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EMPLOYEE ATTITUDES AND INTENTIONS TOWARDS WHISTLEBLOWING IN ESTONIA

Master's thesis

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We have written this master's thesis independently. All viewpoints of other authors, literary sources and data from elsewhere used for writing this paper have been referenced.

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Abstract

This study investigates the factors influencing whistleblowing attitudes and intentions among employees in Estonia, examining how individual characteristics and organisational features shape these aspects. Utilising a large survey of employees in Estonia (n = 8031) conducted in the autumn of 2023, the authors apply multivariate regression analysis based on the Theory of Planned Behaviour. The research focuses on attitudes and intentions related to whistleblowing, without extending to actual whistleblowing behaviour. The analysis reveals that secure reporting channels, managerial positions, and age significantly impact employees' whistleblowing attitudes and/or intentions. Secure reporting channels notably enhance the probability of higher whistleblowing intentions, underscoring the importance of organisational infrastructure in fostering ethical practices. Furthermore, older employees tend to exhibit a more conservative approach towards whistleblowing, assumably influenced by cultural factors rooted in Estonia's historical context.

This research contributes to the academic discourse on whistleblowing by emphasising the necessity of supportive organisational cultures and robust ethical frameworks. It also highlights the importance of continuous education and training in ethical conduct to strengthen whistleblowing intentions. By focusing on the precursors of whistleblowing in terms of attitudes and intentions, the study offers valuable insights for organisations aiming to enhance ethical behaviour and transparency in a diverse and evolving corporate landscape.

Keywords: whistleblowing attitudes, whistleblowing intentions, theory of planned behaviour (TBP)

CERCS classification: S189 Organisational Science, S190 Management of Enterprises, S212 Sociology of Labour and Enterprise

1. Introduction

Whistleblowing, defined as “the disclosure by organization members (former or current) of illegal, immoral, or illegitimate practices under the control of their employers, to persons or organizations that may be able to effect action” (Near & Miceli, 1985, p. 4), plays a critical role in uncovering corporate misconduct and enhancing public safety. The whistleblower case against Hyundai Motor America and Kia Motors America led to a substantial monetary reward from the National Highway Traffic Safety Administration (NHTSA). The NHTSA granted a sum of over $24 million to a whistleblower who supplied vital information on safety concerns within those corporations. This case signifies the

inaugural whistleblower prize granted by the NHTSA. This case exemplifies the pivotal significance of whistleblowers in uncovering corporate misconduct and enhancing public safety. The NHTSA's choice to grant a substantial amount of money emphasises the significance of these disclosures within the realm of automobile safety and adherence to regulations. (*NHTSA Makes Its First Ever Whistleblower Award | NHTSA*, 2021; Orlove, 2021; Yang, 2021) Providing such a significant sum of money indicates the presence of substantial barriers to whistleblowing.

In a European context, the EU Whistleblower Protection Directive (EU) 2019/1937 aims to provide basic protections for whistleblowers within the European Union. This directive, applicable to both private and public companies with a workforce of 50 or more, mandates the establishment of internal reporting procedures and guarantees confidentiality for whistleblowers. Its implementation across member states signifies a commitment to fostering environments where whistleblowers can report misconduct without fear of reprisal. (Directive (EU) 2019/1937 of the European Parliament and of the Council, 2019) The law is enforced in 25 member states but delayed in Poland and Estonia (*EU Whistleblowing Monitor*, n.d.), prompting an investigation into whistleblowing practices in Estonia.

In the Estonian context, the cornerstone of the legal framework for whistleblowing is the Anti-Corruption Act 2012 (ACA), which before this amendment focused mainly on the public sector. But starting in 2012, the ACA will expand to both the public and private sectors and encompass all types of wrongdoing. (*Anti-Corruption Act–Riigi Teataja*, 2023) Before 2012, the Penal Code and Witness Protection Act served as the primary regulations for private sector whistleblowing, with penalties for non-disclosure. The protection of whistleblowers is not explicitly provided for in other laws, as referred to in the report on the protection of whistleblowers in Estonia. (Saarniit, 2009) Recently, there have been significant developments in Estonia's legal framework for whistleblowing with the upcoming implementation of the EU Whistleblower Protection Directive (Directive (EU) 2019/1937 of the European Parliament and of the Council, 2019). Estonia is actively aligning its domestic legislation with the directive, which aims to safeguard whistleblowers across the European Union (Udras, 2023; Vabariigi Valitsus, 2023). Considering the unpredictable path of the directive, the delay might potentially influence the environment for reporting wrongdoing in both the public and private sectors in Estonia.

Given the origin of the data from Estonia, it is essential to note that the country possesses a relatively small population and is classified as a rapidly developing nation located

in Eastern Europe (Győrffy, 2022). The unique socioeconomic and regulatory conditions in a given context might have an influence on whistleblowing attitudes and intentions. This study uses the theory of planned behaviour to analyse whistleblowing attitudes among workers in Estonia. The end goal is to provide a clearer understanding of the complex landscape of whistleblowing and the readiness to proceed with action. The authors seek to understand if this division between sectors stands the ground and has the same impact on the larger public, as exemplified by Employees' Labour Market and Salary Survey participants. The objective of the study is to find out what individual and organisational factors are shaping attitudes and intentions towards whistleblowing among employees in Estonia. The study is unique in Estonia, a country that has not yet implemented the EU whistleblowing directive, presenting a distinct regulatory landscape.

Today, with escalating demands for transparency and ethical behaviour, understanding the nuances of whistleblowing across different industries and sectors is pivotal. Whistleblowers are central in exposing misconduct, be it in the private sector (e.g., loan providers, home building companies, insurance firms, etc.) or public sector (academic institutions, government agencies, and other decision-making organs). Their actions significantly shape our present and future by highlighting unethical practices and their far-reaching consequences (Berndtsson et al., 2018; Yang, 2021).

Despite its perceived advantages, whistleblowing remains a persistent issue. While it is promoted to safeguard the public interest, whistleblowers often confront severe repercussions, including bullying, exile, or even life-threatening situations (Annisaa & Nurlaeli, 2022; Cooper, 2022; Gooderham, 2009; Mehrotra et al., 2020). Attitudes towards whistleblowers also vary by sector, with the automotive industry witnessing significant cases like the Volkswagen emissions scandal, while responses in other sectors remain less clear (Gooderham, 2009; Yang, 2021).

Illustrating the severe consequences, examples such as the dismissal of an employee at Bristol Royal Infirmary due to their whistleblowing actions (Gooderham, 2009) and the threats and subsequent firing of an employee at WorldCom (Avakian & Roberts, 2012; Lee & Xiao, 2018) demonstrate how a single negative reaction can create ripples in the local culture, fostering a stigma against whistleblowing. Despite subsequent investigations often resulting in the closure of such organisations, the fear of negative reactions from peers and colleagues prevents whistleblowing from becoming a more widespread phenomenon (Annisaa &

Nurlaeli, 2022; Avakian & Roberts, 2012; Bosupeng, 2017; Cooper, 2022; Gooderham, 2009; Lee & Xiao, 2018).

Conversely, there are examples, such as the case of Enron, where exposing unethical behaviour led to the company's collapse and positive media exposure for the whistleblower (Bosupeng, 2017; Lee & Xiao, 2018), as well as the successful adaptation of a whistleblowing system at Telia, resulting in the reporting of more than 60 instances of unethical behaviour within the first weeks (Henriksson & Weidman Grunewald, 2020), potentially preventing major setbacks, that serve as reassurance that high moral ethics can be a social norm. These instances highlight the importance of transparency and fairness in difficult dilemmas, bringing about positive influence.

Amidst the rapid development of whistleblowing research in the 1980s, regulations have been simultaneously on the rise, following the growing popularity of whistleblowing frameworks documented and analysed in academic and governmental settings. Central to the discussion of whistleblowing is legislation aimed at protecting whistleblowers and fostering a culture of responsibility and honesty. The Whistleblower Protection Act of 1989, a federal law in the United States, aims to safeguard government employees who expose wrongdoing. It provides legal protections for those who disclose violations, reflecting a commitment to accountability. (Dasgupta & Kesharwani, 2010) Moreover, later amendments to the Act in 2007 expanded its scope to include all federal employees, enhancing protections for those working in national security, government contractors, and science-based agencies. This change significantly broadened the safeguarding of individuals exposed to wrongdoing across various sectors of the federal government. (Dasgupta & Kesharwani, 2010)

The paper is structured as follows: Section 2 focuses comprehensively on the whistleblowing phenomenon from its historical standpoint to contemporary relevance, analyses factors affecting employee attitudes towards it, and provides a review of the theory of planned behaviour (TPB) as a whistleblowing phenomenon analysis framework proposed by Lee et al. (2021), which serves as the basis for the study. Section 3 describes the methodology and sample characteristics used in the empirical study. Section 4 provides an overview of the analysis discoveries in the context of the whistleblowing study on hand. The paper concludes by examining the constraints of this study and proposing potential options for further research on attitudes towards whistleblowing.

2. Literature review

2.1. Whistleblowing Evolution and Analysis: Bridging Historical Significance with Contemporary Attitudes through the Theory of Planned Behaviour

This chapter delves into the evolution and contemporary significance of whistleblowing, with a focus on its definition and historical origins. Drawing upon the Near & Miceli (1985) framework, whistleblowing is defined as the disclosure of illegal, unethical, or immoral practices within organisations. Tracing its roots back to the late 1800s, whistleblowing has emerged as a crucial component of organisational ethics and transparency. The chapter also highlights the increasing scholarly interest in whistleblowing research and its implications for organisational governance and accountability. It concludes by underscoring the ongoing need for further research to deepen our understanding of whistleblowing's role in fostering ethical conduct within organisations, paving the way for subsequent chapters.

The **whistleblowing** phenomenon – a willingness to disclose illegal, unethical, or immoral (subjective to one's personal norm) behaviour – has been in the limelight with recent events worldwide: Enron (Bosupeng, 2017; Lee & Xiao, 2018), Hyundai and Kia Motors (Orlove, 2021; Yang, 2021), Boeing misconduct (Abdeldayem et al., 2023; Leggett, 2024) etc., as a result, leading to a larger discussion regarding the definition and a common understanding of the topic on-hand. To delve into the whistleblowing theme, authors use a Near & Miceli (1985, p. 4) definition, being the most citied and used in older as well as newer research on the topic, thus defining whistleblowing as follows: "[…] the disclosure by organisation members (former or current) of illegal, immoral, or illegitimate practices under the control of their employers, to persons or organisations that may be able to effect action". Access to privileged information and the responsibility to provide proof are two fundamental aspects of effective whistleblowing.

At large, whistleblowing topic research dates to approximately the 1970s. Prior to that year, defined as an ethics sub-topic, the whistleblowing concept emerged. Originally, in the late 1800s and early 1900s, policemen used whistles to audibly blow and alarm the people around them, notifying enforcement and the public. The definition has been adapted in the 1960s and 1970s in the context of reporting unlawful actions, denoting individual actions that exposed something. Olesen (2021, p. 13) referring to Peters and Branch (1972), Nader et al. (1972) and Mueller's (2019) research, describe the process of whistleblowing definition transformation – by popularising the term by the three authors above, the whistleblowing

phenomenon was later associated with "[…] positive valuation as something desirable and important for the democratic process.", thus whistleblowing gained a positive connotation and association with higher personal morals, honesty, and transparency in one's organisation.

