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The Big-Five personality traits as predictors of involuntary turnover

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Minimising involuntary turnover is essential for any company and organisation in order to decrease costs and use their human resources wisely. Involuntary turnover can be minimised by recruiting more qualitative candidates that fit in to the specific role and to the culture of the specific organisation. Many companies have adopted personality tests as a part of their employee selection processes to improve the recruitment decisions and reduce risks. The impact of different personality traits on employee performance have been studied by multiple researchers and despite diverse findings there have been various studies that have pointed out that certain personality traits could predict better job performance. In this study we aim to answer the question whether involuntary turnover could be predicted during the selection process by looking at the personality test results. To answer the question, we are analysing the personality questionnaires of 21 employees of a specific company operating in the logistics sector. A causal-comparative research is conducted and analysis of the descriptive numbers and correlations of the variables is performed. Finally we find out that personality traits agreeableness, stability and conscientiousness seem to have an impact on involuntary turnover and these traits could predict the outcome of the employment already during the selection process.

Keywords	Involuntary turnover, personality, big-five, job performance, recruitment

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1   Introduction

More and more companies are using different kinds of personality tests and questionnaires as a part of their selection processes to find out whether a person would be a good fit for the position and company culture. As people are taking personality tests as a part of the selection process the question is, can these tests actually be used to predict job performance or possible involuntary turnover and thus help in the employer's decision making in whether or not to employ a person. (Martin, 2014) Personality tests and traits as predictors of future job performance have been intriguing researchers over 40 years and the findings have been quite diverse. However during the past 30 years there have been several studies that have found out that some personality traits such as conscientiousness, agreeableness and extraversion could predict the future job performance of an employee hence the results of the tests should be taken carefully into consideration during the hiring process. (Barrick & Mount, 1991) (Judge & Bono, 2000) (Rothman & Coetzer, 2003) Even though the impact of personality traits on job performance has been studied to some extent the impact of the personality traits on possible involuntary turnover has not. Involuntary turnover happens when the employment contract is terminated by the employer and an employee is forced to leave an organisation due to a specific reason such as low job performance or inappropriate behaviour for example. (Seung-Ho, 2019) In this paper we aim to find out whether there is a link between personality traits and involuntary turnover in a case of Company X.

Company X is a part of large multinational corporation that sells and produces goods and is headquartered in the USA. Company X operates in the EMEA (Europe, Middle-East and Africa) market and is located in Belgium where it manages the logistics processes, inbound and outbound logistics, of the regions. The company employees nearly 5000 people out of which a majority works in the distribution centres and in operational roles and around 500 people in supporting functions such as HR, finance, IT, planning and procurement. For this paper we have studied over 20 ex and current employees who have been mainly operating in managerial roles.

In this paper we aim to answer the question: can future involuntary turnover be predicted during the hiring process by looking at the personality test results and if so, which are the personality traits that could predict it. Even though the research is done for Company

X, the topic of this research is relevant for any company that is utilising personality tests as a part of their selection processes and especially for companies that are operating in the same or similar industry. The data that we're using for the purposes of this paper is gathered with the help of the HR department of Company X. Primarily, we are looking at cases of involuntary turnover and their personality test results but we've also identified some "high-performing" employees whose test results are used to conduct a causal-comparative research between these two different samples. In the research we focus on the "Big-Five personality dimensions" that are: agreeableness, conscientiousness, stability, open-mindedness and extraversion, and their possible connection to involuntary turnover. (McCrae & Costa, 1987)

In the literature review chapter, we are going to deep dive into the previously conducted research on involuntary turnover, personality tests as a part of the selection process and the Big-Five personality dimensions and identify the most relevant studies for the present research. Following the literature review we will be taking a closer look at the selection processes at Company X and the Big-Five personality dimensions and personality questionnaires. In the conceptual framework chapter, we are going to present the variables of our research and draft hypotheses whereas in the methodology we are specifying our research design and methods as well as the sample of the study. We will also provide some critique of the chosen methods. Following this we will present the results of our research and analyse each of our findings individually which will lead to the discussion chapter in which we are presenting ideas and creating conversation based on our findings. We will also cover the limitations of the present paper, draw conclusions and finally give our recommendations to Company X and for future research.

2 Literature review

2.1 Involuntary turnover

Employee turnover is a term that refers to the movement and rotation of employees within the job market and between companies, jobs and occupations. (Abassi & Hollman, 2000) Employees are the core of any organisation and companies tend to invest in their human resources through training and development that aim to maintain and retain the employees within the organisation. Due to the resources that are invested in the

employees the managers aim to minimise the turnover and retain the employees within the firm as long as possible. (Ongori, 2007) There are two types of turnover that can be broadly divided into; voluntary and involuntary turnover. Voluntary turnover occurs when an employee voluntarily decides to leave the organisation for some reason, this could be wanting to work for another company or take some time off for some personal reason. Involuntary turnover occurs when the employee needs to leave an organisation without choosing to do so, for example because of a low job performance or termination of the employment contract from the employer's side. (Seung-Ho, 2019) Previous research has been mostly focusing on employee turnover and to the related costs for the firm. However, we were able to identify some literature that has been looking at involuntary turnover and the reasons that lead to the terminations of the employment contracts. It should be noted that some of the research and key literature has been published in the 80's, 90's and early 2000's which could indicate the need for updated research.

Rubenstein, Kammeyer-Mueller, Wang and Thundiyil (2019) are looking at the embeddedness theory which describes different factors that are said to constrain employee turnover, such as fit with the environment, interpersonal skills and benefits. They researched the factors that might predict voluntary and involuntary turnover by empirically testing biographical characteristics with the employee job embeddedness. Their model aims to predict different factors that might lead to a voluntary or involuntary exit of an individual by utilising the biodata that was gathered before or during the hiring process. This data may indicate the job embeddedness of an individual in advance if it contains information about different links to other company's employees, perceived fit with the organisation and/or potential sacrifices that the individual needs to make in order to be employed by the organisation. The results of their studies indicate that the biodata factors assessed were linked to the employees' job embeddedness and to the future employee turnover. They also found out that by increasing the job embeddedness companies are able to decrease the turnover rate and increase the retaining of the employees.

