unobservables, provided that they did not exhibit correlation with the regression coefficients. The random effects considers unobservables and the ordinary error term separately but doesn't require either to be correlated with the regressors. By using the 1423 firm averages in random-effects estimation, it would be possible to estimate the variance of firm-specific error through between-store regression. The random effects are in some way an average of the fixed effects and OLS. Therefore, in cases where unobservables and regressors did not correlate, random-effects outperformed OLS. Moreover, random effects yielded estimates of the time-invariant variables and didn't need a calculation of 1423 firm averages, which gave them an advantage over fixed effects.

As a result, the issue of how to decide between OLS, random effects, and fixed effects estimation emerged. A series of statistical analyses are chosen to give a this issue a statistical answer. In the first test, OLS and random-effects regressions were compared for goodness of fit. The likelihood-ratio test determines if a more complex model's parameter additions significantly improve the model's fit to the data when compared to a simpler model. It accomplishes this by utilizing the test statistic n, which has a chi-square distribution under the null hypothesis, and comparing the likelihoods of the data under the two models (Protassov, 2002). If the likelihood-ratio test is in favor of OLS, then the OLS regression is the best estimator of the three. The second step only happens when the OLS is not the best estimator. The conventional Hausman test comparing random effects and fixed effects was the next test to be carried out. If the Hausman test is significant, it means that the unobservables were present but not connected with the regression coefficients. Thus a significant Hausman test states that the fixed effects has the highest explanatory power out of OLS, random effects and fixed effects (Amini, 2012).

Chapter 4 Results

4.1 Descriptive statistics

Table 1 shows the descriptive statistics for the main variables. It also shows the correlations of the variables. For example the variable turnover of employee is labelled as 1 and in the column 1 the correlation with other variables can be seen. This only shows a between-firm correlation, where the correlations between firms averages is shown. This study also makes use of the within-firm correlation, like the fixed-effect estimator. The within-firm correlations are generated from "demeaned" variables, resulting in correlations within an average firm. Although our study required a multivariate analysis to achieve clear conclusions, the straightforward between- firm correlations are useful as an initial step. The table shows the difference in number of observations of the variables. Unfortunately, the data on involuntary- and voluntary employee turnover is not as extensive as the data on Total turnover of employees. When looking at the pairwise correlations, some interesting correlations appear. For example, the correlation between sales per employee is negative for total turnover of employees and voluntary turnover but positive for the involuntary turnover. These value are only the result of a simple correlation, but they are in line with the third hypothesis. The averages in table 1 show that the voluntary turnover is more than twice as high (12.203) as the involuntary turnover (5.679). Also the number of employees and the company age show that the average company is quite large with enough experience.

Table 1 Descriptive Statistics

Variable	Obs	Mean	Std. Dev.	Min	Max	1	2	3	4	5	6	7	8
1 Turnover of employees	6333	15.849	11.80	.04	95								
2 Involuntary turnover	1501	5.679	6.50	.01	82	0.586							
3 Voluntary turnover	2143	12.203	10.30	.2	95	0.908	0.227						
4 Sales per employee	9712	1717255	986875.56	922	93070064	-0.070	0.075	-0.137					
5 Number of employees	8514	26466	57499.59	11	510444	-0.010	0.054	-0.283	-0.066				
6 Customer satisfaction	1712	84.518	12.26	8.5	100	-0.037	-0.116	-0.014	-0.099	-0.175			
7 Profit margin	13694	20.595	40,74	-720	1287	-0.112	-0.052	-0.115	0.311	-0.278	-0.176		
8 Training hours	4734	39.582	388.42	.03	26645	-0.101	-0.243	0.014	-0.216	0.042	0.189	-0.084	
9 Company age	14190	56,800	52.07	2	550	-0.104	-0.057	-0.102	-0.063	0.160	-0.170	0.001	0.024

Table 2 and 3 show the descriptive statistics of the companies in the retail and finance sector. The high- and low-turnover categories were assigned by ranking and dividing the companies into halves based on their total turnover in each year. It should be noted that the sample size for the finance industry is much larger than the retail sector. The sample size of the retail industry is still comparable with sample sizes of research used in relevant meta-analyses (Hausknecht & Trevor, 2011; Hancock et al., 2011). Besides, many companies might not be attracted to the idea of sharing private information, such as employee turnover (Kleinberg et al.,2001). In line with previous research (Bureau of labor statistics, 2024 & Freifeld, 2023) the average turnover in the finance sector (14,11) is almost twice as low as in the retail sector (26,57) and also the average training hours per employee is lower in the retail sector (27,12) than in the finance sector (34,59). Table 1, 2 and 3 compare correlations between firms for various factors. A further example is the relationship between involuntary turnover and sales per employees, which is positive in table 1, but table 2 and 3 contradict this, since the sales per employee is higher for the group with a lower involuntary turnover. These values should not be emphasized, because they are merely simple correlations. However, they demonstrate the contradicting signals that managers in large organizations must deal with. Again, the lesson is that when comparing firms that differ in numerous unmeasured ways, it is best to focus on what is happening within the firms, which demands adjusting for the unobservables (Siebert and Zubanov, 2009).