Looking into the growing popularity, relevance (recent large-scale whistleblowing scandals, such as Boeing, Enron, and Hyundai), and scale of the phenomenon of whistleblowing, authors visualise the use of the whistleblowing term in literature during years from 1970 up until the latest data overview being done as of 25.02.2024, by consolidating the use of the keyword "whistleblowing" in research publications by decades using a line type chart with a trendline (see Figure 1, each point signifying an amount of publications in each year, consolidated by decade), where the x-axis exemplifies years and the y-axis a number of publications. It is evident that by the first quarter of 2024, the number of articles published exceeds the amounts published in certain previous years, indicating a growing trend of relevance and interest in the topic of whistleblowing. The findings suggest that whistleblowing has been researched more extensively in the recent decade, with more than four times the number of articles than in all previous decades combined. The Publish or Perish article sourcing tool was used to source the article names, later consolidated by year (Harzing, 2007), with the keyword "whistleblowing" as the search term (see Appendix A). The search included books, academic research papers, dissertations, and other publications.

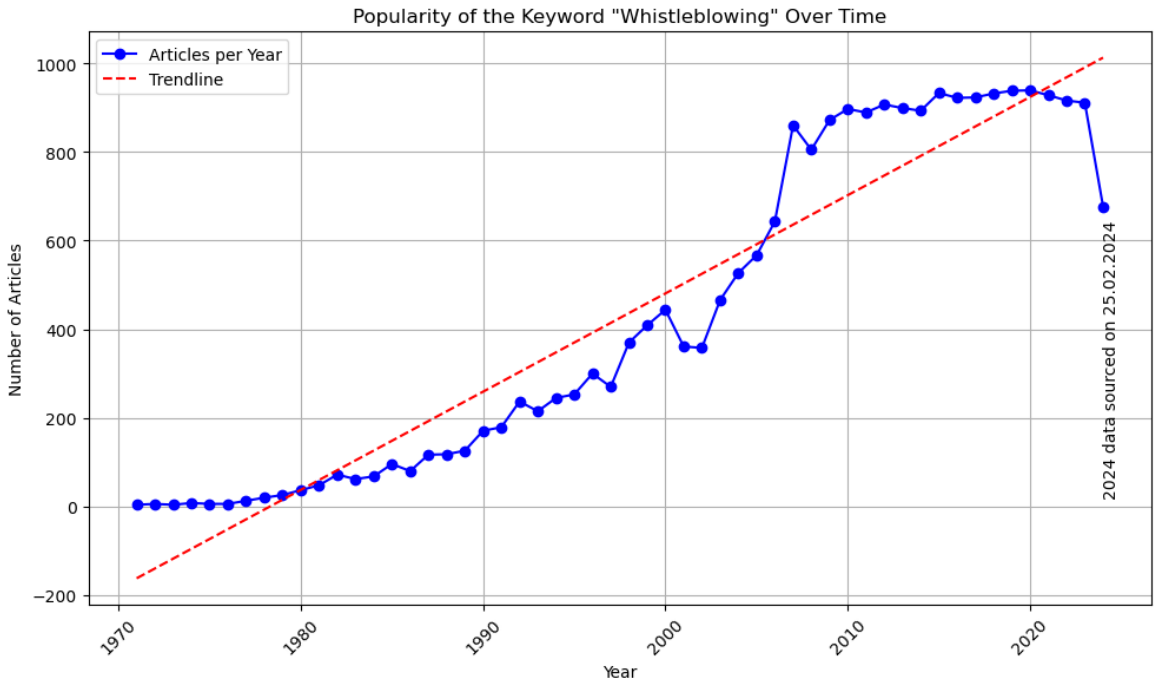


Figure 1. Use of the keyword 'whistleblowing' in research during the years 1972-2024

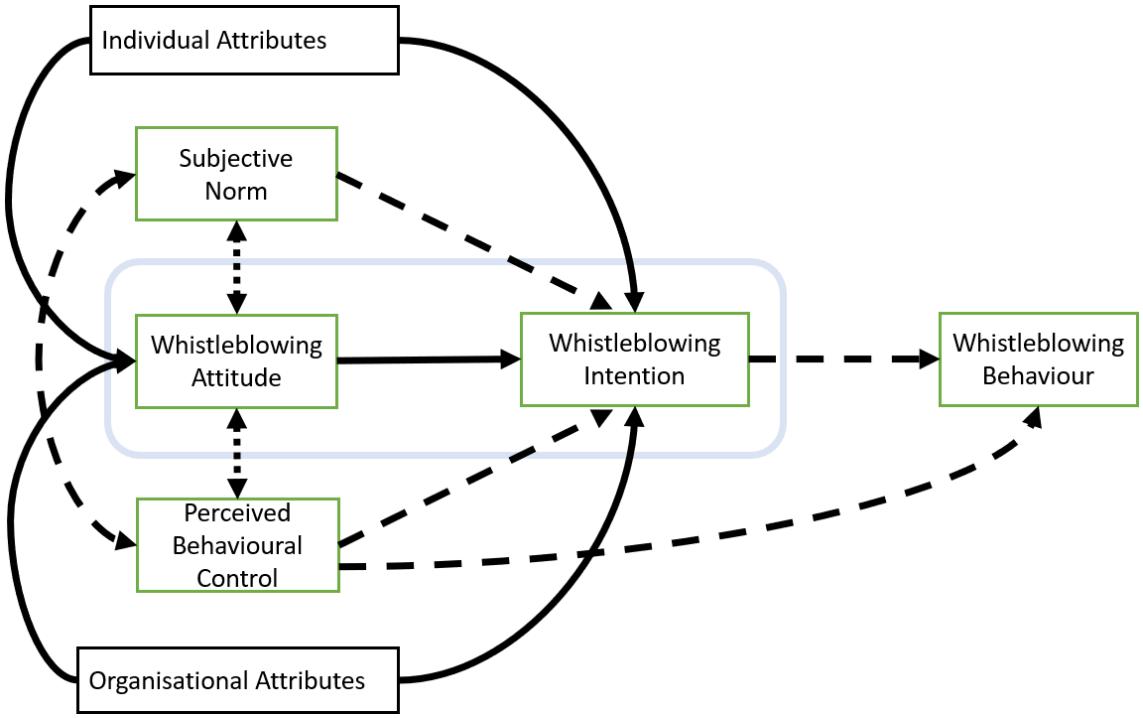
Source: compiled by thesis authors, data sourced using Harzing's Publish or Perish (Harzing, 2007) tool sourcing from the Google Scholar database, analysed with Python (Horvath, n.d.)

Figure 1 illustrates the growth in scholarly attention toward whistleblowing, as evidenced by the exponential increase in research publications on the subject from 1970 through 2024. Over 600 papers have been published in the first two months since the start of this year, indicating an increased probability of a substantial rise by the end of the year compared to previous years. This increase in interest highlights the escalating relevance of whistleblowing in contemporary organisational and ethical discourse.

While exploring the intricacies of whistleblowing practices, it is useful to acknowledge the distinction between internal and external whistleblowing. Internal whistleblowing involves reporting illegal, unethical, or immoral practices within the organisation, typically through designated channels or to management (Nayır et al., 2018; Park & Blenkinsopp, 2009). Conversely, external whistleblowing occurs when individuals take their concerns outside the organisation, either to regulatory bodies, the media, or other external entities (Dworkin & Baucus, 1998; Jeon, 2017). Although this thesis does not delve deeply into this distinction, it is important to recognise these differing pathways as they reflect broader considerations related to organisational culture, trust in internal processes, and the potential risks faced by whistleblowers (Latan et al., 2018; Nayır et al., 2018; Sims & Keenan, 1998).

Whistleblowing analysis has often been approached from an individual's viewpoint, in which attitude, intention, and whistleblowing action (behaviour) lack a clear contextual distinction (Iko Afe et al., 2019; Lee et al., 2021; Park et al., 2014). This approach argues that an individual's moral convictions and subjective understanding of ethical norms primarily influence their decision to blow the whistle. Nevertheless, while this viewpoint provides a valuable understanding of personal morals, it frequently lacks a well-defined analytical framework that can comprehensively consider the many elements that influence the decision-making process of whistleblowing. In recent academic endeavours, specifically the research conducted by Lee et al. (2021), there has been an attempt to address this deficiency by incorporating the Theory of Planned Behaviour (TPB). **The Theory of Planned Behaviour (TPB)** provides a systematic framework for comprehending how factors such as an individual's moral convictions, subjective understanding of ethical norms, and various external influences affect attitudes, intentions, and individual behaviour (Ajzen, 1991). TPB

is a framework that identifies three factors that influence an individual's behavioural intentions and actions: **attitude** towards the behaviour, **subjective norms**, **and perceived behavioural control.**



Note(s): The **solid lines** mark the **primary pathways under investigation**, focusing on interactions within the study area. The **dashed lines** represent **external influences**, providing context but not being the direct subject of analysis.

Figure 2. Scope of research based on the Theory of Planned Behaviour (TPB) framework

Source: compiled by the thesis authors based on Lee et al.'s (2021) research on whistleblowing using TPB

Figure 2 provides a visual depiction of the modified TPB framework, which was discussed earlier. This graphic illustrates the connection between "**attitude**" and "**intention**" in the context of whistleblowing phenomena. It outlines the connection that the authors want to further investigate. This adaptation aims to uncover the cognitive and social factors that shape an individual's thought process and, as a result, their opinion on whistleblowing when encountering ethical dilemmas within an organisation. It lays the groundwork for a thorough understanding of both the attitudes and intentions behind whistleblowing.

The Theory of Planned Behaviour (**TPB**) is a psychological framework that offers a process structure for examining the elements that impact people's intentions and behaviours. In this master thesis, the Theory of Planned Behaviour (TPB) is used to understand the

factors that influence individuals' attitudes and, as a result, their connection to intentions to blow the whistle in organisational contexts. The statement describes a distinct and direct sequence of cause and effect, starting with attitudes, then leading to intents, and finally resulting in conduct, also known as behaviour, in the context of the theory (Ajzen, 1991; Lee et al., 2021). Nevertheless, in the context of the study at hand, it is important to note that the authors have deliberately limited their investigation to the **attitudinal** and **intentional elements** of the TPB, thus offering a concentrated examination of the psychological and normative components that come before the actual act of whistleblowing.

The TPB theory suggests that “attitude towards conduct” represents an individual's assessment of whistleblowing as either good or negative. An individual’s attitude towards whistleblowing is influenced by their perception of potential results and consequences, as well as their judgement of these outcomes, which can have either a positive or negative effect on their decision-making (Ajzen, 1991). If an individual believes that whistleblowing will result in beneficial improvements or personal gratification, they might be more likely to adopt a favourable attitude towards it (Lee et al., 2021). Given the whistleblower cases discussed by Lee et al. (2021) and Park et al. (2024), it is important to consider how people's views are influenced by their perception of the effectiveness and moral righteousness of their possible acts. “Subjective norms” refer to the perceived societal influence that encourages or discourages individuals from engaging in whistleblower behaviour. This normative pressure may be applied by influential individuals, such as family members, coworkers, or broader social norms. The thesis incorporates the research conducted by Alleyne et al. (2017) and Iko Afe et al. (2019), which emphasise the significance of social and cultural factors in relation to whistleblowing. Reflecting on the interconnectedness of constructs of attitude and intention within the Theory of Planned Behaviour, it is evident that certain organisational mechanisms may significantly influence these psychological dimensions.