The relationships between human resource management (HRM) practices and voluntary and involuntary turnover in the trucking industry have been examined by Jason Shaw, John Delery, G. Jenkins and Nina Gupta (1998). They studied one industry in order to minimise the effect of external factors influencing individual companies and with the trucking industry's turnover rate being one of highest, from 38% to 200% (Corsi &

Fanara, 1998) it was well suited for organisation-level analysis. In their study the researchers found out the two different types of turnover have very different kinds of dynamics, consequences and costs related to them. Where termination (involuntary turnover) reflects a bad hiring decision that should be corrected, quitting (voluntary turnover) reflects low attractiveness of the job compared to the other alternatives on the market. The results indicate that the more attention an organisation devotes to its employee selection, the more qualitative the hires will be. An organisation should focus especially on the selection ratio and the validity within the selection process. Even though the research was limited to only one industry, the main finding of the research was that different HRM practices have an effect on quits and terminations and can help in the reduction of different turnovers.

Barrick, Mount and Strauss (1994) examined the antecedents to involuntary turnover due to a reduction in the work force. The study was conducted by using a structural equation model and logit regression analysis with a sample of 194 salespeople to test out an exploratory process model of involuntary turnover. The key finding of the research was that job performance has the highest effect on involuntary turnover and it correlates indirectly with mental ability and conscientiousness, and directly with tenure, gender, job involvement, sales volume and supervisory ratings of performance. The strongest predictor of involuntary turnover were the supervisory ratings of job performance, but also sales volume. According to the results of the research men were more likely to be dismissed than women during a reduction in work force, and also employees with more tenure were more likely dismissed than employees with less tenure. The latter finding contradicts with some previous research (Stumpf & Dawley, 1981) which suggests that the relationships between causes and involuntary turnover may vary depending on the reason the organisation dismisses an employee.

In their article Parker and Gerbasi (2016) look at the impact of energising interactions on voluntary and involuntary turnover within the IT department of a global engineering consulting firm over a period of four years. During the period of the study there were no major organisational changes such as reduction in force that could have influenced the outcomes, which led the involuntary turnover to be a cause of "poor fit" to the organisation. Parker and Gebrasi found out that people with more work colleagues and more energetic activation tend to perform better, but also tend to be evaluated as higher performers than employees with less work colleagues and energetic activation. This is

because when the other actors perceive their interaction with an individual to be energetic activation, they tend to evaluate them more positively as well. In the paper the writers put an emphasis on the individual's unique perception of their interactions. When the interactions are perceived to increase their personal level of energetic activation they have a reduced likelihood of voluntary turnover.

McElroy, Morrow and Rude (2001) researched the effects of voluntary, involuntary and reduction-in-force turnover on organisational performance. The research has a unique approach since it is focusing on the company's point of view rather than the individual's point of view of the situation. The data was collected from 31 sales regions of a national financial service company located in the USA. The results from the research suggested that reduction-in-force should be treated as individual part of turnover as its effect on performance is different. In general, the results suggest that turnover has negative effect and undesirable consequences on organisation's performance. According to the writers creating a distinction between reduction-in-force and other forms of turnover might increase the understanding and prediction of quit behaviour and help to identify more motives for voluntary turnover.

In their paper Stumpf and Dawley (1981) are using absenteeism and performance indices to predict voluntary and involuntary turnover. They analysed the relationships with absenteeism, performance and turnover together with multiple different personal characteristics and also investigated the changes in the relationships among these variables. The sample used for the research consisted of bank employees who were researched for a period of eight consecutive years. The results indicate that absenteeism is significantly related to involuntary turnover whereas performance indices influenced both, voluntary and involuntary turnover. Gender, tenure and age accounted for a small portion of the turnover as well.

Racial bias in the manager-employee relationship have been researched by Giuliano, Levine and Leonard (2011) and in their paper they are analysing the quits, dismissals and promotions in a large retail firm. The paper aims to answer to the question "Does own-race bias in the manager-employee relationship affect employee outcomes?". During their research they found general pattern of own-race bias where employees usually have better outcomes when they are the same race as their manager. The own-race bias was found in nine of the 12 cases examined but there were some anomalies in this pattern as well which were all consistent with status and social theories. This

indicates that not only the race but the status and identity of a person should be taken into consideration as well. The findings regarding dismissals and promotions were similar amongst all races and the social status was especially influential amongst white managers and employees.

Hancock, Allen, Bosco, McDaniel and Pierce (2013) reviewed the employee turnover as a predictor of firm performance. The researchers conducted a meta-analytic review in which they analysed the relationship between turnover rates and organisational performance basing it on the framework of collective turnover. In the model they used the turnover rates are expected to influence directly various factors of organisational performance for example customer service. The writers observed that there is a significant negative relationship between turnover and organisational performance which might suggest that the costs of losses associated with turnover are greater than replacing the departing employee with a better or more cost efficient one. There are also locational differences between the countries and turnover-performance relationships. The most negative relationships were observed in Asia whereas in the European countries the relationships weren't considered as negative as in the USA.

Burris, Detert and Romney (2013) researched how employee and managerial perceptions of voice jointly influence managerially controlled outcomes such as performance evaluations and involuntary employee turnover. They examined 7578 subordinates and 335 managers within a national restaurant chain and their agreement and disagreement between each other. The researchers argue that when an employee speaks up with improvement-oriented comments managers should reward this kind of behaviour. They also argue that in voice disagreement where employees believe that their voice contributions are significantly greater than recognized by their managers this leads to misunderstanding and might lead to the managers perceiving these employees as arrogant. The findings point out that higher level of voices assessed from both the employee's and the manager's perspective lead to positive outcomes. In disagreements employees who overestimate their level of voice in relation to the manager are rated as worse performers and their contracts are more likely to be involuntarily terminated. Employees who underestimate their voice are appraised more positively and are less likely to be fired. The results point out that focusing on only one perception of voice presents an incomplete and sometimes misleading picture of the situation.

2.2 Personality tests in the selection process

The use of different personality tests and questionnaires in the selection and hiring process of employees is more and more usual in various different industries and fields, and has been growing as much as 20% annually for many years. (Martin, 2014) These tests are used to gather more specific information that might be very hard or impossible to obtain during an interview. These personality questionnaires together with other tests, that might measure the candidate's analytical skills, integrity or emotional intelligence, help the recruiters and hiring managers to gain more insights to the person and therefore help them to make better hiring decisions. (Martin, 2014) There is a lot of literature on using personality tests as a part of the selection process but very little research done on the final effects and consequences of the use of these tests. However, we identified a few articles and papers that discuss the organisational effects of the personality tests used during the hiring process.