Table 2: descriptive statistics of the retail industry

Retail	Low total turnover			High total turnover		
Variable	Obs	Mean	Std.	Obs	Mean	Std.
Total turnover	442	13.10	6.526	442	40.03	14.105
Involuntary turnover	103	5.03	4.798	105	12.86	10.789
Voluntary turnover	119	10.81	5.354	131	33.98	18.479
Sales per employee	339	700667.8	158511	329	469280.1	217262
Number of employees	397	48357	86735.890	385	6818	87424.180
Customer satisfaction	64	86.44	12.560	65	84.69	12.771
Profit margin	432	3.76	24.483	437	3.63	26.135
Training hours	187	27.78	34.854	223	26.45	26.506
Company age	440	52.74	32.256	432	63.07	43.294

Table 3: descriptive statistics of the finance industry

Finance	Low total turnover			High total turnover		
Variable	Obs	Mean	Std.	Obs	Mean	Std.
Total turnover	2,724	7.40	3.093	2,725	20.82	9.093
Involuntary turnover	602	2.68	2.351	711	7.10	6.590
Voluntary turnover	910	6.23	3.029	948	14.81	7.556
Sales per employee	2082	1754513	726664	2,074	1473064	1100759
Number of employees	2,366	21678	45317.640	2,374	2075	43568.260
Customer satisfaction	731	85.25	10.262	539	83.69	11.358
Profit margin	2,697	26.43	52.322	2,705	19.64	35.621
Training hours	1,582	39.43	37.650	1,452	29.75	25.534
Company age	2,722	72.96	65.231	2,722	62.20	55.947

4.2 Regression analysis

Before analysing the data, the reliability of the data was checked on missing values and invalid observations. For example, the number of employees of some firms used in this thesis is reported to be very low, while the revenue is disproportionately large. The data of Workspace could thus include some invalid observations. This resulted in a check of the number of employees of the firms. As stated in chapter 3.4, the Orbis database is used to check for the reliability of the number of employees. Both Workspace and Orbis report that the number of employees used in their database originates from the annual reports of the firms themselves, so the difference should be minimal. The observations that had a 10% difference reported between Workspace and Orbis are removed from the sample (Labovitz, 2017). This could results in invalid sales per employee observations, since the number of employees might be reported to by workspace. The results of this control is that 268 observations of number of employees and sales per employee were removed from the regression analyses.

Tabe 4: Results of regression analyses for profit margin

	Retail industry			Finance industry		
Variable	Ordinary least squares	Random effects	Fixed effects	Ordinary least squares	Random effects	Fixed effects
Total turnover	0.043	0.039	-0.105	-0.073	0.261	-0.023
Involuntary turnover	-0.302*	-0.084*	-0.082*	-0.02	1.772**	1.994**
Voluntary turnover	0.473	0.007	-0.066	-0.254*	1.177	1.736
Number of employees	0.0001	0.016	0.007	-0.0001***	-0.0001**	-0.0002**
Training hours	0.005	0.001	0.030	0.340	0.046	.063*
Sq total turnover	-0.002	0.002*	0.002*	-0.009	-0.005	-0.001
Sq involuntary turnover	-0.007	0.002***	0.003***	0.012	0.004	-0.003
Sq voluntary turnover	0.002	0.003**	0.003**	0.010	0.005	0.002
R^2 (within)		0.56	0.57		0.43	0.46
R^2 (between)		0.18	0.21		0.12	0.16
R^2 (overall)	0.24	0.32	0.35	0.21	0.26	0.31

Table 5: Results of regression analyses for sales per employee

	Retail industry			Finance industry		
Variable	Ordinary least squares	Random effects	Fixed effects	Ordinary least squares	Random effects	Fixed effects
Total turnover	-10385**	-4217*	-4115*	-16604	-10107	-7115
Involuntary Turnover	-7728**	-1048	-315	-11827	26837**	25218**
Voluntary turnover	-6958	-7499***	-8119***	-16850	-21912***	-19950***
Number of employees	-2.64**	-.245	-.041	-7.29***	-7.34**	-5.27
Training hours	62	-209	-223	-1055**	-704	-1926
R2 (within)		0.45	0.47		0.33	0.37
R2 (between)		0.13	0.16		0.11	0.14
R2 (overall)	0.22	0.28	0.31	0.14	0.22	0.26

Table 4, 5 and 6 show the results of the regression analyses for profit margin, sales per employee and customer satisfaction in the retail and finance industry. The results are presented separately for profit margin, sales per employee and customer satisfaction. For each of these dependent variables an OLS, Random effects and Fixed effects test has been done. To determine which of these tests has the highest explanatory power, the models are tested using a likelihood-ratio test and a Hausman test. The likelihood-ratio test is used to compare the OLS and the Random effects. The likelihood-ratio test statistic is 743,42 distributed as chi-square with 8 degrees of freedom. The 1% significance level is 11,78, which is smaller than 743,42. This indicates that the Random effects model has a significantly higher explanatory power than the OLS. Secondly a Hausman test is done to compare the explanatory power of the random and fixed effect. This results in a chi-square of 8,07 with a probability of 0,0891. This indicates that the fixed effects has a higher explanatory value than the random effects. In conclusion, the OLS test has the lowest explanatory value of the three test, the random effects has the second highest explanatory value, while the fixed effects has the highest explanatory value.

Starting with results from the Ordinary least squares regression, the total, involuntary and voluntary turnover shows significant negative results for both the finance and the retail industry for all three dependent variables. This would confirm the first hypothesis, but still it does not give an answer on the other hypotheses. Since the OLS has a lower explanatory value than the fixed effects and random effects, the results from the OLS serve as a first indication. However the results of the fixed- and random effects tell a different story.

Firstly, they are big differences between the finance sector and the retail sector. The retail sector still only has significant results that are negative, while the finance sector has significant positive and negative results for profit margin and the sales per employee. Also the impact appears to be bigger in the finance sector with higher coefficients than in the retail sectors. For example the profit margin has a coefficient of -0.082 in the retail sector for the fixed effects, while it is 1.994 in the finance sector. This confirms hypothesis 6, stating that the "The negative relationship between employee turnover and firm performance is greater for companies in the finance sector than for companies in the retail sector".

Secondly, there appears to be a difference between the total turnover and the voluntary turnover. Table 5 shows for the retail industry that the voluntary turnover has a stronger effect (-8119) on the sales per employee than the total turnover has(-4115). The same appears for the customer satisfaction in the retail sector, where the effect of the voluntary turnover (-0.478) is greater than the total turnover (-0.089). Unfortunately only one test has found significant values for both voluntary- and involuntary turnover, which makes it harder to compare the effects of these variables. Table 5 suggest that there is a big difference in the effect of involuntary turnover and voluntary turnover. With a positive effect of the involuntary turnover and a negative effect of the voluntary turnover

Thirdly, the turnover variables have also been tested on curvilinearity with a squared variable. The variables: profit margin and the customer satisfaction show significant results for curvilinearity. The result indicate an negative attenuated relationship, since the turnover variables are negative and the squared turnover variables in table 4 and 6 are positive. An negative attenuated relationship has a negative slope for low levels of turnover. This relationship is weaker at higher levels of turnover. In figure 1, the slope of a negative attenuated relationship is visualised. Table 5 does not include the square of turnover, since there were no significant results for curvilinearity. The results of the customer satisfaction have a lower explanatory power, due to the lower observation (1712) than the sales per employee (9712) and the profit margin (13694). It can also be seen comparing the R2 values of table 6 with the R2 values of table 4 and 5.