The third element of the Theory of Planned Behaviour (TPB), “perceived behavioural control”, refers to the individual's perception of how easy or difficult it is to engage in the act of whistleblowing. This perception is impacted by prior experiences and predicted obstacles. Although this research does not focus on a deeper analysis of perceived behavioural control, it is important to note that this aspect also significantly affects the creation and availability of whistleblowing channels. The authors' choice to exclude this aspect is based on the limitations of their study technique, which emphasises the purposefulness of the action rather than the action itself. The use of a selected strategy is backed by empirical evidence that

indicates an intricate connection between the perception of control and the intent to blow the whistle, as emphasised by Miceli & Near (1984).

By including the Theory of Planned Behaviour (TPB) in the examination of whistleblowing, the authors examine how the combination of personal inclinations (status in the organisation, tenure) and societal (gender, age, education) factors come together to shape the decision-making process that precedes whistleblowing. The thesis has a specific emphasis on "**attitude**" and "**intention**" to thoroughly examine these variables. The study does not analyse the actual whistleblowing behaviour, since this would require a post-facto investigation that is outside the scope of their research methodology due to questionnaire and overall research focus restrictions (questionnaire rather than interviews as a preferred method of data collection). This leads the authors to propose the following hypotheses:

- H1: The attitude towards whistleblowing is positively associated with whistleblowing intention.

This hypothesis lays the foundation for using TPB as an analysis framework for testing other hypotheses related to attributes – individual and organisational – further described in the next chapter. The hypothesis highlights the critical role of individual perceptions and their influence on the propensity to report unethical practices. By understanding how attitudes directly correlate with intentions, we can better comprehend the motivational underpinnings of whistleblowing behaviour.

In this chapter, the development and current significance of whistleblowing have been examined, tracing its evolution from a simple alert mechanism to a key component of organisational ethics. The literature review highlights a growing academic interest in whistleblowing, particularly noted by the significant increase in publications over the past decade. The analysis differentiates between internal and external whistleblowing, noting organisational preferences for internal methods but recognising scenarios where individuals might opt for external outlets.

As the narrative progresses to the next chapter, the discussion focuses on both individual and organisational factors that shape attitudes and intentions towards whistleblowing. By applying the Theory of Planned Behaviour, the thesis examines how these factors influence two key pillars of the TPB: attitude and intention. The third pillar, behaviour, is left as an open opportunity for further exploration in subsequent studies.

2.2 Factors Influencing Employees' Attitudes and Intentions Towards Whistleblowing

Understanding the factors that shape employees' attitudes towards whistleblowing is pivotal for both organisations and researchers. According to Park & Blenkinsopp (2009, p. 546), "An **attitude towards whistleblowing** (the extent to which an individual has a favourable or unfavourable evaluation of whistleblowing) is the sum of the products of the employee's beliefs about the consequences of whistleblowing and his or her subjective evaluation of those consequences." Whistleblowing involves reporting unethical or illegal activities within an organisation and is shaped by various individual and organisational factors. This analysis differentiates between individual factors such as age, sex (separately from gender, which is avoided due to its complexity and the limitations of the study's questionnaire), tenure, managerial role, and level of education. Organisational factors considered include sector type (public, private, or third) and the availability of secure reporting channels, with other variables serving as control factors with lesser influence. This sub-chapter explores the key factors that contribute to attitudes and intentions towards whistleblowing.

Age may significantly influence how individuals perceive and respond to ethical dilemmas related to whistleblowing. Research has demonstrated a complex relationship between age and whistleblowing behaviour. For instance, Hajiabbasi et al. (2022) suggest that older employees are more likely to engage in whistleblowing, a finding supported by the work of Ahmad et al. (2012), which also highlights demographic influences on whistleblowing intentions. Both Mesmer-Magnus & Viswesvaran (2005) and Stansbury & Victor (2009) found that older employees are more likely to intend to blow the whistle due to their higher status within the organisation, idiosyncrasy credits, and commitment to the organisation's well-being. However, there is no direct correlation between age and actual whistleblowing behaviour. Contrastingly, several other studies suggest that age does not significantly influence whistleblowing attitudes or intentions, challenging the notion that age-related factors decisively influence decision-making in the workplace, despite the potential moderating effect of age (Liyanarachchi & Adler, 2011; Sari et al., 2023; Sims & Keenan, 1998). This indicates that an individual's attitude towards whistleblowing may remain constant regardless of their age, implying that variables other than age may have a more substantial influence on their propensity to become a whistleblower.

Particularly in Estonia, the historical context of the Soviet era may negatively influence older employees' attitudes towards whistleblowing. During this period,

whistleblowing could have been perceived negatively, akin to betrayal, due to the socio-political climate that discouraged such actions. Drawing parallels between Estonia and Russia, both former Soviet states, it is hypothesised that similar negative attitudes towards whistleblowing might prevail among the older generations in Estonia, influenced by past experiences during the Soviet occupation. Stalinist repression in Estonia included denunciations of dissent and extensive deportations of Estonians to Siberia. These measures highlighted the dangers of challenging the Soviet regime and instilled fear among the populace, reinforcing the authoritarian control exerted by the Soviet state over Estonia. Clark et al. (2020) note that in Russia, factors such as high power distance, acceptance of corruption, and underdeveloped regulations for whistleblowers contribute to a culture where fear of retaliation is a decisive factor against whistleblowing. These factors likely reflect a broader Soviet legacy, which may also influence whistleblowing perceptions in Estonia (Clark et al., 2020; Jõesalu & Kõresaar, 2013). Moreover, Caillier (2017) research on the role of whistleblowing education suggests that educational interventions can significantly modify whistleblowing intentions, indicating that the negative perceptions held by older generations could potentially be mitigated through targeted educational programs. Based on the historic and country-specific context, the authors prove the hypothesis below:

- H2a: Higher age ranges are negatively associated with employee attitudes towards whistleblowing.
- H2b: Higher age ranges are negatively associated with employee intentions towards whistleblowing.

In conclusion, while some studies suggest a potential inclination towards whistleblowing with increasing age, the historical and cultural context in Estonia might lead older employees to hold more negative attitudes and lower intentions towards whistleblowing, influenced by their past experiences during the Soviet era (Clark et al., 2020; Jõesalu & Kõresaar, 2013).

Sex has been identified as a significant variable that might influence attitudes towards and intentions regarding whistleblowing. Research by Tilton (2017) suggests that women may be more inclined to blow the whistle compared to men due to differences in ethical decision-making processes. This is supported by findings from Nayır et al. (2018) and Nisar et al. (2019), who observe that women, often more attuned to ethical considerations, tend to be more motivated to report wrongdoing within organisations. Moreover, instances where societal structures are characterised by pronounced male dominance may restrict women’s

access to decision-making roles, thus potentially diminishing their likelihood of engaging in whistleblowing activities due to limited access to privileged information (Puni & Hilton, 2020; Tilton, 2017). Empirical findings, such as those reported by Nayır et al. (2018), corroborate the notion that women are more inclined to report instances of unethical conduct. One plausible explanation posited by the authors implicates heightened empathy and a stronger emotional attachment to the workplace environment and its prevailing cultural norms. One such explanation could be women's reluctance to disrupt the organisation's harmonious environment.

On the contrary, studies such as those by Lee et al. (2021) propose that sex may not be a significant predictor of whistleblowing attitudes. They argue that the perception of ethical behaviour and the willingness to report misconduct may be more related to individual moral values than sex, although cultural traditionalism could influence behavioural expectations tied to sex (Lee et al., 2021), as supported by another study conducted by Puni & Hilton (2020). Further exploration is needed to comprehend the nuanced relationship and complex dependencies between sex and whistleblowing attitudes. Multiple studies concur that a larger study is necessary to unravel the relationship between whistleblowing and sex (Nayır et al., 2018; Nisar et al., 2019; Tilton, 2017). Additionally, in male-dominated societies where men are more likely to hold managerial positions due to gender biases or personal preferences, implementing policies that facilitate anonymous whistleblowing can promote fair and transparent reporting of unethical behaviour (Tilton, 2017). Such measures shift the focus away from individual personalities and authority interpretations, enabling a more rational assessment of misconduct and minimising speculation about personal character. As such, the authors word the hypothesis as follows:

- H3a: Female employees exhibit more positive attitudes towards whistleblowing compared to their male counterparts.
- H3b: Female employees exhibit more positive intentions towards whistleblowing compared to their male counterparts.

Despite these varied findings, there is a consensus that further exploration is needed to fully understand the nuanced relationship between sex and whistleblowing attitudes and intentions. Implementing policies that support anonymous whistleblowing might help mitigate the influence of gender biases and promote fair and transparent reporting of unethical behaviour, particularly in male-dominated environments (Tilton, 2017).

Employee **tenure and seniority**, reflecting a spectrum of experiences and perspectives, can significantly influence attitudes towards whistleblowing within organisations. In this work, tenure and seniority are considered nearly alike, embodying a unified measure of an employee's duration and level of experience within an organisation (Stansbury & Victor, 2009). This approach stems from the assumption that both tenure and seniority similarly impact an employee's perspective on and likelihood of engaging in whistleblowing, thereby not differentiating between the two for the purposes of our analysis. Contrary to the intuitive association between long-term employment, loyalty, and potential reluctance to report misconduct due to fear of retaliation or career consequences, recent scholarly discourse suggests a more nuanced relationship (Stansbury & Victor, 2009). Mesmer-Magnus & Viswesvaran (2005) argue that more senior employees, often equipped with greater organisational power and access to influential networks, are indeed more likely to engage in whistleblowing. This is especially true when the acts of wrongdoing pose severe threats to public safety, underscoring a sense of responsibility towards societal welfare over personal or internal organisational loyalties.

This perspective is further supported by a much less recent study by Sims and Keenan (1998), who contend that longer tenure may foster deeper loyalty and adherence to the organisation's ethical standards, pushing employees to act against unethical behaviour. Tilton (2017, p. 359), referencing Bishara et al. (2013), highlights and supports this viewpoint by concluding that longer organisational tenure, in addition to higher job satisfaction, is positively associated with whistleblowing intentions, challenging earlier assumptions about the protective nature of close interpersonal relationships within the organisation against whistleblowing. The understanding and connections made from research may vary depending on cultural considerations; however, this issue is indeed far more complex.

However, the dynamics between tenure, seniority, and whistleblowing are complex. While Dworkin & Baucus (1998) observed that internal whistleblowers often have shorter tenures and face significant challenges, including dismissal and legal repercussions, due to a lack of managerial support, external whistleblowers, with similarly limited organisational tenure, tend to provide substantial evidence that prompts organisational change and face even greater retaliation. This dichotomy emphasises the intricate interplay between an employee's position within the organisation and their likelihood to initiate whistleblowing actions. As a result of the investigation of literature on the topic of tenure and attitude and intention to blow the whistle, the authors compile the following hypothesis to be tested:

- H4a: Higher organisational tenure is negatively associated with attitudes towards whistleblowing.
- H4b: Higher organisational tenure is negatively associated with intentions towards whistleblowing.

Employees in **managerial positions** (further in text synonymized with senior positions), endowed with greater access to sensitive information and authority within an organisation, are more inclined to report wrongdoing. This inclination stems not from tenure, but from their roles, which provide both the expertise and the procedural channels necessary to effectively address misconduct. Mesmer-Magnus & Viswesvaran (2005) have highlighted that individuals in senior-level roles are more likely to engage in whistleblowing, attributed to their enhanced access to critical organisational information and a higher probability of occupying roles that allow for direct action against unethical practices. Further supporting this, research has demonstrated that whistleblowers typically possess a high degree of education and are often found in higher-ranking positions within the organisational structure, enabling them to navigate the complexities of reporting misconduct more effectively (Mesmer-Magnus & Viswesvaran, 2005; Sims & Keenan, 1998). On the other hand, in higher positions, there may be a greater risk of retaliation due to a perceived betrayal of power structures and a desire to maintain the organisation's image (Mesmer-Magnus & Viswesvaran, 2005).