Whitney Martin (2014) looks at the problems with using personality tests for hiring in her paper published in the Harvard Business Review. She presents graphs that are based on Frank Schmidt's meta-analysis of a century's worth of workplace productivity data which tell us that the most effective hiring selection practices combine multi-measure tests that include cognitive ability, personality and interest tests. The least effective is only the use of job experience tests and the second least effective practice is only the use of personality tests. (Schmidt & Hunter, 1998) In her article Martin criticises the use of Four Quadrant (4-Q) personality tests for hiring because the results can be easily manipulated by the candidate and the test measures more "states" rather than traits which are more stable. These kinds of personality tests are not good indicators for the future job performance but are mostly indicators for team building, coaching, communication and other development applications. According to Martin some of the well-validated and highly predictive assessment tools can provide significant assistance in the hiring process, and help to predict the individuals work productivity but it should be noted that the assessments should be uniquely picked for each organisation separately in order to get the best results.

Satow (2011) researched the selection of employees with online tests and the Big Five personality model in German companies. He stated that there are many positive sides to organising online testing for the job applicants, convenience and cost savings being

the most significant. The challenges in online testing are the identification of the test taker and the disclosure of the test material, therefore Satow suggests that unprotected online tests should be only used for pre-selection purposes. The key findings of the research state that personality traits such as neuroticism, openness and agreeableness could explain some differences in income together with gender, age and qualifications. However, the reasons for why these personality traits are linked to difference in income should be further examined.

Kelechi John Ekuma (2012) assessed three different selection methods by examining the importance of predictive and face validities to employee selection. According to the writer, maximising predictive validity in the selection process should be the main purpose and pursuit of the HR practitioners but they should also bear in mind that the selection process is an interaction with the candidates and the different assessment tools should provide ways to demonstrate diverse abilities. In order to improve the predictive validity of the techniques examined, structuring the interview seemed the most viable option while the assessment centres could be improved by designing implemented work samples. The results point out that there is no one single best method of selection but that it should be a combination of carefully chosen methods that are unique to the organisation, and implemented by well-trained HR personnel.

A study from Lee, Smith and Geisinge (2017) investigated whether faking in personality assessments affects the prediction of job performance and the consequences of selection decision when there was assumed to be a nonlinear relationship between personality and job performance. The main question of the research was whether faking in the personality assessment could predict job performance and what impact does the faking have on selection decisions and selection accuracy. The researchers found out that faking in a personality assessment led to substantial decrease in the prediction of job performance. The impact on the selection accuracy however was not noticeable.

2.3   Five-Factor model and job performance

The Five-Factor model developed by McCrae and Costa (McCrae & Costa, 2008) is a widely used tool in the recruitment of new employees as it is perceived to predict quite well one's work performance in different kinds of jobs. (Towler, 2020) The five factors

measured in the model are; extraversion, neuroticism, agreeableness, conscientiousness and openness to experience. There has been some literature and research conducted in order to find out whether some of these personality traits could actually indicate and predict future job performance and job satisfaction. (Towler, 2020)

Barrick and Mount (1991) studied the relation between the Big Five personality traits and job performance that was divided into three subcategories; job proficiency, training proficiency and personnel data, and in five different occupational groups; professionals, police, managers, sales and skilled/semi-skilled. The research was done by using meta-analytical methods. In their research Barrick and Mount found out that the conscientiousness dimension seemed to be a valid predictor of job performance in all the studied occupational groups. This was explained by stating that individuals who exhibit strong sense of purpose, obligation and persistence seemed to generally perform better in their jobs than those who don't exhibit similar personality traits. Extraversion dimension was a valid predictor of job performance for two occupational types, managers and sales as these occupations demand a lot of interaction with other people. The other personality dimensions could predict some kind of job performance in different occupational groups but the findings weren't consistent.

Rothman and Coetzer (2003) continued researching the relation of personality traits and job performance by looking at 159 employees at a pharmaceutical company. The employees filled out a Big-Five personality survey that helped the researchers to study the link between certain personality traits and the person's job performance and creativity. While analysing the results they found out that openness to experience is related to task performance and creativity and that people who score high on this dimension tend to perform better at work. High scores on neuroticism might predict poorer performance and less creativity in the work. Extraversion was related to higher performance and creativity most probably because these people tend to experience more positive effects and emotions. Conscientiousness was also associated with higher job performance and creativity. Personality dimensions: emotional stability, openness to experience and agreeableness were related to better manager performance.

Judge and Bono (2000) studied the links between the Big Five personality traits and transformational leadership and leaders in over 200 organisations took part in the research. Based on the data that Judge and Bono gathered they found out that

extraversion and agreeableness predicted positively transformational leadership whereas neuroticism and conscientiousness were unrelated to transformational leadership. Agreeableness might be perceived as an indicator of transformational leadership since they both are characterized by trust, compassion and empathy. Also extraversion can quite easily be linked to transformational leadership because of the high amount of interaction and energy. Openness to experience correlated with transformational leadership until the other personality dimensions were controlled and the correlation dropped therefore it can't be seen as a reliable predictor of transformational leadership.

Gardner et al. (2012) were studying the fit between employees' personality and the organizational culture and the effects that a recruitment strategy could have on this. The organisations aim towards achieving a high-level of person-organisation fit as this is generally seen as a key to retaining employees and reducing turnover. The researchers examined the relations between a recruitment strategy, the Five-Factor Model of personality and person-organisation fit by using the Competing Values model. The four organizational cultures according to this model are; clan culture, hierarchy culture, market culture and adhocracy culture. They found out that a recruitment strategy didn't affect the subjective person-organisation fit but the personality traits affected the fit within different cultures. People who were more agreeable and extraverted perceived a better fit in clan culture whereas less agreeable people perceived a better fit with market culture, less open and more conscientious people perceived a better fit with a hierarchy culture and people who are high on openness perceived a better fit with adhocracy culture.

2.4   Conclusion of the literature review

As we can observe from the reviewed literature there has been relatively a lot of research done on involuntary and voluntary turnover together with reduction in work force. Most of the literature is focusing on involuntary turnover and the costs related to it for the firm but also the effects of reduction in force have been researched extensively. Based on the reviewed literature we can conclude that companies should focus their resources and attention to the selection process that should be uniquely designed for the organisation and consist of several different methods. Besides assessing the technical

skills of a candidate the fit of the applicant's personality and values to the organisation should be assessed as this could predict better job embeddedness, integration and performance and lower the risk of turnover. Turnover should be minimised because it leads to higher costs to the organisation than hiring a qualitative and more efficient employee, and because it has negative effects on the organisation's performance. However, it should be noticed that some of the reviewed research has been conducted 20 and 30 years ago which might indicate the need for new and updated research.