Table 6: Results for Customer satisfaction

	Retail industry			Finance industry		
Variable	OLS	Random effects	Fixed effect	OLS	Random effects	Fixed effect
Total turnover	-0.403*	-0.073	0.097	-0.040	-0.202**	-0.089**
Involuntary Turnover	-3.378**	-1.320	0.490	-0.747**	-0.243	-0.302
Voluntary turnover	0.380	0.487	0.082	-0.424*	0.051	-0.478*
Number of employees	-0.001***	-0.001**	0.001	-0.001	0.001	0.001
Training hours	0.094***	-0.039	0.236	0.035***	0.014	-0.084**
Sq total turnover	0.006*	0.001	0.001	0.001	0.005**	0.079**
Sq involuntary turnover	0.151**	0.064	-0.03	0,300	0.008	0.012*
Sq voluntary turnover	0.001	-0.005	-0.003	0,008	-0.002	0.009*
R2 (within)		0.19	0.25		0.17	0.21
R2 (between)		0.17	0.13		0.03	0.08
R2 (overall)	0.36	0.15	0.18	0.14	0.14	0.15

4.3 Control variables

Table 7: Results of fixed effect regression analyses of profit margin and sales per employee

	Retail industry		Finance industry	
Employee turnover Groups	Profit margin	Sales per employee	Profit margin	Sales per employee
Company size <100	-0.017	8228	0.035	12209**
Company size 100-999	-0.416**	9086	-0.452	-5887
Company size 1000-9999	-0.034	-19127***	-0.397**	-1528
Company size ≥10000	-0.069**	-6758*	-0.553**	-10039
Company age 0-10	-0.126*	16630***	0.034	15427
Company age 11-20	-0.279***	-4320**	0.424*	6496**
Company age 21-50	-0.086	588	1.236	-17225
Company age >50	-0.094***	-5052**	-0.191*	434
CME	-0.042	-1633	-0056	6947
LME	-0.056**	-9117**	0.651	6363
Other	-0.005	158	0.105	-8962
Region dummies	Up to -0,22**	Up to -8853*	Up to -0.56*	Up to 24122*

There are two hypotheses left have not been tested yet: hypothesis 4 and 5 about the age and size of the companies. Tables 4 and 5 have shown that there is a negative relation between the number of employees and the profit margin and sales per employee. But these result do not include the employee turnover, so they do not answer the hypotheses. To get an answer on these hypotheses the companies are divided into different categories based on size and age. Since the observations have been divided into the groups of finance and industry and also on the company size or age, the variables involuntary turnover and voluntary turnover provide less explanatory power than the total employee turnover. When looking at the size of the companies, there is limited support for the fifth hypothesis. The retail sector shows a larger effect of employee turnover for companies that have 100 until 999 employees (-0.416) than companies with 10000 or more employees (-0.069). This can also be seen for sales per employee for the groups 1000-9999 employees (-19127) and ≥10000 employees (-6758) This is contradicted by the finance industry where the companies with ≥10000 employees have a stronger relationship (-0.553) between employee turnover and firm performance than the companies with 1000-9999 employees (-0.397). Since many coefficient have low significant levels, it is hard to draw decisive conclusions from these results.

Table 7 shows limited support for the fourth hypothesis in the retail industry, since the companies which are older than 50 years have a smaller employee turnover-firm performance relationship (-0.094 &-5052) than the companies that are 10 years old or young (-0.123 and 16630). However, the results of the companies that are 11 until 20 years old do not confirm the hypothesis, since the effect is not in between the old and young companies. Also for the finance industry there does not seem to be a clear difference between the groups. When the retail and finance industries are compared, it is noticeable that the companies with an age of 11 until 20 years old perform differently. The finance companies are better able to handle with employee turnover since the coefficients are 0.434 and 6496, while the retail companies have a coefficient of -0.279 and -4320. To test for homogeneity the Levene's test is used. The test results is not significant (0,24), so the variance between the groups are not significantly different, indicating homogeneity of variance.

There appear to be some regional differences. Firms from Africa have the strongest significant negative relationship, while firms from South America show less negative consequences from employee turnover. The validity of these results is lower, since multinational firms can operate on multiple continents. Also the national institution does have an impact on the relationship between employee turnover and firm performance. Retail firms that are from LME countries have a significant negative relationship between employee turnover and firm performance. The reason could be that LME countries are more categorized by a self-orientated culture with financial incentives based on individual success (Walker, 2018).

5. Conclusion, discussion & recommendations

This final chapter presents an answer to the issue statement presented in Chapter 1. Furthermore, the findings are analysed and compared to current research. Finally, recommendations, limitations, and future research prospects are discussed.

5.1 Conclusion

Out of the problem indication it appeared that there is a gap in the literature regarding research into certain aspects of employee turnover. Furthermore, research about differences between industries are very limited. Thus, the following problem statement originated: *"What is the effect of employee turnover on firm performance in the finance and retail sector?".* In order to answer this research question six hypotheses were formulated, based on relevant literature. These hypotheses were tested using data from Workspace. This results in table 8, giving an overview of the hypotheses and the results.