However, it's important to note that the correlation between managerial positions and whistleblowing is not universally acknowledged. Zainol et al. (2018) found no significant correlation between management position and whistleblowing propensity, suggesting that the willingness to report unethical behaviours might be uniformly distributed across various levels of the organisational hierarchy. This divergence in findings indicates the complexity of whistleblowing behaviour and suggests that factors beyond position and tenure, such as organisational culture and individual ethics, play critical roles in influencing an employee's likelihood to blow the whistle. Considering these findings, it is evident that the relationship between tenure, seniority, or managerial function within one’s work tasks and whistleblowing is multifaceted and warrants further exploration. Rather than viewing tenure and seniority as barriers to whistleblowing, these elements may, under certain conditions, act as catalysts for ethical interventions, highlighting the importance of fostering an organisational culture that supports ethical vigilance and empowers all employees to act in the face of wrongdoing. As such, the authors intend to test the following hypothesis:

- H5a: Holding a managerial position is positively associated with attitudes toward whistleblowing.
- H5b: Holding a managerial position is positively associated with whistleblowing intentions.

Education as a contributing factor to attitudes towards whistleblowing is a complex and multifaceted aspect, encompassing various interdependencies and relations. A fundamental inquiry emerges regarding whether the level of education enables individuals to perceive ethically intricate issues through the lens of ethical frameworks and elevated standards or whether the recency of educational experiences fosters a heightened ethical consciousness. Notably, contemporary educational curricula tend to adopt a more contemporary and comprehensive approach to workplace ethics (Annisaa & Nurlaeli, 2022; Caillier, 2017; Nisar et al., 2019).

Ethics constitutes an integral component across numerous professional domains, manifesting varying degrees of integration, from routine engagement to critical junctures involving unexpected incidents and ethical quandaries. In the present study, the authors observe divergent approaches to examining whether education, specifically the level thereof (e.g., primary, lower secondary, upper secondary, etc.), exerts influence on the propensity to engage in whistleblowing activities. Some scholars, such as Annisaa & Nurlaeli (2022), Caillier (2017), and Cho & Song (2015), posit that education holds considerable significance in whistleblowing studies. They argue that individuals with recent and comprehensive educational backgrounds are more inclined to engage in whistleblowing activities. Conversely, Sims & Keenan's (1998) seminal but comparatively dated study suggests that education's role in whistleblowing contexts is negligible. This perspective introduces complexity to the relationship between education and whistleblowing, raising questions about whether educational attainment directly influences whistleblowing tendencies or if other intrinsic traits, such as a strong work ethic and transparency culture in an organisation, play a more significant role. Given the robust credibility of the scholarly work by Cho & Song (2015), which is evidenced by a high citation index and widespread recognition within the academic community, the authors posit that higher levels of education correlate positively with attitudes towards whistleblowing. Consequently, individuals with greater educational attainment are more likely to possess the intention to blow the whistle. Following the general findings on the relation between level of education and intention and attitude towards whistleblowing, the authors intend to test the following:

- H6a: Higher levels of education are positively associated with attitudes towards whistleblowing.
- H6b: Higher levels of education are positively associated with intentions towards whistleblowing.

Building upon the detailed examination of **individual-level demographic factors** influencing attitudes towards whistleblowing, it is essential to consider how these insights lay the foundation for proposing specific hypotheses. The preceding discussion underscores that while attributes such as age, gender, and tenure play significant roles, they intertwine complexly with an individual's whistleblowing disposition. This nuanced interplay suggests that different demographic and role-based characteristics may predict varying levels of propensity towards whistleblowing actions within an organisation. While some studies suggest a potential inclination towards whistleblowing with increasing age, the historical and cultural context in Estonia might lead older employees to hold more negative attitudes and lower intentions towards whistleblowing, influenced by their past experiences during the Soviet era. Similarly, the varied influences of gender, tenure, managerial position, and level of education reveal a complex interplay between individual characteristics and whistleblowing propensities. These individual factors, though significant, are part of a broader organisational context that also shapes whistleblowing behaviour. As such, it is essential to extend the analysis to organisational factors that can either facilitate or hinder the whistleblowing process.

The second category of factors is dissected below – **organisation-level factors**. Previous research exploring the whistleblowing phenomenon agrees that certain industries, mostly in the public **sector** (Iko Afe et al., 2019; Lee et al., 2021; Mehrotra et al., 2020; Park et al., 2014), but not limited to, are prone to transparent, fair, and ethical takes on the governance and management processes. Referencing Taylor's (2018) work, Lee et al. (2021) state that **public sector** employees have better relationships based on peer trust and are thus more likely to be sure of the magnitude of the consequences following a non-ethical behaviour occurrence. On the other hand, in the **private sector**, though the innate motivation to blow the whistle might not be high, and can largely depend on the culture – both internal and external, businesses create a prerequisite in the form of formalised training, anonymous reporting systems, and reward systems to incentivize action, thus contributing to the higher likelihood of the intent being followed up by an action (Berndtsson et al., 2018; Brewer, 1997; Cooper, 2022; Kang, 2022; Nayır et al., 2018; Sharma et al., 2018).

Whistleblowing plays a vital role in all sectors since it has the potential to prevent loss of life, rebuild public confidence, and enhance the efficiency of services. The whistleblower's choices may be influenced by the centralised and hierarchical management structure and political control of the public sector. Federal legislation governs the procedure, which involves numerous steps. In the public sector, whistleblowing is often associated with a perspective that values the well-being of others and oneself. (Latan et al., 2023)

Research conducted by Rothschild (2013) revealed that attitudes and intentions for whistleblowing varied across different sectors. Employees in the public sector have a higher propensity to report instances of misbehaviour when they see them, in contrast to those in the non-profit and private sectors. Organisational managers in all industries often make efforts to undermine or terminate whistleblowers. Given the potential for personal injury and danger, a significant majority of whistleblowers indicate a willingness to participate in whistleblowing again. Furthermore, a greater percentage of whistleblowers from non-profit organisations said that their company made changes to their organisational processes in response to their disclosures. (Rothschild, 2013) The authors intend to test the following hypothesis:

- H7a: Employees in the public sector have a more positive association with whistleblowing attitudes compared to those in the private and third sectors.
- H7b: Employees in the public sector have a more positive association with whistleblowing intentions compared to those in the private and third sectors.

In general, the study articles provide valuable insights on the unique differences and similarities in the motives and behaviours of whistleblowers in **all three sectors**. The significance of addressing organisational barriers, developing supportive environments, and promoting ethical behaviour is underscored in all sectors. Their research underscores the importance of understanding the complex aspects of whistleblowing and the necessity for customised strategies to promote openness and ethics across all sectors.

Miceli & Near's (1984) study implies that those with a deeper understanding of **misconduct reporting channels** are more motivated to report wrongdoing. In the context of whistleblowing, the terms internal and external channels refer to the methods by which individuals report wrongdoing, misconduct, or unethical behaviour within the organisation. Some studies collectively support the idea that the **availability of reporting channels** plays an essential role in influencing whistleblowing intentions (Gao et al., 2015; Mesmer-Magnus & Viswesvaran, 2005; Stansbury & Victor, 2009).

A secure whistleblowing channel is a protected platform that allows anyone inside an organisation to disclose unlawful acts or misconduct without facing any repercussions. Such methods maintain the confidentiality of the whistleblower's identity, guaranteeing a feeling of security. They have the ability to maintain anonymity even from system administrators, ensuring the whistleblower's identity remains unknown. These systems are equipped with robust encryption protocols to safeguard shared data from unauthorised intrusion. These channels are user-friendly and available to all members of the organisation, preventing any potential conflicts of interest and ensuring impartial treatment of reports. In order to protect whistleblowers from reprisals, they follow local legislation. They provide regular updates on the progress of their report, which helps to establish confidence in the system. These norms are connected to the ethical guidelines of the organisation and are endorsed by leaders, which promotes greater adoption among individuals. Channels may be established by many approaches, depending upon the requirements of the organisation.

In research conducted by Nayir et al. (2018), it was shown that organisational leaders need to give top priority to meeting international governance standards to provide safe channels for workers to report wrongdoing, whether in private or public sector organisations. This includes enhancing the efficiency of internal reporting, enacting laws to protect whistleblowers, and promoting a culture that upholds ethical standards. Providing explicit instructions on how to report misconduct and creating a culture of integrity inside the company may also help establish reliable avenues for whistleblowing.

In the context of organisational support, the availability of secure reporting channels is crucial for fostering a culture where employees feel motivated to report misconduct. Studies such as those by Gao et al. (2015) and Near & Miceli (1985) illustrate that understanding and trust in these complaint mechanisms significantly influence an employee's intention to use them. Secure reporting channels, whether outsourced or managed in-house, are integral to protecting the identities of whistleblowers and ensuring that reports are treated impartially. They play a pivotal role in shaping the attitudes and intentions of employees towards whistleblowing by providing a safe environment for disclosing unethical practices. These channels not only comply with international governance standards but also embody the organisational commitment to ethical conduct, as highlighted and supported by Nayır et al. (2018). By enhancing the efficiency of internal reporting systems and embedding these channels within the framework of organisational ethics, leaders can significantly bolster

employees' trust and willingness to report wrongdoing. This leads the authors to propose the following hypothesis:

- H8: The availability of a secure reporting channel is positively associated with the intention to whistleblow.

In conclusion, the examination of organisational determinants uncovers a complex situation where the kind of industry and the presence of reliable channels for reporting have significant impacts on attitudes and intentions regarding whistleblowing. The public sector, which is regulated by specific laws and has a commitment to the well-being of the public, often encourages a more conducive atmosphere for reporting wrongdoing, in contrast to the private sector. On the other hand, in the private sector, there are obstacles such as corporate cultures that inhibit openness. However, there have been advancements, such as formal training and anonymous reporting mechanisms, that are promoting a more favourable environment for whistleblowing. The intricate interaction of many elements in different industries highlights the significance of organisational support systems in enabling or impeding whistleblowing efforts.