The literature on personality tests as a part of selection processes presents that the use of these kinds of tests is increasing and companies should focus more closely on the tests and assessment tools that they are using. When using personality tests as a part of the selection it should be noted that this kind of assessment should be used only for pre-selection purposes. The tests can be useful when candidates answer them honestly but the risk of people cheating or altering their answers based on the expectations of the recruiters should be taken into consideration. In addition to this each organisation should carefully design and select the tests that they are using as a part of the selection processes in order to get the best and most accurate results.

The relations between personality traits and job performance have been studied to some extent and there have been a lot of interesting discoveries made in this field. The results point out that some of the personality traits measured by Five-Factor model seem to affect the job performance of an individual but the findings are not always consistent and depend on the tasks and role of the employee.

Even though there has been a lot of research done on involuntary turnover and personality tests as a part of the recruitment the connection between these two has not been researched thoroughly yet. The personality traits of the Five-Factor model have been researched in context to the job performance of an individual employed by a specific organisation but have not been studied in a relation to involuntary turnover. This leaves a gap in the literature and presents an opportunity for future research.

3   Employee selection in the Company X

Selection process is a set of activities that are used in the recruitment process of a new employee and result in hiring a person for an open position. These activities vary depending on the organisation that is hiring but also on the position the needs to be filled. The requirements, level and function of the role define the length and complexity of the selection process. (Wolniak, 2018) There are several ways of recruiting people by reaching them via mass media, company visits, external recruitment agencies or consultants. The most common one is the use of internet to inform the candidates and advertise the open vacancies within a certain company. (Wolniak, 2018)

Company X uses different ways to inform possible candidates about their open vacancies such as internet, print media and radio. The biggest and most influential medium of these is the internet as it reaches the most people and can be used both nationally and internationally but also enables the organisation to interact with the applicants and share stories, experiences and information fast and directly to the audience. The candidates are able to apply only via the company's jobsite and most of the stages of the selection process are also done online. Company X also uses more pro-active recruitment techniques to attract candidates such as headhunting and reaching out to the candidates themselves. These kinds of activities are usually used only in cases where the vacancy requires a very specific and rare set of skills that are hard to find and expertise that can be only found by screening experts working in similar fields in other companies.

After the vacancy has received a sufficient pool of applicants the CVs and applications are screened by a recruiter who's responsible for the role. The most promising ones are invited for a phone interview with the HR department and also for a set of online tests. The online tests might vary depending on the position but all the candidates must complete a personality questionnaire and an analytical test which's level of difficulty is altered depending on the requirements of the role. The personality questionnaire results are used in the interviewing process to gain a better understanding of the person and their strengths and weaknesses but are never used to reject anyone. The results of the analytical test are used to define whether the analytical skills are on the requested level and they are compared to the results of the other people working in the organisation. The candidate must reach a low average score in order to be allowed to continue in the

selection process and if this is not met the selection process should be terminated. The results stay valid for a year after taking the test and if a candidate wishes to take the tests again after a year when applying for a new position they are welcomed to do so.

If candidate passes the HR interview and the online tests the next stage is usually a face-to-face interview with the hiring manager of the department. However, this final stage varies a lot between different roles and might include multiple interviews with different people and departments if needed. After the final interviews the suitable person should be selected and an offer made by the HR department.

4   The Five-Factor Model and personality questionnaires

Robert McCrae and Paul Costa developed the Five-Factor Personality Model between the 1980's and 1990's and based it mainly on a lexical hypothesis which suggests that different traits can be described simply by using adjectives or descriptive phrases and languages adapt to accommodate and describe the way we act. (Grice, 2020) (McCrae & Costa, 2008) The five factors may be assessed by multiple different ways, self-assessments or questionnaires being one of them.

The five traits that the model defines to be the most important are; extraversion, neuroticism, agreeableness, conscientiousness and openness to experience. (McCrae & Costa, 2008) Extraversion is usually detected easily by other people as well and includes for instance sociability, assertiveness, activity and talkativeness. These traits are usually perceived socially desirable and extraverts might be described as energetic and optimistic. (Rothman & Coetzer, 2003) High score in neuroticism might indicate that the person can't cope well with stress or control impulses and the traits associated with neuroticism are fear, sadness and embarrassment for example. In the case of Company X this trait has been turned around and is called stability that indicates good mental stability. Altruism and sympathy resonate with agreeableness and a person with a high score in agreeableness is always wanting to help others and relies on other's helping them when needed. If the score in this trait is low it indicates competitiveness, scepticism and egocentricity. Conscientiousness is referring to self-control and ability to plan, organise and carry out tasks. High score in this indicates determination, strong willingness and purposefulness. Finally, openness to experience is linked to creativity,

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willingness to challenge conventional authorities and ideas. Also the people who score higher in openness tend to feel more strongly, both positive and negative emotions. (Rothman & Coetzer, 2003)

The personality questionnaire used in the selection process of the new employees in the Company X is based on the Five-Factor model of McCrae & Costa. The candidates need to complete an online assessment which takes about 45 minutes to complete and where they need to choose the best and worst fitting qualities in 62 different situations. Afterwards their answers are challenged and the candidates need to choose between certain strong personality traits and put them in order to indicate the dominance of certain personality traits. The candidates can complete the test either in Dutch or English depending on their native language.

5   Conceptual framework

This paper aims to answer the question whether an involuntary turnover could be predicted already during the hiring process by looking at the personality questionnaire results. As the reviewed literature points out there is a lot of research on different types of employee turnovers within organisations and involuntary turnover's costs to firms have been researched quite extensively. There is also some research conducted to see how personality tests should be implemented as a part of the hiring process and if some personality traits of an individual could work as predictors of their job performance. All of the researched literature points out that a high employee turnover in an organisation results in higher costs, hence firing and letting people go actually costs more than hiring more qualitative candidates who have a better organisational fit and tend to stay longer in the organisation. This is why companies should pay attention to their recruitment practices and critically evaluate whether certain tools bring added value to the hiring process and result in more qualitative employees.