Table 8: Overview of the hypotheses tested

***H1**: The relationship between employee turnover and organizational performance is negative.*	Rejected
***H2**: The relationship between employee turnover and organizational performance is curvilinear.*	Accepted
***H3**: The negative impact of voluntary employee turnover on organizational performance is greater than the negative impact of involuntary employee turnover on organizational performance.*	Accepted
***H4**: The negative impact of employee turnover on firm performance is greater for young companies than for older companies*	Fail to reject
***H5**: The negative impact of employee turnover on firm performance is greater for small companies than for large companies.*	Fail to reject
***H6**: The negative relationship between employee turnover and firm performance is greater for companies in the finance sector than for companies in the retail sector.*	Accepted

Analysing the data revealed that a simple ordinary least square regression would be misleading, since the between group regression can differentiate significantly from the within group regression. The random and fixed effects showed that the employee turnover does not always have a negative effect on the organizational performance. The finance industry shows this with varying outcomes based on the kind of employee turnover. The voluntary turnover does have a negative effect on the organizational performance, while the involuntary turnover appears to show positive effects on the firm performance. This is not the case for the retail sector where the employee turnover remains negative. Therefore H1 is rejected. Consequently the voluntary turnover does appear to have a stronger negative effect on the firm performance. This variable has a high significance level and the effect can be seen in both the retail as the finance industry. H3 is thus accepted. The curvilinearity of employee turnover is tested with the square employee turnover. The results show that there is a curvilinear effect that there is a negative attenuated relationship. This indicates that the impact of employee turnover on firm performance is higher for low levels of employee turnover. When the employee is high the negative effect on firm performance diminishes. There is no support for the U-shaped curved relationship of Abelson and Beysinger (1984), since there were no significant negative squared turnover results found. H2 receives enough support to accept the hypothesis. Both H4 and H5 are failed to reject in this study, because of the mixed results. For companies with more than 10000 employees the effect of employee turnover seems to be relatively low compared to smaller firms. This is not always the case and the differences between medium and smaller firms do not have the same trend. The situation for the company is similar with mixed results. The sales per employee for companies with less than 100 employees has significant positive results and also for firms which are 10 years or younger the relation between the employee turnover and sales per employee appears to be positive. Further research is required to get a better understanding of the differences between the groups.

5.2 Discussion

Because the hypotheses of this study are based on existing literature on the impacts of employee turnover on firm performance, the results can be compared to the hypotheses and relative literature stated in the literature review. First, we examined the general relationship between employee turnover and firm performance. A profound body of research shows the direct costs that are made with employee turnover (Darmon, 1990; Hom & Griffeth, 1995; Milanowski

& Odden, 2007). Also the indirect costs that a company faces due to the human and social capital are shown in multiple studies (Hurley & Estelami, 2007; Batt, 2002; Cannella & Hambrick, 1993). These are costs that a company faces both for involuntary and voluntary turnover. The advantages of employee turnover such as the firing of bad performers, employees with relatively high salaries and achieving better career opportunities do not hold for voluntary turnover (Holtom et al., 2008; McElroy et al., 2001; Meier & Hicklin, 2008; Abelson & Baysinger, 1984). The results of this study are in contract with the studies that pointed out that involuntary turnover would still have a negative effect on the employee turnover (Shaw et al, 2013; Li et al., 2022). The reason there is a difference in findings is because these studies do not differentiate the involuntary turnover between different industries. The involuntary turnover is only tested for all the industries together, not separately. This study has similar results for involuntary turnover when there is no separation between industries. Since the average turnover is almost twice as high in the retail sector (26.57) as in the finance industry (14,11), the effect of employee turnover is also different.

The results of this study are in line with the theory of price (1977), which states that the effect of employee turnover diminishes at higher levels. The reason for this is that companies with higher employee turnover levels have more employees that have worked for a shorter amount of time for the company. An example of the different curvilinear outcomes are the studies of Siebert and Zubanov (2009) and Ton and Huckman (2008), which both study the retail sector. The study of Siebert and Zubanov (2009) finds an inverted U-shape relationship, while the study of Ton and Huckman (2008) finds a negative attenuated relationship. This study also finds a negative attenuated relationship for the profit margin, similar to the findings of Ton and Huckman (2008), while this study does not find an inverted U-shape relationship for the sales per employee. The reason for this difference with the study of Siebert and Zubanov (2009) is that this study does not have specific data about full-time or part-time turnover.

Also the results of other moderating variables, company age and company size do not differ much from current literature. According to Li et al. (2022) younger firms and/or smaller firms have a significantly greater negative effect of employee turnover on firm performance. The results of the retail industry do support this claim by Li et al. (2022), but the finance industry does not support this claim. Since the study of Li et al. (2022) does not mention at what age a firms becomes mature and at what size a firm is large, it is hard to compare the results. Firms that have been labelled as small or young in this thesis, might just be in the large and old category group of the study of Li et al. (2022).

Finally, the differences found between the finance and the retail sector are in line with the literature, that states that the retail sector has a lower skill and investment level than the finance sector (Dangermond et al. 2019; Freifeld, 2023; Pil & Leana, 2000). Also the average hours of training is higher in the finance sector (34,59) than in the retail sector (27,12), which indicates a higher amount of human and social capital lost with employee turnover. Interestingly enough, the positive relationship between involuntary turnover and firm performance only appears in the finance industry in this study. One of the reasons for this is that the average salary in the finance sector is higher and with the help of new innovations, finance companies are able to achieve more output with less FTE (Golić, 2019). Previous literature that did study differences between industries of the effect of employee turnover on firm performance have similarities in results, with a stronger negative relationship between employee turnover and firm performance in the finance sector than in the retail sector (McElroy, 2007; Park et al., 2013).

5.2.1 Theoretical contribution

In literature, the understanding of employee turnover is primarily based on the factors that cause employee turnover (Lee, 2018). The studies that do focus on employee turnover do not precisely point out the differences between (in)voluntary turnover. This thesis brings new insights of the effect of (in)voluntary turnover on firm performance. Secondly, this thesis fills a gap in the current literature by gathering data on the age and size of companies and analysing this. There are theoretical assumptions both on the age, size and (in)voluntary turnover (Shaw et al., 1998). These assumptions have not been tested before.