Table 1. Attributes Significance in Whistleblowing Attitude and Intention Relation

Type	Attribute	Attribute Significance	Literature
Individual	**Age**	Medium/ Low	Hajiabbasi et al., (2022); Stansbury & Victor, (2009); Mesmer-Magnus & Viswesvaran, (2005); Sari et al., (2023); Sims & Keenan, (1998)
	Gender	Medium/ Low	Tilton, (2017); Nayır et al., (2018); Nisar et al., (2019); Puni & Hilton, (2020); Lee et al., (2021)
	Tenure	High	Stansbury & Victor, (2009); Mesmer-Magnus & Viswesvaran, (2005); Sims and Keenan, (1998); Bishara et al. (2013); Dworkin & Baucus, (1998)
	Managerial Position	High	Mesmer-Magnus & Viswesvaran, (2005); Sims & Keenan, (1998); Zainol et al. (2018)
	Level of Education	Medium/ High	Annisaa & Nurlaeli, (2022); Caillier, (2017); Nisar et al., (2019); Cho & Song, (2015); Sims & Keenan, (1998)
Organisational	**Sector**	Medium	Latan et al., (2023); Iko Afe et al., (2019); Lee et al., (2021); Mehrotra et al., (2020); Park et al., (2014); Taylor, (2018); Berndtsson et al., (2018); Brewer, (1997); Cooper, (2022); Kang, (2022); Nayır et al., (2018); Sharma et al., (2018); Rothschild, (2013)
	Secure Reporting Channel Availability	High	Miceli & Near, (1984); Aslam et al., (2021); Latan et al., (2023); Cho & Song, (2015); Near & Miceli, (1985); Kwon et al., (2021); Chaudhary et al., (2019); MacGregor & Stuebs, (2014); Berndtsson et al., (2018)

Source: compiled by the thesis authors based on whistleblowing attitudes and intentions' shaping factors used in the literature review section of the thesis

Building on the detailed discussions of both individual and organisational influences on whistleblowing, **Table 1** is presented to encapsulate the findings of this sub-chapter. This table systematically summarises the significance of each attribute, ranging from age and gender to sector type and managerial position, regarding their impact on whistleblowing attitudes and intentions. Each attribute's significance is evaluated based on the literature reviewed, offering a clear visual representation of how these factors interact to influence whistleblowing outcomes. This structured summary provides a valuable reference for further scholarly inquiry into the multifaceted nature and interdependencies of whistleblowing. In conclusion, Table 1 provides an informative summary of individual and organisational factors that influence attitudes and intentions towards whistleblowing.

In drawing this literature review to a close, it is evident that whistleblowing remains a significant yet complex issue within modern organisations. The review has systematically dissected the multifarious individual and organisational factors that shape attitudes and intentions towards whistleblowing, in alignment with the study's objective to elucidate these influences among employees in Estonia. As encapsulated in Table 1, the synthesis of these factors offers a coherent overview of their impact, providing a robust foundation for the forthcoming empirical exploration. Moving forward, the Methodology and Data section will detail the procedures and analytical techniques employed to further investigate these relationships. This transition marks a shift from theoretical exploration to empirical validation, aiming to substantiate the insights garnered through the literature with concrete data, thus fulfilling the study's overarching aim to delineate the determinants of whistleblowing within diverse organisational contexts.

3. Methodology and Sample

3.1. Methodology

This chapter outlines the methodology employed in this thesis, investigating how the collected data is analysed against a theoretical framework and applied in the implementation of the research. Utilising the Theory of Planned Behaviour (TPB), the study examines whistleblowing attitudes and intentions through multivariate regression models, addressing both individual and organisational influences.

Data for this study were sourced from the biannual Labour Market and Compensation Survey conducted by the Salary Information Agency, which records the highest participation rates in Estonia. The survey captures responses from both employed individuals and job

seekers, collected via the agency's database and partner organisations such as CVKeskus.ee. The survey's optional nature results in variable response rates, with sample sizes typically exceeding 10,000 participants. The data was obtained for thesis purposes and represents a dataset derived from the questionnaire with approximately 100 questions, representing only a small portion of the questionnaire's data. Data used is anonymised (has answer IDs) and is non-identifiable, following the sensitive data handling guidelines for social studies research. The survey is taking place biannually, in autumn and spring. Core questions regarding salary, benefit packages, organisational culture, work commitment, etc., are recurring, while whistleblowing questions added to the 2023 questionnaire by the authors are new in the context of the survey.

The questionnaire for this study was distributed by the Salary Information Agency, which leveraged its extensive database from previous surveys. Sources for this database include CVKeskus, an online job market website, along with various mailing lists and other communication channels such as word of mouth, ensuring a diverse and comprehensive reach. The survey was conducted exclusively online, facilitating ease of participation and data collection. Regarding data analysis, STATA software was employed due to its robust capabilities in handling complex multivariate regression models. In the analysis phase, any instances of missing data were systematically excluded to maintain the integrity and reliability of the statistical outputs.

To explore whistleblowing attitudes and intentions, participants were presented with a scenario where they had to decide whether to report a colleague who they knew had stolen valuable work equipment:" In an organisation, some essential work equipment has gone missing, which has resulted in a significant delay and would cost at least 1,000 EUR to replace. Employee X knows with certainty that his work colleague Y has stolen the equipment. Employee X tried to talk to his colleague about it, but the colleague denied having anything to do with it.". Responses to this scenario are critical for assessing whistleblowing intentions and attitudes. Data from the survey are particularly focused on sections of the questionnaire that align with the TPB, incorporating variables like age, sex, tenure, managerial position, education level, job sector, organisational size, and job commitment score.

The dependent variables, encapsulating attitudes towards misconduct, non-reporting, and whistleblowing intentions, were coded on an ordinal scale. Responses were assigned codes ascending from 1 (Attitude: "Strongly disapprove", Intention "Definitely not") to 5

(Attitude: “Strongly approve”, Intention: „Definitely yes"), with 1 symbolising strong disapproval and 5 denoting strong approval. The coding reflects the degree of respondents' approval or disapproval regarding non-reporting of misconduct and their propensity to engage in whistleblowing.

In the individual variables section, the authors used a systematic approach to reflect sample characteristics. Age was categorised and sequentially coded from 1 (the youngest age group) to 6 (the oldest age group). For sex, a binary coding scheme was employed: 1 for males and 2 for females. The authors also coded tenure, managerial positions, and education levels to capture the gradations within each variable, aligning with increasing experience, authority, and educational achievement. The organisational variable context was translated into numerical codes to reflect different sector characteristics. Public sector entities received a code of 1, private companies were coded as 2, and non-profit organisations were designated with a code of 3. The presence of a secure channel for reporting misconduct was marked with a binary code, with 0 indicating absence or unknown status and 1 indicating presence.

Control variables, such as questionnaire language and job location, were also coded to control for additional variance within the data. Responses were coded 1 for questionnaires completed in Estonian and 2 for those in Russian. Job location was categorised as a binary variable: 1 for respondents working in Estonia and 0 for those employed elsewhere.

Adopting the NACE Rev. 2 classification system (NACE Rev. 2 - Statistical Classification of Economic Activities, n.d.), the authors assigned codes to different industries based on the survey responses, each corresponding to its specific sector. For organisational commitment, the authors used a scale from 1, indicating strong disagreement, to 5, representing strong agreement, based on responses to a set of engagement statements.

In the analytical framework of this master's thesis, the authors incorporated a numerical coding system for the survey responses to facilitate multivariate regression analysis. Assigning a numerical value to each categorical and ordinal response enabled the conversion of qualitative survey data into a quantifiable format (see Appendix B). This coding was critical for subsequent statistical interpretation and analysis.

The coding of the data served as the basis for the two regression analysis models, conducted using Stata software (Statistical Software for Data Science | Stata, n.d.). Through the two models, 1) **whistleblowing attitude** and 2) **whistleblowing intention**, the thesis authors explored the relationship between the dependent and independent variables, providing insights into the factors influencing whistleblowing phenomena in organisations.

The attitude regression model is as follows:

$$\textbf{Attitude Towards Whistleblowing} = \beta_0 + \beta_1(\text{age}) + \beta_2(\text{sex}) + \beta_3(\text{tenure}) + \beta_4(\text{managerial position}) + \beta_5(\text{level of education}) + \beta_6(\text{sector}) + \beta_7(\text{questionnaire language}) + \beta_8(\text{job location}) + \beta_9(\text{industrial classification}) + \beta_{10}(\text{organisational employee count}) + \beta_{11}(\text{organisational commitment}) + \varepsilon$$

where $\boldsymbol{\beta_0}$ is an intercept, representing the baseline attitude towards whistleblowing when all independent variables are held at zero, $\boldsymbol{\beta_1}$ **-** $\boldsymbol{\beta_{11}}$ represent the coefficients for each independent and control variable in the equation, reflecting their individual contribution to the dependent variable, and $\boldsymbol{\varepsilon}$ represents the error term of the equation.

Drawing on the Theory of Planned Behaviour, which emphasises the significant influence of attitudes on intentions, this thesis incorporates whistleblowing attitude as a pivotal interacting variable in the analysis of whistleblowing intention. This approach underscores the dynamic role of attitude, as it not only contributes independently but also modifies the effects of individual-level and organisational-level factors within the regression model. Consequently, the model for whistleblowing intention is formulated as follows: whistleblowing intention is influenced by attitude towards whistleblowing, age, sex, tenure, managerial position, level of education, and sector, plus the effects of secure reporting channel availability, questionnaire language, job location, industrial classification, organisational employee count, and organisational commitment, added to the error term.

$$\textbf{Whistleblowing Intention} = \beta_0 + \beta_1(\text{attitude towards whistleblowing}) + \beta_2(\text{age}) + \beta_3(\text{sex}) + \beta_4(\text{tenure}) + \beta_5(\text{managerial position}) + \beta_6(\text{level of education}) + \beta_7(\text{sector}) + \beta_8(\text{secure reporting channel availability}) + \beta_9(\text{questionnaire language}) + \beta_{10}(\text{job location}) + \beta_{11}(\text{industrial classification}) + \beta_{12}(\text{organisational employee count}) + \beta_{13}(\text{organisational commitment}) + \varepsilon$$

$\boldsymbol{\beta_0}$ represents the intercept where all variables are zero, $\boldsymbol{\beta_1}$ **-** $\boldsymbol{\beta_{13}}$ represent the coefficients for each independent and control variable in the equation, reflecting their individual contribution to the dependent variable, and $\boldsymbol{\varepsilon}$ represents the error term of the equation.

Theoretical views may provide valuable insights into the interpretation of factors like attitude and intention in the context of whistleblower behaviour. To remind the reader, **attitude** refers to an employee's inclination or predisposition towards a certain behaviour, which includes their ideas about the potential outcomes or repercussions of that behaviour. **Intention**, however, refers to the deliberate desire to engage in a certain behaviour, which is shaped by attitudes, subjective standards, and perceived behavioural control. The Theory of

Planned Behaviour (TPB) is used to comprehend and measure the influence of these factors on whistleblowing intentions in particular work settings, enhancing the understanding and enabling the practical implementation of theoretical notions.

3.2. Sample

The collected data is part of a larger Employees' Labour Market and Salary Survey of employees in Estonia, which was conducted in the autumn of 2023. The poll provided anonymity, guaranteeing that contact information was not linked to the replies. The ultimate dataset covers cross-sectional, individual-level data (n = 8031).

Table 2. Demographic and Employment Characteristics of the Study Sample

Category	Percentage
Age Distribution	
16-24 years	3.0%
25-34 years	17.0%
35-44 years	25.8%
45-54 years	24.2%
55-64 years	22.5%
65-74 years	7.4%
Sex	
Men	36.6%
Women	63.4%
Tenure	
Less than a year	14.3%
1–2 years	19.0%
3–4 years	14.6%
5–9 years	19.6%
10 or more years	32.5%
Management Responsibility	
Managerial position	30.0%
Non-managerial position	70.0%
Educational Qualifications	
Higher education (inc. professional higher education)	56.4%
No higher education	43.6%
Sector of Employment	
Private companies	60.2%
State institutions	23.1%
Non-profit organisations	11.2%
Other sectors	5.5%
Questionnaire Correspondence Language	
Estonian	86.7%
Russian	13.3%
Size of the Organisation	
Medium-sized (50-249 employees)	29.0%
Large-sized (250+ employees)	29.0%
Other sizes	42.0%

Source: compiled by the thesis authors based on Employees' Labour Market and Salary Survey

As evident from the preceding data in **Table 2**, the demographic and professional characteristics of our sample highlight significant trends and distributions across several categories. The majority of respondents completed the questionnaire in Estonian, underscoring the linguistic backdrop of the study region. A closer examination of age distributions shows a workforce predominantly in the mid-career stages, with the 35-44 and 45-54 age groups representing nearly half of the participants. Gender distribution favours females, and a significant portion of the sample possesses higher education qualifications, reflecting a well-educated workforce. These insights are crucial for understanding the professional dynamics and demographic makeup of our study population."