5.1   Variables

When developing the conceptual framework for this study a broad amount of literature was reviewed to find out the correct independent and dependent variables. As in the previous literature we have chosen to use the Five-Factor Models personality dimensions

as the independent variables that we believe to affect the possibility of involuntary turnover. The five dimensions are divided into various personality traits that combined together create each personality dimension. The dimensions are named the same as in Company X's personality test in order to avoid misunderstandings. The independent variables are Conscientiousness, Extraversion, Openness, Agreeableness and Stability and the dependent variable is involuntary turnover.
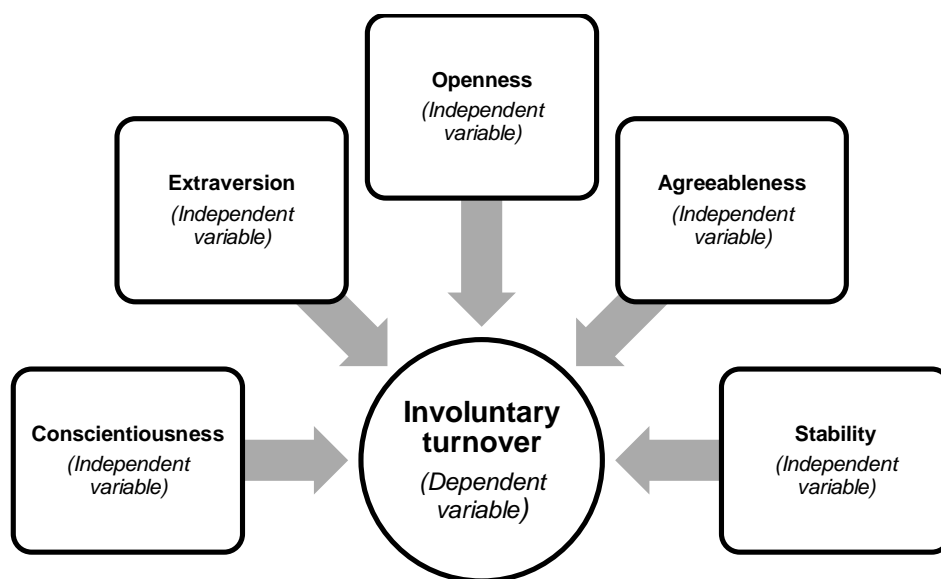
Figure 1 – Independent and dependent variables

5.2   Hypotheses

The present paper attempts to answer the question whether an involuntary turnover could be predicted already during the hiring process by looking at the personality questionnaire results. Based on the previous research and literature reviewed we can expect that conscientiousness, extraversion and openness (to experience) will have an effect on the outcome of the employment. According to the existing literature higher scores in conscientiousness can predict higher job performance as people with high scores on this dimension tend to have stronger sense of purpose, obligation and persistence that may lead them to perform better than those who don't possess these traits. (Barrick & Mount, 1991) (Rothman & Coetzer, 2003) High scores in extraversion dimension may predict better job performance in roles that require a lot of human interaction such as managers and leaders, whereas high scores in openness (to

experience) can predict good task performance in many different roles. Neuroticism might indicate poorer job performance thus people with high scores in this dimension might be more often involved in involuntary turnover. (Rothman & Coetzer, 2003) Judge and Bono (2000) also found out in their study that agreeableness might indicate better job performance in tasks that demand high levels of interaction with other people as this dimension is often connected to trust, compassion and empathy.

As we are looking at various cases of termination of the employment contract we should take into consideration that there might be multiple personality traits that affect the behaviour of the person and depending on their role at the company and the reason for the termination the traits might differ. As we look at the findings of previous literature we can expect to see lower scores in conscientiousness and openness (to experience) in all of the roles and lower scores in extraversion and agreeableness in the roles that require high levels of interaction between humans. We can also expect to see higher scores in neuroticism.

6   Methodology

In order to find out if involuntary turnover could be predicted during the hiring process by looking at the personality test results, we have gathered data on the involuntary turnover and the personality questionnaire results by Company X's HR department providing us with their cases of involuntary turnover from the past 6 years. In total there were 24 cases out which we could find the personality tests of only 11. This could indicate that even though the personality questionnaire is a mandatory part of the selection process not all the candidates have to go through it for some reason. There have also been various changes to the personality questionnaire, the most recent being the change to completely online based testing two years ago. Before the online tests, the candidates came to the office where they took the analytical and personality test under supervision whereas now they can take the assessments at a time and a place that is the most suitable for them without supervision.

6.1 Research design

The collection of the required data was conducted with the help of the HR department of Company X. The cases of terminations of contracts were provided by the Employee relations team that handles all the issues and terminations of the employees in the company. The high-performing employees were pointed out by HR professionals working in close contact with these people. After receiving the names of all the employees, we had to pull the test results of each individual case from the company's database, translate some of them into English and consolidate the results to be comparable with each other.

After careful consideration we chose to use a quantitative research method and conduct a causal- comparative research by comparing the personality test results of the people who have been fired to the high-performing employees in same or similar roles in Company X. This particular research design is seeking to find relationships between variables once the event has already occurred by comparing two or more groups of individuals to see whether the independent variables (personality dimensions) affected the dependent variable (involuntary turnover). (Salkind, 2012) Due to the post facto and comparative nature of the research design we decided that this would be the most ideal tool to use.

Statistical analysis was carried out by using Microsoft Excel and SPSS. Descriptive statistics (mean, standard deviation, skewness and kurtosis) were used to analyse the results. Pearson's correlation coefficient was used to determine and measure relationships between the variables.

6.2 Sample

The sample includes 21 cases, 11 involuntary turnovers and 10 high-performing. The original sample consisted of 47 cases out of which 24 were cases of involuntary turnover and 23 high-performing employees. However, once we started to gather the data of personality test results we could only find the results of 21 cases. The employees in both sample groups were employed in same or similar roles and nearly all of them were managerial or leading roles.

Looking at the cases of dismissals (involuntary turnover) we could observe that the majority of cases were linked to the quality of work, these people were dismissed either because of poor functional knowledge, incapability of teamwork and/or communication and poor decision making. Even though most of the cases were linked to the quality of work the sample includes also cases of misconduct and matters of respect. These include falsifying documents, bullying and sexual conduct.

In total 21% of the involuntary turnover was female and almost 80% male whereas in the final sample population only 9% was female. The percentages for high-performing cases were 48% female in the original sample and 60% in the final sample population that was used for this study.

6.3   Critique of the chosen methods

It should be noted that there are some restrictions and weaknesses to the chosen research and data gathering methods. First of all, the sample size is very small and could lead to skewed results that don't represent a realistic picture. Also the high amount of males in comparison to the low amount of females might affect the end results and lead to results that don't represent all the employees. Secondly, the data that was used in this study was provided by the HR department of Company X and none of the employees were interviewed or questioned. This might also affect the end results of the research and provide only one sided view to the phenomenon of involuntary turnover. Thirdly, as mentioned earlier the questionnaires and the way of testing have changed during the years. We tried to standardise the answers and make them comparable but it should be noted that the tests taken in different years differed from each other which made it difficult to consolidate the results. Lastly, the results and cases are company-specific hence a person who might not be a good fit for this company or for one specific role might perform much better in another company and in another role.