Despite the difference that could occur between industries, the vast majority of studies (72%) on employee turnover are single-industry studies. The studies that do point out differences between industries, do not have an in-depth analysis of multiple industry specific characteristics and why these differences in results occur (Hancock et al., 2011; Hausknecht & Trevor, 2011). This thesis found a significant effect of the industry on the effect of employee turnover. The negative effect of the employee turnover in the retail sector was smaller than in the finance sector. The amount of literature that has studied the effect of employee turnover on firm performance is limited. This makes the results of this thesis a contribution to the current literature (Hausknecht & Trevor, 2011). One of the studies that did report results for both the finance and retail sector, found that the effect of employee turnover on firm performance in the retail/food sector (-0,04) is smaller than in the finance/service/health/tech industry (-0,05) (Hancock et al., 2011). It is hard to determine what the effect of employee turnover is for every industry separately when the results are categorized for two and four industries together.

Furthermore, the differences between the effect of involuntary turnover in the retail and finance sector are significant. The positive effect of involuntary turnover on firm performance in the finance sector has not been shown in other studies. Involuntary turnover is only mentioned in 11% of current literature of employee turnover and it is often presumed that is related to poor performance turnover. There is no empirical evidence that involuntary turnover yields favourable outcomes at the collective level (Hancock et al., 2011). The studies that do measure the effect of involuntary employee turnover only perform a pairwise correlation analysis (McElroy, 2007) or find no significant results for involuntary turnover (Park et al., 2013).

5.2.2 Practical implications

Insights will be expanded to bigger proportions in order to anticipate theories on a global issue. This thesis is not only important for the companies that were part of this thesis; the findings can also benefit other organizations and investors. To be more explicit, managerial consequences include improved staff turnover management. The difference in the effect of involuntary and voluntary employee turnover in the finance industries implies that managers should be warry to lose employees due to voluntary employee turnover. The effect of voluntary employee turnover is strongest for low to medium levels due to the curvilinear effect of the voluntary employee turnover. The relevant characteristics that an HR manager should include in the profiles of employees to increase retention rates are task significance, autonomy and feedback (Hee et al., 2011).

Finally, this thesis uses a panel data of 2014 up until 2023, while many other studies (Hancock et al., 2011; Hausknecht & Trevor, 2011; Park et al., 2013; Shaw et al., 1998; Siebert and

Zubanov, 2009) use data that is much older. Since the employee turnover has risen a lot since 2020 (Dogru, 2023), the dynamics regarding employee turnover may also have changed. This thesis does use recent data, so the effects that are found, are more applicable on the current market. This could give managers a better insight, to understand the current situation and effects at their companies better.

5.3 Limitations and future research

As previously stated, Allen et al. (2010) believe that turnover rates alone could reveal little about the likely impact of turnover on the firm. Future study that looks at who quits, where they are going, and when they quit will help researchers and managers gain a better understanding of how cumulative turnover affects organizational performance. In terms of who leaves, a critical conceptual question underpinning the turnover-performance link is whether turnover is functional or dysfunctional (Wallace and Gaylor, 2012). If high performers make up the majority of leavers, we would anticipate the negative impact on performance to be considerably greater than if poor performers left. However, researchers have rarely identified these kinds of differences. We recommend further research that addresses the relative performance levels among departures as a possible moderator of the turnover-performance relationship.

Some constraints may have impacted the results of the analyses, highlighting areas for future investigation. Firstly, the full-time turnover and part time turnover where not taken into account for differentiating the employee turnover. As shown by Siebert and Zubanov (2009) and Ton and Huckman (2008) there are key difference between full-time employee turnover and part-time employee turnover. The limited availability of data on these variables is the reason why not only this study, but also many other studies did not include the variables in the results (Hancock et al., 2011). Measuring the effects of full-time turnover and part-time turnover in other industries than the retail industry would definitely fill gaps in the literature, but it would also have a high practical contribution, since HR managers could use this information for strategies.

The measurement of the firm performance is also an important limitation of this study. This study uses a broader concept of the firm performance, which measures financial performance, labor productivity and customer service (Hausknecht and Trevor, 2011). When looking at the impact that the employee turnover has on the firm performance there are many factors than can be taken into account. For example variables that measure the output that is lost per employee. This might be easier for employees who work on the assembly line, than for other employees (Boustan, 2022). There are also variables that could measure the impact of employee turnover over a longer period. For example the expectation of investor (share price), managers and employees. High employee turnover might cause uncertainty, leading to parties not wanting to invest time or money in the company (Li et al., 2022).

This also brings up the essential question of understanding temporal difficulties (Culpepper, 2011). Scholars, for example, rarely discuss the rate at which turnover affects firm performance. Turnover may have a faster influence on customer service in the retail sector than it does on innovation in an R&D organization. Likewise, even when studies have gathered turnover data at multiple time points, they have not yet evaluated the potential influence of shifts in turnover rates on firm performance. Allen et al. (2010) argue that the extent to which turnover rates are increasing or falling may be just as relevant as the level of turnover in determining the probable effect of turnover on the company. Therefore, this study urges scholars to tackle these complex temporal challenges from both theoretical and methodological perspectives.

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Appendix 1: Regions and countries of origin

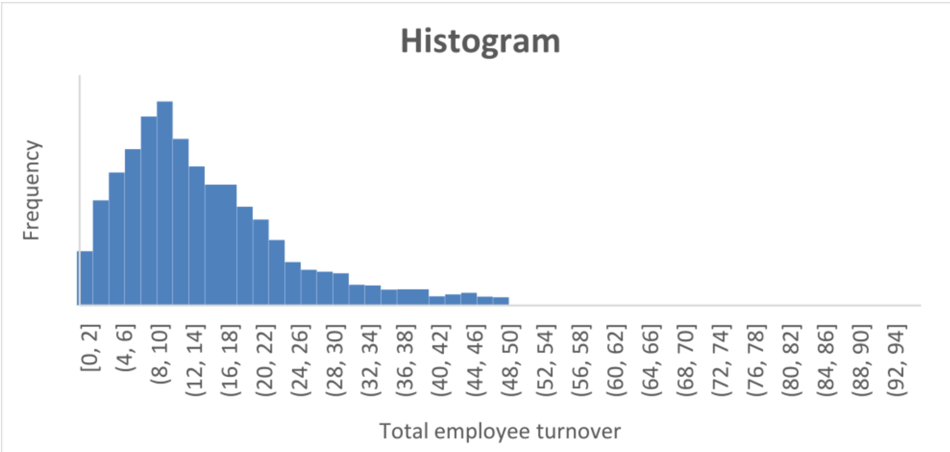
Table 9: **Region of origin**	
Africa	51
Asia	451
Europe	415
Middle East	66
North America	301
Oceania	65
South America	72
Grand Total	**1421**