It is also important to note that the working-age population for this study is defined as those aged 16 to 74, in accordance with the guidelines outlined by Statistics Estonia (*Kas tööea mõiste on ajale jalgu jäänud?*, n.d.). This definition helps to standardise the demographic scope of the analysis, ensuring that the findings are applicable to the employable population.

In the analysis of questionnaire responses within our study sample, the descriptive statistics reveal significant findings regarding attitudes towards non-reporting of misconduct and whistleblowing intention. The average approval for non-reporting misconduct is notably low, with a mean score of 1.85 on a 1–5 scale. Remarkably, the highest score recorded for whistleblowing intention was 4, below the possible maximum of 5, indicating an absence of the highest level of intent among participants. Further, the data demonstrate a majority presence of one gender, with an average score of 1.637, and a prevalent trend towards mid-level educational achievement, evidenced by an average score of 2.503. Organisational commitment appears robust, with an average score of 3.91, underscoring a strong sense of affiliation within their organisations. Detailed statistical data can be found in **Appendix C**.

Moving to Chapter 4, this demographic context becomes essential for analysing whistleblowing attitudes and intentions. Employing multivariate regression models, the forthcoming analysis connects these workforce characteristics with the Theory of Planned Behaviour (TPB), examining how demographic factors influence whistleblowing attitudes and intentions within organisational settings.

4. Results and Discussion

The authors compile two regression models, one for each of the dependent variables: whistleblowing attitude (in the study, the authors use attitude towards non-reporting as a dependent variable, Table 3) and whistleblowing intention (Table 4). The authors first test the regression for the attitude of whistleblowing. Later in the text, they use the same methods and questions to test the validity of the model: the multicollinearity test and regression model testing, focusing on the significance of the variable, the sign of the coefficients, and the strength of the relationships.

Table 3. Attitude Towards Non-Whistleblowing Regression Model Outcomes

Source	SS	df	MS			
Model	140.193	39	3.595	Number of obs	=	5,168
Residual	3055.175	5,128	0.596	F (39, 5128)	=	6.03
				Prob > F	=	0.000
Total	3195.368	5,167	0.618	R-squared	=	0.044
				Adj R-squared	=	0.037
				Root MSE	=	0.772

Attitude Towards Non-reporting a Misconduct		Coeff.	Std. err.	t	P>t	[95% conf.	interval]
Individual Level Independent Variables							
Age							
	2	-0.0585	0.0865	-0.680	0.499	-0.2281	0.1110
	3	-0.0349	0.0859	-0.410	0.684	-0.2034	0.1335
	4	-0.0910	0.0862	-1.060	0.291	-0.2600	0.0780
	5	-0.0477	0.0874	-0.550	0.586	-0.2191	0.1238
	6	0.0528	0.0993	0.530	0.595	-0.1418	0.2475
Sex							
	2	0.0047	0.0249	0.190	0.852	-0.0442	0.0535
Tenure							
	2	-0.0707	0.0383	-1.850	0.065	-0.1459	0.0044
	3	-0.0823	0.0404	-2.040	0.042*	-0.1616	-0.0031
	4	-0.0626	0.0384	-1.630	0.103	-0.1378	0.0126
	5	-0.0447	0.0367	-1.220	0.223	-0.1166	0.0272
Managerial Position							
	1	-0.0938	0.0240	-3.900	0.000***	-0.1409	-0.0467
Level of Education							
	2	-0.0797	0.0595	-1.340	0.181	-0.1963	0.0370
	3	-0.0926	0.0593	-1.560	0.119	-0.2088	0.0237
Organisational Level Independent Variables							
Sector							
	2	-0.0495	0.0382	-1.300	0.195	-0.1244	0.0253
	3	0.0425	0.0605	0.700	0.483	-0.0761	0.1610
Control Variables, i.e., questionnaire language, job location, industrial classification, organisational employee count, and organisational commitment, are included in the model.							
_cons		2.8611	0.1692	16.910	0.000	2.5294	3.1928

* indicates a p-value < 0.05, signifying statistical significance.

*** indicates a p-value < 0.001, signifying the highest level of statistical significance.

Source: compiled by the thesis authors

The authors start with an evaluation of **multicollinearity** among the predictors in the whistleblowing attitude regression model. Diagnostic results, included in **Appendix D**, indicated that the **variance inflation factor (VIF)** values for all variables remained below the critical threshold of 5, suggesting that multicollinearity is not a significant issue within the model. The mean **VIF** was calculated at **1.07**, further confirming the independence of the variables and ensuring the reliability of the regression outputs. The authors then proceeded with further analysis of the regression model below.

The regression model **(Table 3)** for analysing attitudes towards non-reporting misconduct showed significant statistical fit ($F(11, 5156) = 17.73$, $p < 0.0001$). The model's R-squared value was 0.037, indicating that 3.7% of the variability in attitudes towards non-reporting is explained by the included predictors. The authors acknowledge that attitude cannot be fully explained by sociodemographic and social attributes alone. A deeper analysis of subjective norms and perceived behavioural control is required, which represents a limitation of this study as it does not focus on the more nuanced and cognitive aspects of attitude.

The authors report that not all factors were significant; for example, H2a: “Higher age ranges are negatively associated with employee attitudes towards whistleblowing.”. The results of the regression analysis indicate that this hypothesis cannot be supported, as the coefficients for different “**Age**” groups did not consistently demonstrate a significant negative impact on attitudes towards whistleblowing ($p > 0.05$). This may suggest that other factors, such as individual ethics or organisational culture, play more critical roles in shaping these attitudes, irrespective of age. The authors cannot accept Hypothesis 2a.

The same applies to H3a: “Female employees exhibit more positive attitudes towards whistleblowing compared to their male counterparts.” The analysis from the regression model reveals that “**Sex**” does not significantly impact whistleblowing attitudes, as indicated by the **non-significant coefficient** for sex ($p = 0.852$). This outcome suggests that attitudes towards whistleblowing are not predominantly influenced by gender alone. It highlights the need for organisational strategies that address whistleblowing across all demographics, focusing instead on broader ethical education and support systems that transcend gender differences.

For hypothesis 4a: “Higher organisational tenure is negatively associated with attitudes towards whistleblowing,” contrary to expectations, higher “**Organisational Tenure**” does not significantly correlate with attitudes towards whistleblowing in most

categories. The coefficients for various tenure categories were largely non-significant, except for category 3 (2-4 years of tenure), which showed a significant negative coefficient (coefficient = -0.0823, p = 0.042). This indicates that employees with 2-4 years of tenure have a stronger positive attitude towards whistleblowing compared to those with less than a year of tenure. However, the other categories do not show substantial evidence that longer tenure diminishes whistleblowing propensity. Therefore, we cannot fully accept hypothesis 4a, as the evidence is not consistently significant across all tenure categories.

On the other hand, hypothesis H5 can be accepted. For **"Managerial Position,"** the authors posited the hypothesis "H5a: Holding a managerial position is positively associated with attitudes towards whistleblowing." The analysis demonstrated that holding a managerial position correlates negatively with the approval of non-reporting, as evidenced by a coefficient of -0.0938 with a p-value of less than 0.001. This result indicates that individuals in managerial roles are less likely to approve of non-reporting behaviours, implicitly suggesting they are more inclined to support whistleblowing. This finding leads to an acceptance of the hypothesis. This outcome is consistent with existing literature, which suggests that employees in managerial positions, endowed with greater access to sensitive information and authority within an organisation, are more inclined to report wrongdoing. This inclination stems not from tenure but from their roles, which provide both the expertise and the procedural channels necessary to effectively address misconduct (Mesmer-Magnus & Viswesvaran, 2005). Research has shown that whistleblowers are often found in higher-ranking positions within the organisational structure, enabling them to navigate the complexities of reporting misconduct more effectively (Mesmer-Magnus & Viswesvaran, 2005; Sims & Keenan, 1998). Furthermore, the complex nature of whistleblowing behaviour and the potential risks of retaliation that higher positions might face underscore the multifaceted and potentially catalytic role of senior roles in promoting ethical interventions within organisations.

However, it's crucial to note that the correlation between managerial positions and whistleblowing is not universally acknowledged, and findings like those of Zainol et al. (2018), which found no significant correlation, suggest that the willingness to report unethical behaviours might be uniformly distributed across various levels of the organisational hierarchy. This divergence in findings highlights the complexity of whistleblowing behaviour and suggests that factors beyond position and tenure, such as organisational culture and individual ethics, play critical roles in influencing an employee's likelihood to blow the

whistle. Thus, while tenure and seniority may not always act as direct facilitators of whistleblowing, under certain conditions, they may serve as catalysts for ethical interventions, emphasising the importance of fostering an organisational culture that supports ethical vigilance and empowers all employees to act in the face of wrongdoing. This nuanced understanding underscores the complexity of whistleblowing dynamics and the critical role organisational contexts play in shaping these behaviours.

As for the remaining hypotheses 6a, "Higher levels of education are positively associated with attitudes towards whistleblowing," and 7a, "Employees in the public sector have a more positive association with whistleblowing attitudes compared to those in the private and third sectors," they also remain irrelevant to the discussion. The regression model does not support the hypothesis that higher levels of education positively influence whistleblowing attitudes. The coefficients related to "**Education Levels**" showed no significant positive impact, underscoring that educational attainment alone does not necessarily predict a proactive whistleblowing attitude. This indicates the potential need for targeted ethical training and organisational culture initiatives that encourage whistleblowing behaviours across all educational backgrounds. Hypothesis 7a finds limited support in the data. While there were some variations in coefficients across different "**Sectors**", the overall impact of working in the public sector on whistleblowing attitudes was not consistently more positive compared to the private or third sectors. This mixed result suggests that sector-specific factors alone may not be sufficient to enhance whistleblowing attitudes significantly. It points towards the necessity of cultivating a supportive whistleblowing environment through comprehensive policies and ethical standards that are consistently applied across all sectors.

In the evaluation of control variables within the regression model for attitudes towards non-reporting misconduct, several interesting relationships were observed that provide deeper insights into the factors influencing whistleblowing behaviour. The variable indicating "**Organisational Commitment**" showed a significant negative relationship with the attitude towards non-reporting, as evidenced by a coefficient of -0.1507 and a p-value of less than 0.001. This suggests that higher levels of commitment to the organisation are associated with a greater likelihood of disapproving of non-reporting, which could be interpreted as an increased propensity to report wrongdoing.

The regression analysis indicated a mixed impact of different **"Industrial Classifications**" on attitudes towards non-reporting, with most categories showing non-significant effects ($p > 0.05$). However, specific sectors like public administration and defence (code 23, showed a significant negative coefficient (-0.1833, $p = 0.029$), suggesting that employees in these sectors are more likely to disapprove of non-reporting. The variable

"Organisational Employee Count" also showed a notable relationship, with larger organisations (250 or more employees) associated with a greater disapproval of non-reporting, reflected by a coefficient of -0.0954 and a p-value of 0.016.