7   Results

7.1   Involuntary turnover

Table 1

Descriptive statistics of involuntary turnover

	N	Mean	Std. Deviation	Skewness		Kurtosis	
				Statistic	Std. Error	Statistic	Std. Error
Agreeableness	11	4,09	2,427	,640	,661	,360	1,279
Extraversion	11	6,27	1,954	-,368	,661	-1,018	1,279
Conscientiousness	11	5,36	1,567	,594	,661	-,054	1,279
Stability	11	6,73	1,737	-,888	,661	,662	1,279
Open mindedness	11	6,09	1,814	-,041	,661	-,576	1,279
Valid N (listwise)	11						

Table 1 shows that the people who have been dismissed from Company X obtained in average lower scores in agreeableness and quite neutral scores in conscientiousness. In the other three Big-Five dimensions these people obtained slightly higher scores than normal. Based on the standard deviation and skewness we can observe that the scores are somewhat spread out quite unequally and there is a lot of variation in the scores.

7.2   High-performing employees

Table 2

Descriptive statistics of the high-performers

	N	Mean	Std. Deviation	Skewness		Kurtosis	
				Statistic	Std. Error	Statistic	Std. Error
Agreeableness	10	5,10	2,132	-,334	,687	,225	1,334
Extraversion	10	6,20	1,687	-,910	,687	-,212	1,334
Conscientiousness	10	4,10	1,524	,735	,687	,042	1,334
Stability	10	4,20	2,044	,445	,687	-,049	1,334
Open mindedness	10	6,00	2,000	,000	,687	-1,229	1,334
Valid N (listwise)	10						

Table 2 shows that the high-performing employees average score for conscientiousness and stability are lower than normal (5). The average of the scores in agreeableness is quite neutral and the scores in extraversion and stability tend to be slightly higher than the norm. Looking at the standard deviation, skewness and kurtosis we can observe that the distribution of the scores is quite unequal for the high-performing employees as well.

7.3 Big-Five dimensions

Table 3

Descriptive statistics of the Big-Five dimensions

	N	Mean	Std. Deviation	Skewness		Kurtosis	
				Statistic	Std. Error	Statistic	Std. Error
Agreeableness	21	4,57	2,293	,146	,501	-,461	,972
Extraversion	21	6,24	1,786	-,513	,501	-,818	,972
Conscientiousness	21	4,76	1,640	,497	,501	-,239	,972
Stability	21	5,52	2,250	-,267	,501	-,962	,972
Open mindedness	21	6,05	1,857	-,025	,501	-1,005	,972
Valid N (listwise)	21						

Table 3 shows the descriptive statistics of all the cases, including involuntary turnover and the high-performing employee scores. The statistics point out that the average score of all the cases was lower than the norm in agreeableness and conscientiousness. In other three dimensions the scores were slightly above the norm. The standard deviation, skewness and kurtosis show that again the distribution of the results is very unequal and there is a lot of variation.

7.4 Employee performance and agreeableness

Table 4

Correlation between employee performance and agreeableness

		Employee performance	Agreeableness
Employee performance	Pearson Correlation	1	,225
	Sig. (2-tailed)		,326
	N	21	21
Agreeableness	Pearson Correlation	,225	1
	Sig. (2-tailed)	,326	
	N	21	21

Table 4 represents the Pearson's correlation coefficient for employee performance and agreeableness personality dimension. The calculated correlation between these two variables is 0,225 which indicates a weak positive correlation. The correlation is not statistically significant.

7.5 Employee performance and extraversion

Table 5

Correlation between employee performance and extraversion

		Employee performance	Extraversion
Employee performance	Pearson Correlation	1	-,021
	Sig. (2-tailed)		,929
	N	21	21
Extraversion	Pearson Correlation	-,021	1
	Sig. (2-tailed)	,929	
	N	21	21

Table 5 represents the Pearson's correlation coefficient between employee performance and extraversion personality dimension. The calculated correlation between these variables is -0,021 which signifies a very weak negative correlation. This correlation is not statistically significant.

7.6 Employee performance and conscientiousness

Table 6

Correlation between employee performance and conscientiousness

		Employee performance	Conscientiousness
Employee performance	Pearson Correlation	1	-,394
	Sig. (2-tailed)		,077
	N	21	21
Conscientiousness	Pearson Correlation	-,394	1
	Sig. (2-tailed)	,077	
	N	21	21

Table 6 represent the Pearson's correlation coefficient between employee performance and conscientiousness. The calculated correlation between the variables is -0,394 which indicates medium negative correlation. This correlation is somewhat statistically significant.

7.7 Employee performance and stability

Table 7

Correlation between employee performance and stability

		Employee performance	Stability
Employee performance	Pearson Correlation	1	-,575[**]
	Sig. (2-tailed)		,006
	N	21	21
Stability	Pearson Correlation	-,575[**]	1
	Sig. (2-tailed)	,006	
	N	21	21

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

Table 7 represents Pearson's correlation coefficient between employee performance and stability personality dimension. The calculated correlation between these variables is -0,575 which indicates a strong negative correlation. This correlation is statistically significant.

7.8 Employee performance and open-mindedness

Table 8

Correlation between employee performance and open-mindedness

		Employee performance	Open-mindedness
Employee performance	Pearson Correlation	1	-,025
	Sig. (2-tailed)		,914
	N	21	21
Open-mindedness	Pearson Correlation	-,025	1
	Sig. (2-tailed)	,914	
	N	21	21

Table 8 represents the Pearson's correlation coefficient between employee performance and open-mindedness personality dimension. The calculated correlation between these variables is -0,025 which indicates very weak negative correlation. This correlation is not statistically significant.

8 Analysis of the results

Analysis of the correlation between the personality test results and employee performance showed that there are some significant relationships between the personality dimensions and the outcome of the employment. The SPSS analysis pointed out that there is a significant correlation between stability and employee performance and somewhat significant correlation between conscientiousness and employee performance as well as between agreeableness and employee performance. Based on the obtained results there are is no significant correlation between open-mindedness and

outcome of the employment neither between extraversion and the outcome of the employment.