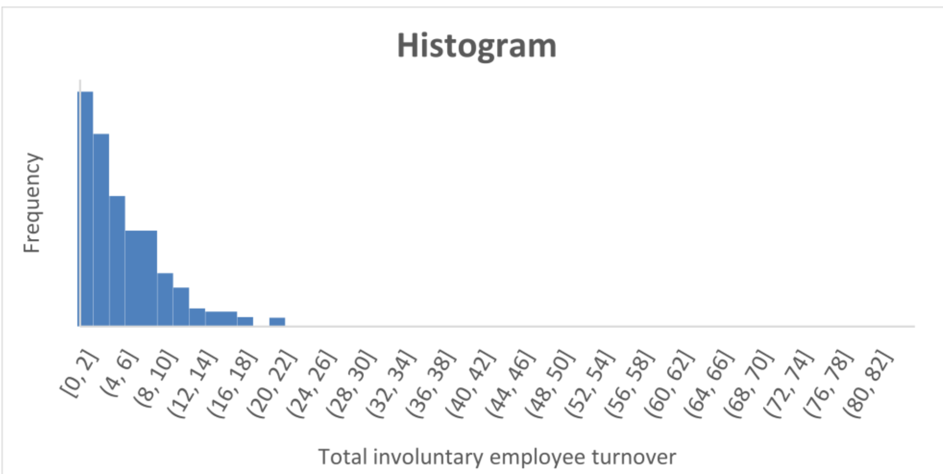
Table 10: Country of origin	
Argentina	8
Australia	55
Austria	8
Bahrain	6
Barbados	1
Belgium	13
Bermuda	7
Brazil	31
Bulgaria	1
Canada	49
Chile	15
China	113
Colombia	10
Cyprus	1
Czech Republic	2
Denmark	11
Egypt	3
Faroe Islands	1
Finland	14

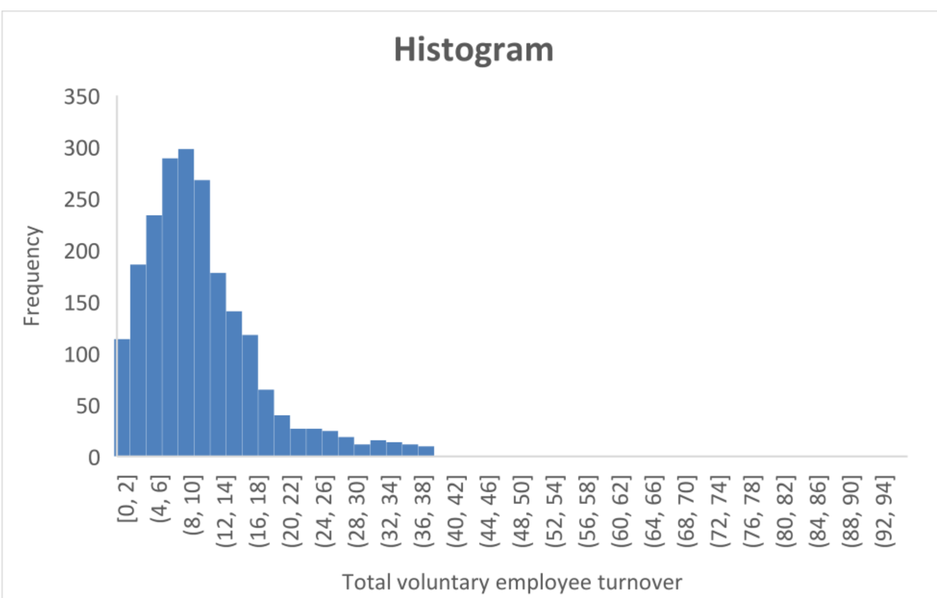
France	35
Georgia	4
Germany	34
Greece	6
Hong Kong	24
Hungary	2
Iceland	1
India	92
Indonesia	20
Ireland	2
Israel	4
Italy	22
Japan	30
Jordan	5
Kazakhstan	2
Kenya	1
Kuwait	7
Liechtenstein	2
Luxembourg	8
Malaysia	32
Mauritius	1
Mexico	24
Morocco	10
Netherlands	17
New Zealand	10
Nigeria	1
Norway	17
Oman	2
Pakistan	3
Peru	6
Philippines	13
Poland	14