As Table 3 does not include a detailed view of the control variables, it is noted that these variables are included in the model. Readers can turn to Appendix E to see the results for control variables in that section.

Table 4. Whistleblowing Intention Regression Model Outcomes

Source	SS	df	MS			
Model	334.537	41	8.159	Number of obs	=	4,512
Residual	1171.660	4,470	0.262	F (41, 4470)	=	31.13
				Prob > F	=	0.000
Total	1506.197	4,511	0.334	R-squared	=	0.222
				Adj R-squared	=	0.215
				Root MSE	=	0.512

Whistleblowing Intention		Coeff.	Std. err.	t	P>t	[95% con. interval]	
Attitude Towards Non-Reporting a Misconduct		-0.3154	0.0105	-30.050	0.000***	-0.3360	-0.2948
Individual Level Independent Variables							
Age							
	2	-0.0579	0.0596	-0.970	0.331	-0.1748	0.0589
	3	-0.0901	0.0593	-1.520	0.128	-0.2063	0.0261
	4	-0.1298	0.0595	-2.180	0.029*	-0.2466	-0.0131
	5	-0.1476	0.0605	-2.440	0.015*	-0.2663	-0.0290
	6	-0.1398	0.0693	-2.020	0.044*	-0.2757	-0.0039
Sex							
	2	0.0328	0.0177	1.860	0.063	-0.0018	0.0675
Tenure							
	2	0.0307	0.0271	1.130	0.257	-0.0223	0.0838
	3	0.0242	0.0286	0.850	0.398	-0.0319	0.0802
	4	0.0062	0.0271	0.230	0.819	-0.0470	0.0594
	5	-0.0286	0.0261	-1.100	0.274	-0.0797	0.0226
Managerial Position							
	1	0.0862	0.0170	5.080	0.000***	0.0529	0.1195
Level of Education							
	2	-0.0083	0.0447	-0.180	0.853	-0.0959	0.0794
	3	0.0316	0.0444	0.710	0.476	-0.0555	0.1188
Organisational Level Independent Variables							
Sector							
	2	0.0279	0.0271	1.030	0.303	-0.0252	0.0809
	3	0.0288	0.0432	0.670	0.505	-0.0558	0.1134
Secure Reporting Channel Availability							
	1	0.0892	0.0171	5.210	0.000***	0.0556	0.1227
Control Variables, i.e., questionnaire language, job location, industrial classification, organisational employee count, and organisational commitment, are included in the model.							
_cons		3.6638	0.1261	29.060	0.000	3.4167	3.9110

* indicates a p-value < 0.05, signifying statistical significance.

*** indicates a p-value < 0.001, signifying the highest level of statistical significance.

Source: compiled by the thesis authors

In the second model, "**Whistleblowing Intention**" (**Table 4**), authors replicate the analysis procedures. All variables, except the additional "Attitude to Non-reporting misconduct" and "Secure Whistleblowing Channel", remain the same. The thesis authors start with an evaluation of multicollinearity among the predictors in the whistleblowing intention regression model. Diagnostic results, included in **Appendix F**, indicated that the variance inflation factor (**VIF**) values for all variables remained below the critical threshold of 5, suggesting that multicollinearity is not a significant issue within the model. The mean VIF was calculated at **1.08**, further confirming the independence of the variables and ensuring their reliability.

The regression analysis presented in Table 4 highlights several key findings regarding the factors influencing whistleblowing intention. The model demonstrates a significant overall fit with an **F-statistic** of **31.13** and a probability value of less than **0.0001**, indicating that the model is statistically significant. The **R-squared** value of **0.222** suggests that approximately 22.2% of the variability in whistleblowing intention can be explained by the predictors included in the model.

The application of the Theory of Planned Behaviour (TPB) to whistleblowing in this thesis is supported by a detailed analysis of attitudes and intentions within organisational settings. The primary hypothesis, H1, states that "The attitude towards whistleblowing is positively associated with whistleblowing intention." This hypothesis is foundational, asserting that a positive attitude towards whistleblowing correlates directly with the intention to act upon witnessing unethical behaviour. The regression analysis revealed a significant negative coefficient for the independent variable "**Attitude Towards Non-Reporting a Misconduct**" (coefficient = -0.3154, $p = 0.000$). Given that the variable "Attitude Towards Non-reporting a Misconduct" is inversely coded (where a higher score indicates a more positive attitude towards non-reporting), this result substantiates that a negative attitude towards non-reporting (i.e., a positive attitude towards reporting) is strongly associated with a higher whistleblowing intention. The statistical significance ($p < 0.001$) of this coefficient confirms the robustness of this relationship and supports H1. This empirical evidence corroborates the hypothesis that a positive attitude towards reporting misconduct is indeed positively associated with the intention to whistleblow. This finding aligns with TPB, which posits that an individual's attitude towards a behaviour significantly influences their intention to engage in that behaviour (Ajzen, 1991; Lee et al., 2021). Therefore, the analysis strongly

supports the acceptance of H1, validating the use of TPB in exploring whistleblowing attitudes and intentions within the thesis. With H1 accepted, the research can now proceed to a more detailed examination of other elements within the TPB framework, such as subjective norms and perceived behavioural control. Although these were not the primary focus of this current analysis, further examination could enrich our understanding of the interplay between individual and organisational factors that shape whistleblowing behaviour (Miceli & Near, 1985; Park & Blenkinsopp, 2009).

Investigating the intention to blow the whistle, the authors initially dissect the individual-level variables, such as age, sex, tenure, managerial position, and level of education. The coefficients for "**Age**" categories (4, 5, and 6) indicate a significant negative association between age and whistleblowing intention, with values of -0.1298 ($p = 0.029$), -0.1476 ($p = 0.015$), and -0.1398 ($p = 0.044$), respectively. This supports the hypothesis "H2b: Higher age ranges are negatively associated with employee intentions towards whistleblowing." The negative correlation suggests that older employees may have lower intentions to report misconduct, possibly due to a higher perceived risk of retaliation or a greater sense of loyalty to their organisation (Sims & Keenan, 1998). This finding is consistent with the work of Ahmad et al. (2012), who found that younger employees are generally more willing to engage in whistleblowing activities. Thus, the authors partially accept H2b. Interestingly, even though the attitudinal regression model showed that older age categories did not have substantially differing attitudes towards whistleblowing, the intentional regression model reveals a tendency for older employees to have a more negative intention to blow the whistle. This indicates that while older employees might not feel differently about whistleblowing in theory, their willingness to act on such attitudes is significantly lower.

The coefficient for "**Sex**" is 0.0328 ($p = 0.063$), which is not statistically significant at the 0.05 level but indicates a potential positive trend. This does not fully support the hypothesis "H3b: Female employees demonstrate more positive intentions towards whistleblowing compared to their male counterparts." However, the positive trend is consistent with the findings by Nayır et al. (2018) and Nisar et al. (2019), which suggest that women may be more ethically sensitive and more likely to report wrongdoing due to their ethical decision-making processes. Therefore, the authors partially support H3b.

The coefficients for "**Tenure**" categories are not statistically significant across the board. For example, category 2 (1-2 years) has a coefficient of 0.0307 ($p = 0.257$), category 3

(3-4 years) has a coefficient of 0.0242 (p = 0.398), category 4 (5-9 years) has a coefficient of 0.0062 (p = 0.819), and category 5 (10 or more years) has a coefficient of -0.0286 (p = 0.274). This lack of statistical significance in all categories indicates that tenure does not have a substantial impact on whistleblowing intentions. Consequently, the authors reject the hypothesis "H4b: Higher organisational tenure is negatively associated with intentions towards whistleblowing." Interestingly, category 5 is the only one with a negative coefficient, suggesting that employees with 10 or more years of tenure might have a negative intention towards whistleblowing, although this result is not statistically significant. This implies that people in this tenure category could be less likely to whistleblow, warranting further investigation into why this specific group might differ.

The positive coefficient of 0.0862 (p = 0.000) indicates that holding a "**Managerial Position**" is positively associated with whistleblowing intentions, confirming the hypothesis "H5b: Holding a managerial position is positively associated with intentions towards whistleblowing." This finding aligns with the literature by Mesmer-Magnus & Viswesvaran (2005), who found that individuals in higher-ranking positions are more likely to report misconduct due to their greater access to sensitive information and procedural channels. Thus, the authors accept H5b.

The coefficients for "**Level of Education**" categories are not statistically significant, with values such as -0.0083 (p = 0.853) for category 2. This does not support the hypothesis "H6b: Higher levels of education are positively associated with intentions towards whistleblowing." While previous research suggested a positive correlation, this study's findings indicate no significant difference. Therefore, the authors reject H6b.

Next, the authors focus on organisational-level variables. The coefficients for "**Sector**" categories are not statistically significant, indicating that sector type may not have a significant impact on whistleblowing intentions in this model. This does not support the hypothesis "H7a: Employees in the public sector have a more positive association with whistleblowing intentions compared to those in the private and third sectors." While previous research by Latan et al. (2023) and Rothschild (2013) suggested that public sector employees might have higher whistleblowing intentions due to the sector's ethical standards, this study's findings indicate no significant difference across sectors. Therefore, the authors reject H7a.

The positive coefficient of 0.0892 (p = 0.000) supports the hypothesis, "H8: The availability of a secure reporting channel is positively associated with the intention to whistleblow." This finding underscores the importance of "**Secure Reporting Channels**" in

fostering whistleblowing intentions, as suggested by Mesmer-Magnus & Viswesvaran (2005) and Miceli & Near (1984). The availability of such channels likely enhances employees' perceived behavioural control, making them more comfortable reporting misconduct. Thus, the authors accept H8.

As previously noted, Table 4 does not include a detailed view of the control variables, but it is noted that these variables are included in the model. Readers can turn to Appendix G to see the results for control variables in that section. In addition to the model's main variables on individual and organisational levels, control variables also provide additional insights. The coefficient for "**Questionnaire Language**" - 0.0455 (p = 0.092), which is not statistically significant but suggests a potential negative trend. "**Job Location**" (coefficient = -0.0313, p = 0.582) and "**Industrial Classification**" (coefficient = 0.0356, p = 0.168) did not show significant impacts on whistleblowing intentions. However, the coefficient for "**Organisational Employee Count**" was positive (0.0554 in organisations with 50-249 employees and 0.0576 in the largest organisations with 250+ employees with p = 0.047 and 0.045 consecutive, compared to their smaller counterpart, micro-organisations with less than 10 employees), suggesting that **larger organisational size is associated with higher whistleblowing intentions**. This finding indicates that employees in larger organisations might feel more supported or less personally at risk when reporting misconduct, which is the same outcome as was in the Attitude to Non-reporting Misconduct model. Additionally, the positive coefficient for "**Organisational Commitment**" (0.0719, p = 0.000) indicates that higher organisational commitment is positively associated with whistleblowing intentions. This suggests that **employees** who are more **committed** to their organisation are also **more likely to report wrongdoing**, possibly due to a stronger alignment with organisational values and a desire to maintain ethical standards (Stansbury & Victor, 2009).

The acceptance and rejection of the hypotheses based on the regression model and supporting literature provide a nuanced understanding of the dynamics at play. The implications of these findings are significant for both organisational policy and future research, emphasising the importance of a multifaceted approach to promoting ethical behaviour and transparency within organisations.