8.1 Stability

As we can see from the results the most significant relationship seems to be between stability and employee performance where the Pearson's correlation coefficient is -,575. This means that there is a strong negative correlation between the two variables i.e. when one of the variables moves up, the other one moves down and vice versa. Stability can be seen as the opposite of the term neuroticism which is used in most of the models of Big-Five personality dimensions and in the researched literature. The results contradict our hypothesis where we stated that we're expecting to see rising scores in neuroticism (i.e. low scores in stability) in cases where people have been dismissed and low scores in neuroticism (i.e. high scores in stability) when people are performing well at their job. Based on the results of our analysis it seems that in average the high-performing employees have lower scores in stability than the ones that have been dismissed.

8.2 Conscientiousness

The second significant relationship is between conscientiousness and employee performance. The Pearson's correlation coefficient for these variables is -,394 which indicates medium negative correlation. This means that based on our results when the employee performance goes down the conscientiousness scores go slightly up and based on our data the employees who were dismissed had somewhat higher scores in conscientiousness than the high-performing employees. These findings also contradict our hypothesis in which we mentioned that we're expecting to see lower scores in conscientiousness from people who have been dismissed and higher scores from people who are recognized as high-performers.

8.3   Agreeableness

The last significant relationship that we could observe is between agreeableness and employee performance. The Pearson's correlation coefficient for these variables is ,225 which indicates weak positive correlation. The relationship is not very significant but based on our results we can observe that agreeableness might affect the outcome of the employment and that people who score high in agreeableness would have better chances of becoming high-performers and stay in the job whereas people who score lower in agreeableness would have slightly bigger chances of being dismissed at some point of the employment. These findings support our hypothesis as we stated that we're expecting to see lower scores on agreeableness for those people who have been part of involuntary turnover and higher scores for the people who are seen as high-performers.

8.4   Open-mindedness and extraversion

Regarding the two remaining Big-Five personality dimension, open-mindedness and extraversion we could not find significant relationships and correlations between the employee performance. In our hypothesis we mentioned that we're expecting to see low scores on these dimensions for people who have been dismissed and have been working in a role that requires a lot of human interaction and high scores from those working in similar roles but who are recognized as high-performers. Based on our results these personality dimensions don't affect the outcome of the employment and therefore are not significant when predicting the possibility of involuntary turnover.

8.5   Conclusion of the analysis

Our research question was whether involuntary turnover could be predicted during the hiring process by looking at the test results and based on the analysis of the results we can state that the involuntary turnover can't be predicted entirely by the personality test results. These type of tests and questionnaires might help when predicting the success of the employee at the job but the employer shouldn't solely rely on the results of these tests.

9 Discussion

As we can see from the analysis only one of our hypotheses was supported by our results. Against our expectations conscientiousness and stability correlated negatively with the employee performance whereas open-mindedness and extraversion didn't seem to have an impact on the outcome of the employment. Agreeableness was the only personality dimension that correlated positively with the employee performance and thus supported our hypothesis. However, it should be noted that the correlation between agreeableness and employee performance wasn't very strong and therefore can't be stated as statistically significant. The results might be surprising when looking at the previously conducted research and literature as most of them have had consistent findings where it's been shown that there would be a positive correlation amongst extraversion, openness, conscientiousness, agreeableness and job performance. (Barrick & Mount, 1991) (Rothman & Coetzer, 2003) (Judge & Bono, 2000) These differences in findings could be explained by the different approach for the same issue. Where Barrcik & Mount, Rothman & Coetzer and Judge & Bono have been focusing on the job and task performance we've been focusing on seeing whether there could be also indicators of inappropriate behaviour, lack in communication skills, dishonesty together with poor functional knowledge. The phenomenon that we're looking at is the same but the approach is different as we're looking at cases where the employment has already been terminated due to various reasons.

Barrick & Mount explained the relevance of conscientiousness for task performance to be important because individuals who exhibit strong sense of purpose, obligation and persistence seem to generally perform better in their jobs than those who don't exhibit similar personality traits. (Barrick & Mount, 1991) Other researchers have made similar remarks in relation to conscientiousness. The provider of the online test that Company X uses states that a person who scores high in conscientiousness "wants to deliver perfect work, structures his work, sticks to the rules and instructions orderly" (CEBIR, 2020). A person who scores low on conscientiousness is described as "tolerates disorder, does not want to lose time preparing or finishing work, easily adapts the rules" (CEBIR, 2020). In our results it seems to be that people who have been dismissed have scored higher in conscientiousness than the high-performing employees which contradicts with the previously conducted research. One explanation for this could be that different personality traits suit for different companies and industries. Company X is

working on a logistics sector which sometimes might be very chaotic and unstructured and so people who are used to working in a very structured environment might not be the best fit for this industry or company. Also people who score low on this dimension might be more capable of working in a fast paced environment where decisions need to be taken and rules adapted sometimes. Examples of this could be a couple of phrases that are commonly used within Company X, "Fail fast, learn fast" and "It's better to ask forgiveness than wait for permission".

High levels of neuroticism have been said to lower the job performance (Rothman & Coetzer, 2003) (Barrick & Mount, 1991) therefore we hypothesised that the stability dimension would be positively correlated with employee performance thus low scores on stability would predict possible involuntary turnover in the future. However, the analysis of our results has pointed out that this isn't the case in Company X. The relationship between employee performance and stability seems to be negatively correlated which contradicts our hypothesis. A person who scores high on stability is described as "emotionally stable, deals with problems calmly and self-assured, is not so much driven by emotions" whereas a person who scores low on this dimension is described as "sensitive, strongly linked to his emotions, wants to be reassured, avoids stressful situations". (CEBIR, 2020) In their study Debusscher, Hofmans and De Fruyt (2014) found that people who experience low levels of neuroticism (high levels of stability) would perform better at highly demanding tasks, whereas higher level of neuroticism (low level of stability) is better for less demanding tasks. However, the employees in both samples were employed in same or very similar roles where the tasks are equally demanding and therefore Debusscher's, Hofmans' and DeFruyt's theory doesn't give us an explanation why it seems to be that in Company X the employees who have been dismissed seem to have higher scores in stability than the high-performing ones. In his study Richard Hense (2000) found out that people who experience high levels of neuroticism tend to "dwell on negative aspects of the situation" and experience more dissatisfaction than people who score lower in neuroticism. Even though there are many theories and studies that contradict our findings it should be pointed out that again the approach for similar seeming phenomenon is different. In most of the studies the researchers are looking at the job performance or job satisfaction of an employee which with no doubt has an effect on the outcome of the employment but doesn't directly correlate with involuntary turnover. Therefore, these findings should be researched further in order to be able to explain why does it seem that people who score lower on stability (higher on neuroticism)

tend to perform better at Company X than the people who have been dismissed from the organisation.