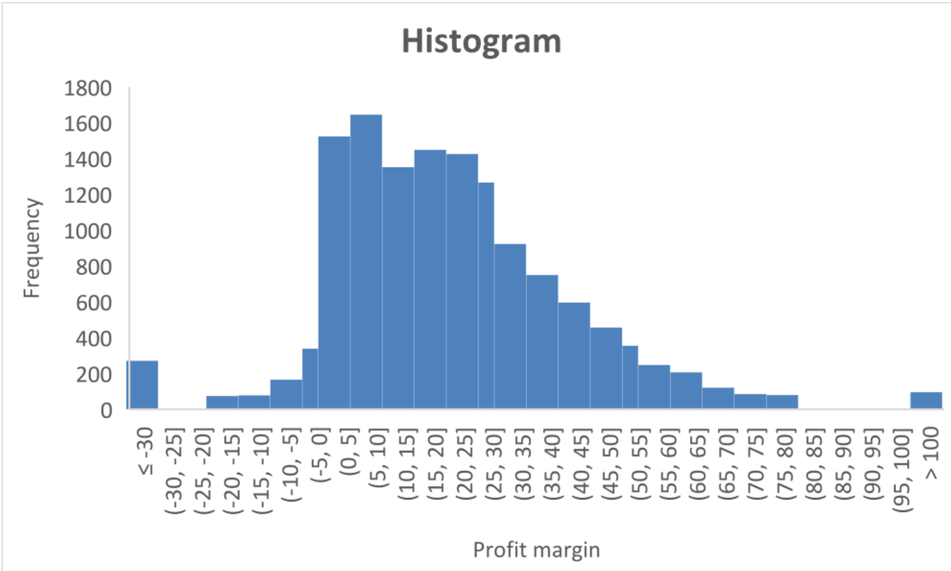
Portugal	3
Qatar	5
Romania	4
Russia	12
Saudi Arabia	11
Singapore	30
Slovenia	1
South Africa	33
South Korea	24
Spain	9
Sweden	38
Switzerland	33
Taiwan	24
Thailand	29
Togo	1
Turkey	27
UAE	28
Uganda	1
United Kingdom	88
USA	221
Grand Total	**1421**

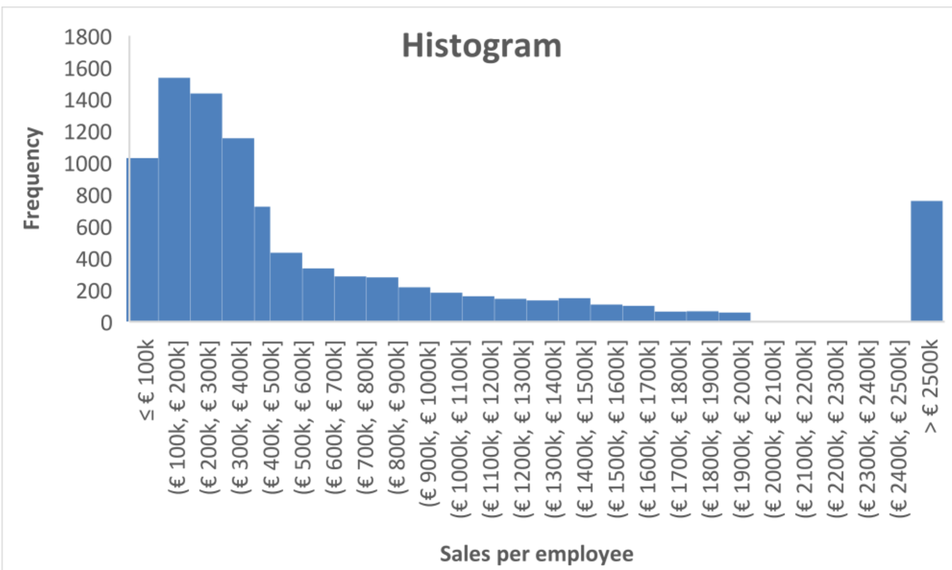
Appendix 2 Histograms








Histogram
Frequency
1800
1600
1400
1200
1000
800
600
400
200
0
≤ -30
(-30, -25]
(-25, -20]
(-20, -15]
(-15, -10]
(-10, -5]
(-5, 0]
(0, 5]
(5, 10]
(10, 15]
(15, 20]
(20, 25]
(25, 30]
(30, 35]
(35, 40]
(40, 45]
(45, 50]
(50, 55]
(55, 60]
(60, 65]
(65, 70]
(70, 75]
(75, 80]
(80, 85]
(85, 90]
(90, 95]
(95, 100]
> 100
Profit margin


Histogram
Frequency
1800
1600
1400
1200
1000
800
600
400
200
0
≤ € 100k
(€ 100k, € 200k]
(€ 200k, € 300k]
(€ 300k, € 400k]
(€ 400k, € 500k]
(€ 500k, € 600k]
(€ 600k, € 700k]
(€ 700k, € 800k]
(€ 800k, € 900k]
(€ 900k, € 1000k]
(€ 1000k, € 1100k]
(€ 1100k, € 1200k]
(€ 1200k, € 1300k]
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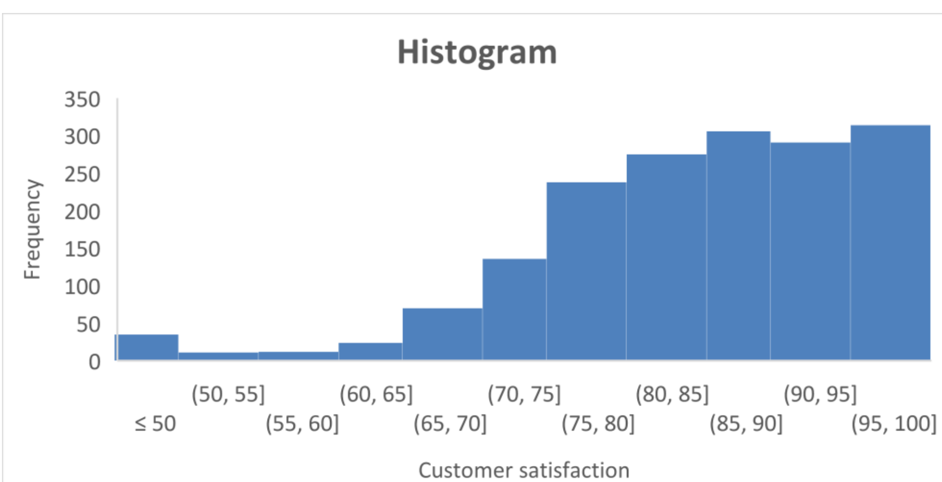
(€ 1500k, € 1600k]
(€ 1600k, € 1700k]
(€ 1700k, € 1800k]
(€ 1800k, € 1900k]
(€ 1900k, € 2000k]
(€ 2000k, € 2100k]
(€ 2100k, € 2200k]
(€ 2200k, € 2300k]
(€ 2300k, € 2400k]
(€ 2400k, € 2500k]
> € 2500k
Sales per employee