Only one of our hypotheses was supported by the findings and looking at the results of our research we could see that agreeableness correlates positively with employee performance. Considering that almost everyone in the sample groups was in some kind of a managerial role this is an expected result. An agreeable person is described as "often puts others' interest first, acts in a friendly, altruistic and indulgent way" whereas a person who scores low on agreeableness is described as "puts his own interest first". (CEBIR, 2020) Based on the previous research and our results we can deduce that people who are highly agreeable and in managerial roles have bigger chances of becoming high performing whereas employees in similar roles with low scores on agreeableness might have a bigger chance of being fired. This might be because highly agreeable people tend to be described as trustworthy, compassionate and empathetic which are perceived as important characteristics for a good leader. (Judge & Bono, 2000) People who score lower on agreeableness tend to be less cooperative and might not trust others which might lead to conflicts at the work place hence lead into involuntary exit and turnover. (McCrae & Costa, 1987)

Last part of the discussion will cover the remaining personality dimensions, extraversion and open-mindedness. In our hypothesis we predicted that these traits would have an effect on the outcome of the employment based on the researched literature. In the hypothesis we expected to see high scores of extraversion from the high-performing employees in managerial roles and lower scores from the ones that were dismissed from Company X. In our hypothesis we also stated that we were awaiting to see lower scores on open-mindedness from the employees who have been dismissed as this trait could predict good task performance in various different roles. Against our expectations we couldn't deduct any kinds of relationships or correlations between these personality traits and the outcome of the employment. The Pearson's correlation coefficients for both traits and employee performance was below -,03 which tells us that based on the results and our sample there is no statistically significant correlation. According to the test provider of Company X an extraverted person is "stimulated by social contacts, spontaneous, likes speed and challenges, takes the lead" whereas a person scoring low on extraversion is described as "reserved, thinks before speaks or acts, needs time for him/herself". (CEBIR, 2020) An open-minded person is described to be "open for

novelties, likes complex problems, forms his/her own opinion, likes creativity" and a person who scores low on this dimension is "conventional, traditional, likes safe territory, prefers simplicity to complexity". (CEBIR, 2020) Looking at the overall scores of both of the sample groups (Table 1 and Table 2) we can see that both groups score a bit above average in both dimensions (≥6). This means that in general the people working at Company X are slightly more extraverted and open-minded than an average person but that there is no indication of higher chance of involuntary turnover when a person scores lower in these dimensions as the scores for both samples are almost equal.

9.1   Limitations

The present study comes with its limitations. Firstly, the sample size in our research was quite small and might not represent the whole population of Company X. Also the gender diversity in the two sample was very unbalanced and in the sample of involuntary turnover majority was male whereas in the sample of high-performing employees' the majority was female this might lead to skewed results that don't represent all the employees. Secondly, as mentioned previously there have been changes in the testing methods during the years which forced us to consolidate some of the results to be comparable. This might lead to faulty results as the tests that the employees have taken are not identical. Also there has been a shift from supervised tests towards online tests which might lead to more people cheating during the tests and altering their responses to be better fitting to the role that they're applying for. In this study we covered the Big-Five personality dimensions, agreeable, stable, open-minded, extraverted and conscientious which are the dominating dimensions however, these dimension are all divided into various sub-traits that help to define the overall score for each dominating trait. Because of the changes in the personality tests, we couldn't take these sub-traits into account as they haven't been measured in all of the tests that the sample groups have completed. If we had been able to analyse all the sib-traits as well it might have given us more insights into each person and so better indicate whether there are certain sub-traits that could predict the outcome of the employment. Thirdly, it should be noted that the data for this study was provided by the HR department of the Company X and none of the employees in either sample groups was contacted. It should be taken into consideration that the data received might be biased and one sided. Lastly, the present study provides a unique view to one organisation and industry and might not be

applicable to other companies and industries. Each organisation has its own organisational structure and culture that define a lot what kind of people are perceived as high-performers but also who are not fitting to the company. The results from another organisation in another industry might differ a lot from what we have found out. People who have been dismissed from a Company X could be perceived as better employees in another company.

10 Conclusion

The results of this study point out that personality test results might help companies to predict involuntary turnover already during the hiring process but they shouldn't only rely on these tests. In the case of Company X people who score high on agreeableness dimension can be expected to perform slightly better especially in managerial roles and therefore their likelihood of being dismissed at some point of their employment is smaller. Against our expectations but based on our results and analysis people who score lower on conscientiousness and stability also tend to perform better at their job within Company X and are not as likely to become part of involuntary turnover during their employment. It should be noted that these findings contradict the findings of all previous research and the reasons might need to be studied further. Finally contradicting our hypothesis, we couldn't find any significant relationships between extraversion and involuntary turnover or between open-mindedness and involuntary turnover in our analysis even though many other researchers have found that higher scores on these dimensions should predict better job performance. Our findings might indicate that there are significant differences between the companies in terms of what kind of personality traits are perceived as successful. This might be influenced by the industry that the company is operating in but also by the individual company culture which defines what kind of people are seen as high-performing and fitting to the organisation.

The present study contributes to the already existing wide amount of literature done on involuntary turnover, recruitment activities and personality tests by bringing in a new point of view to the phenomenon. Even though there is quite a lot of research conducted on the field of job performance and Big-Five personality dimensions, our paper approaches this from a slightly different angle and thus brings new ideas and insights that might provide as an inspiration and base for future research. The influence of

personality traits on job performance and involuntary turnover is broad and although our findings bring some more light on the question whether there could be a link between personality and involuntary turnover there remains to be a lot of room for further research.

11 Recommendations

Based on our research and analysis we have some recommendation for the Company X. First, as we have stated previously the personality test results shouldn't be considered as a "hard stop" for any hiring process but should be taken into a further consideration in the recruitment. The test results should be used as a basis of interviews conducted by the HR department but also communicated forward to the managers or supervisors of the employee. The personality traits agreeableness, conscientiousness and stability should be closely monitored and focused on while conducting interviews. Secondly, all of the employees should fill-in the questionnaires as it's said to be a mandatory part of the selection process. During our data gathering process we could notice that only 37,5% had completed the personality questionnaires which made it harder for us to compare and observe differences in personalities. A higher completion rate of the personality questionnaires would make possible future research easier but also it would make the selection process more equal for everyone and could help the HR department to identify and predict possible future conflicts between the employee and the organisation. Lastly, it might be helpful and interesting to check the personality test results in case involuntary turnover should happen. During the exit discussions the personality test results might help to explain the behaviour of an individual and bring more clarity on the reasons why the employment did not go as planned.

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