Histogram
Frequency
350
300
250
200
150
100
50
0
≤ 50
(50, 55]
(55, 60]
(60, 65]
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(70, 75]
(75, 80]
(80, 85]
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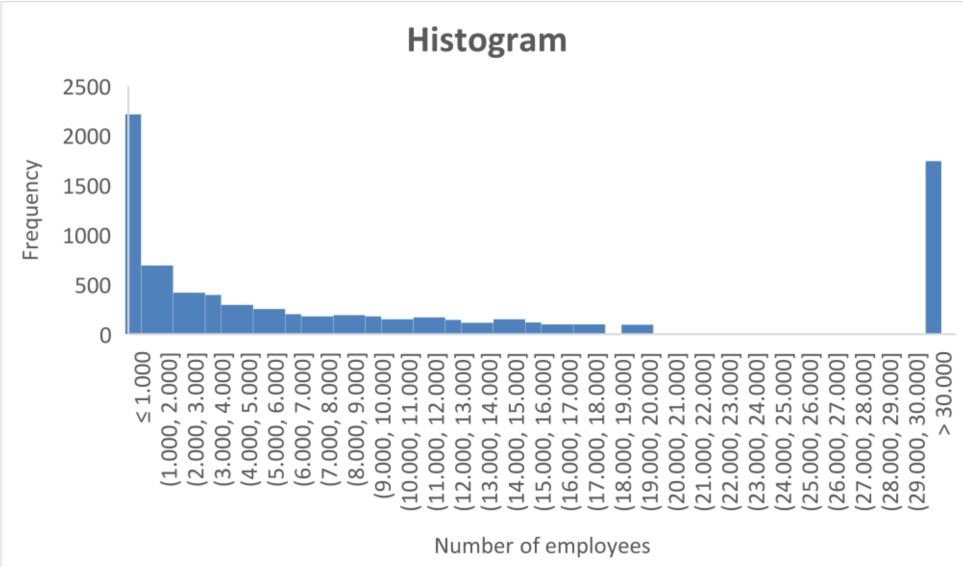
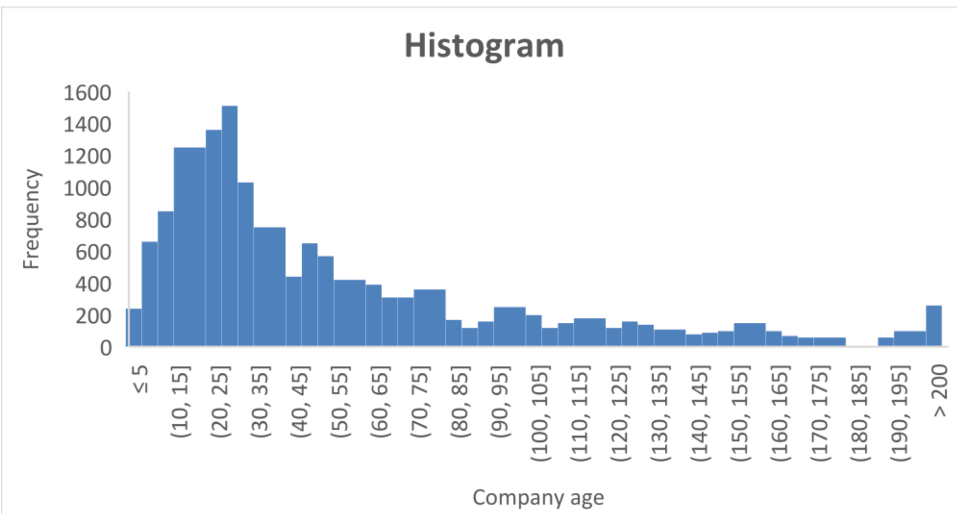
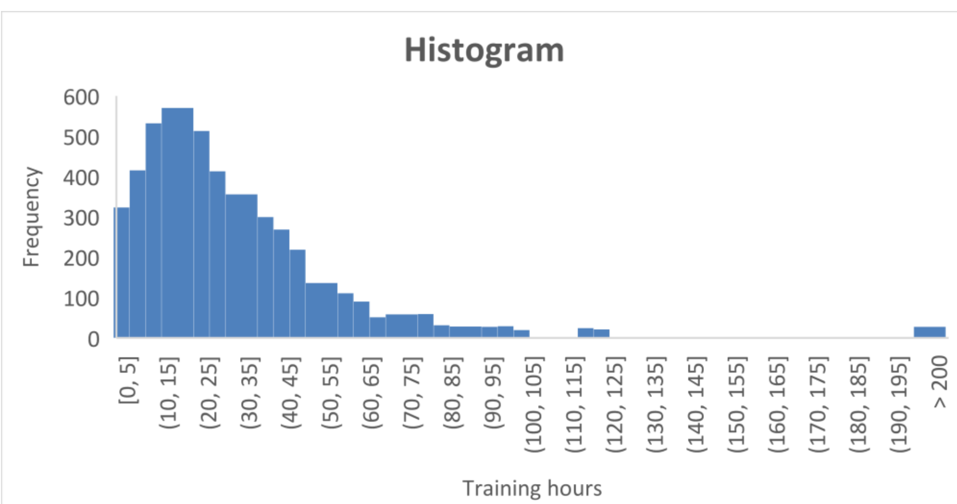
(90, 95]
(95, 100]
Customer satisfaction


Histogram
Frequency
Number of employees


Histogram
Frequency
Company age


Histogram
Frequency
Training hours

Appendix 3: Schedule

Activity	Time schedule
Submit research proposal	**April 5th (week 14)**
Revision of the research proposal	Week 15 and 16
MTH Supervision form	**April 26th (week 17)**
Expand the introduction and theoretical framework	Week 18
Expand the methodology & get preliminary results	Week 19 & 20
Coding and explaining the results	Week 21 & 22
Discussion and conclusion	Week 23
Finalizing all the chapters	Week 24 & 25
Submitting Thesis for defense	**June 30th (week 26)**
Prepare presentation for defense	Week 26 & 27
Thesis defense session	**July 9th**