The acceptance and rejection of the hypotheses based on the regression model and supporting literature provide a nuanced understanding of the dynamics at play. The implications of these findings are significant for both organisational policy and future

research, emphasising the importance of a multifaceted approach to promoting ethical behaviour and transparency within organisations.

Table 5. Hypotheses and Their Outcomes

Hypothesis	Status	Influence	Supporting Authors
H1: "The attitude towards whistleblowing is positively associated with whistleblowing intention."	Accepted	+	Ajzen (1991); Lee et al. (2021)
H2a: "Higher age ranges are negatively associated with employee attitudes towards whistleblowing."	Rejected	N/A	Liyanarachchi & Adler (2011); Sari et al. (2023); Sims & Keenan (1998)
H2b: "Higher age ranges are negatively associated with employee intentions toward whistleblowing."	Partially Supported	-	Ahmad et al. (2012); Hajiabbasi et al. (2022); Clark et al. (2020)
H3a: "Female employees exhibit more positive attitudes towards whistleblowing compared to their male counterparts."	Rejected	N/A	Lee et al. (2021); Puni & Hilton (2020)
H3b: "Female employees demonstrate more positive intentions towards whistleblowing compared to their male counterparts."	Partially Supported	+	Tilton (2017); Nayır et al. (2018); Nisar et al. (2019)
H4a: "Higher organisational tenure is negatively associated with attitudes towards whistleblowing."	Partially Supported	N/A	Dworkin & Baucus (1998); Mesmer-Magnus & Viswesvaran (2005)
H4b: "Higher organisational tenure is negatively associated with intentions towards whistleblowing."	Rejected	N/A	Stansbury & Victor (2009); Mesmer-Magnus & Viswesvaran (2005); Sims & Keenan (1998); Tilton (2017); Bishara et al. (2013)
H5a: "Holding a managerial position is positively associated with attitudes towards whistleblowing."	Accepted	-	Mesmer-Magnus & Viswesvaran (2005); Sims & Keenan (1998)
H5b: "Holding a managerial position is positively associated with intentions towards whistleblowing."	Accepted	+	Mesmer-Magnus & Viswesvaran (2005); Zainol et al. (2018)
H6a: "Higher levels of education are positively associated with attitudes towards whistleblowing."	Rejected	N/A	Sims & Keenan (1998)
H6b: "Higher levels of education are positively associated with intentions towards whistleblowing."	Rejected	N/A	Sims & Keenan (1998)
H7a: "Employees in the public sector have a more positive association with whistleblowing attitudes compared to those in the private and third sectors."	Rejected	N/A	Rothschild (2013); Berndtsson et al. (2018); Brewer (1997)
H7b: "Employees in the public sector have a more positive association with whistleblowing intentions compared to those in the private and third sectors."	Rejected	N/A	Rothschild (2013); Berndtsson et al. (2018); Brewer (1997)
H8: "The availability of a secure reporting channel is positively associated with the intention to whistleblow."	Accepted	+	Near & Miceli (1985); Gao et al. (2015); Nayır et al. (2018)

Source: compiled by the thesis authors

The authors conclude by creating **Table 5**, consolidating all hypotheses tested, their outcomes, and study references in hypotheses creation. By integrating these insights with the TPB, the study not only reaffirms the relevance of attitudes and intentions in predicting whistleblowing intentions but also invites further exploration into subjective norms and perceived behavioural control aspects of the TPB in future research. This could provide a more nuanced understanding of how individual perceptions and the organisational environment collectively influence the propensity to engage in whistleblowing. This ongoing analysis will continue to shape effective strategies for promoting ethical vigilance and accountability within varied organisational contexts.

Figure 3 below represents a refined version of the previously discussed theoretical framework (Figure 2), incorporating hypothesis influence signs (+/-) to indicate the direction and significance of the relationships established through the regression analysis. This visual depiction highlights how individual attributes (e.g., age, sex, tenure, managerial position, and level of education) and organisational attributes (e.g., sector type and secure reporting channels) interact with subjective norms and perceived behavioural control to shape whistleblowing attitudes. In turn, these significantly influence whistleblowing intentions. The confirmed hypotheses are marked with influence signs, illustrating the positive or negative associations that were empirically validated in the study.

Figure 3 illustrates the theoretical framework of the study based on the Theory of Planned Behaviour (TPB), highlighting the confirmed hypotheses and their relationships, and showing how individual and organisational attributes influence whistleblowing attitudes, which in turn affect whistleblowing intentions.

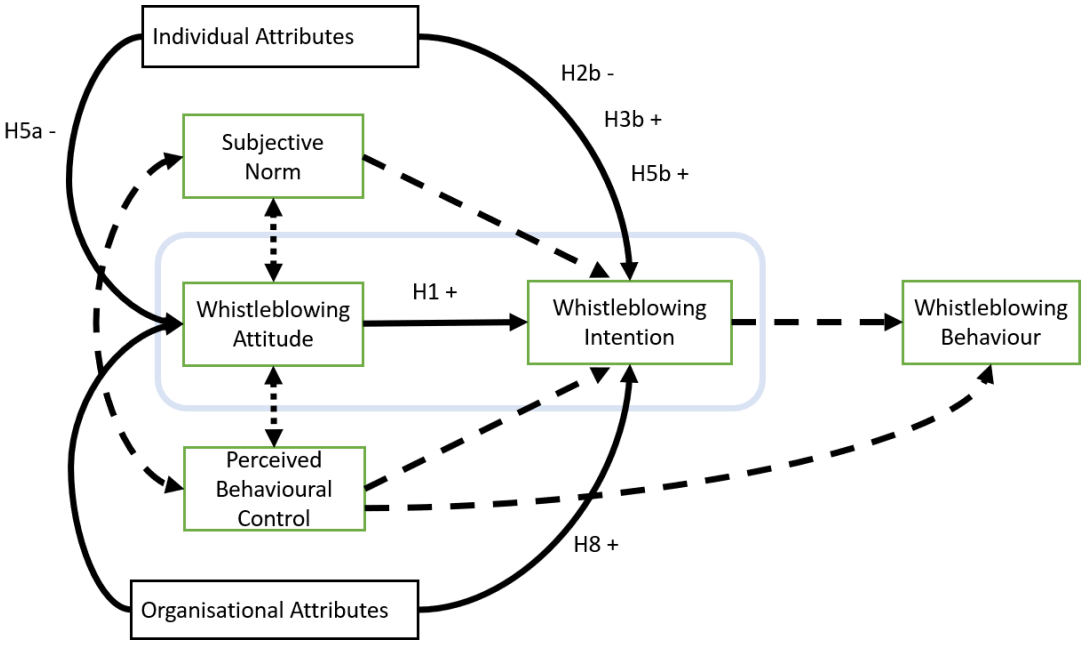


Figure 3. Theoretical Framework for the Study with Confirmed Hypotheses and Their Effects (Based on the TPB Framework)

Source: compiled by the thesis authors based on Lee et al.'s (2021) research on whistleblowing using TPB

The analysis of whistleblowing intention reveals critical insights into factors influencing an employee's decision to report misconduct. The regression results highlight the significant role of attitudes towards non-reporting, which strongly correlate with whistleblowing intention. Findings indicate that older employees exhibit lower intentions to whistleblow despite similar attitudes, suggesting a gap driven by perceived risk or loyalty. Tenure did not significantly impact intentions, but the negative coefficient for those with ten or more years of tenure suggests potential reluctance in this group. The positive association between managerial positions and whistleblowing intentions underscores the importance of authority and access to information. Additionally, secure reporting channels play a crucial role in encouraging whistleblowing, emphasising the need for robust reporting mechanisms. These findings inform strategies to foster a supportive environment for whistleblowing, addressing both individual and organisational factors.

5. Conclusion

This study provides an analysis of whistleblowing attitudes and intentions among employees in Estonia, using the Theory of Planned Behaviour (TPB) as a guiding framework. By examining both individual and organisational factors, the study offers insights into the dynamics influencing whistleblowing behaviour.

The main analytical framework hypothesis that a positive attitude towards whistleblowing is associated with a higher intention to whistleblow was strongly supported. The regression analysis confirmed that a negative attitude towards non-reporting, i.e., a positive attitude towards reporting, significantly correlates with higher whistleblowing intentions. This finding aligns with the TPB, emphasising the influence of attitudes on behavioural intentions.

The analysis revealed that older employees are less likely to report misconduct, suggesting that age might negatively influence whistleblowing intentions. This may be due to a higher perceived risk of retaliation or a stronger sense of loyalty among older workers. On the other hand gender was not a significant factor in predicting whistleblowing attitudes or intentions, though there was a slight indication that female employees might have more positive intentions towards whistleblowing.

Contrary to expectations, higher organisational tenure did not consistently correlate with attitudes or intentions towards whistleblowing. Only one tenure category showed a significant negative association with attitudes, and no significant association was found with intentions. This suggests that tenure-related factors might be less influential than previously thought. However, holding a managerial position was positively associated with both attitudes and intentions towards whistleblowing. Managers are more likely to report wrongdoing, possibly due to their greater access to information and the procedural channels necessary for addressing misconduct.

Interestingly, higher levels of education were not significantly associated with attitudes or intentions towards whistleblowing, indicating that educational attainment alone does not predict whistleblowing behaviour. Similarly, the study found no significant difference in whistleblowing attitudes or intentions across different sectors, whether public, private, or third. This suggests that sector-specific factors alone are not sufficient to enhance whistleblowing attitudes significantly.

The availability of secure reporting channels was positively associated with whistleblowing intentions, highlighting the importance of having robust mechanisms in place to support potential whistleblowers. Secure channels likely enhance employees' perceived behavioural control, making them feel safer and more comfortable reporting misconduct.

The findings of this study have several implications for organisational policy and practice. Organisations should focus on fostering positive attitudes towards whistleblowing through ethical training and creating a culture that values transparency and accountability. Special attention should be given to addressing the concerns of older employees, who may be less inclined to whistleblow due to perceived risks. While gender was not a significant predictor, it is important to ensure that whistleblowing policies are inclusive and supportive of all employees, regardless of gender.

Authors believe that training programmes for managers should emphasise their role in supporting and facilitating whistleblowing, given their influence and access to information. Although education level was not a significant factor, organisations should continue to educate employees about the importance of whistleblowing and the mechanisms available to them. Despite the lack of sector-specific differences, best practices should be adopted across all sectors, ensuring consistent application of whistleblowing policies. Establishing and maintaining secure, anonymous reporting channels is crucial for encouraging whistleblowing and protecting whistleblowers from retaliation.

Future research could expand on this study by exploring subjective norms and perceived behavioural control, providing a deeper understanding of how social and organisational pressures influence whistleblowing intentions. Longitudinal studies would help in understanding how attitudes and intentions towards whistleblowing evolve over time. Comparative studies across different cultural contexts could provide insights into how cultural norms and values impact whistleblowing behaviour. Additionally, investigating the impact of the EU Whistleblower Protection Directive on whistleblowing behaviour in Estonia and other EU countries would be valuable in assessing the effectiveness of such regulations.

In conclusion, this study enhances the understanding of whistleblowing behaviour by highlighting the significant role of attitudes and a supportive organisational environment. By addressing the identified factors, organisations can better support whistleblowing, fostering a culture of integrity and ethical behaviour. This comprehensive analysis provides a robust foundation for future research and practical applications in promoting transparency and accountability within organisations.

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Resümee

TÖÖTAJATE SUHTUMINE JA KAVATSUSED VIHJENANDMISESSE EESTIS

Keit Puh, Marju Tõkke

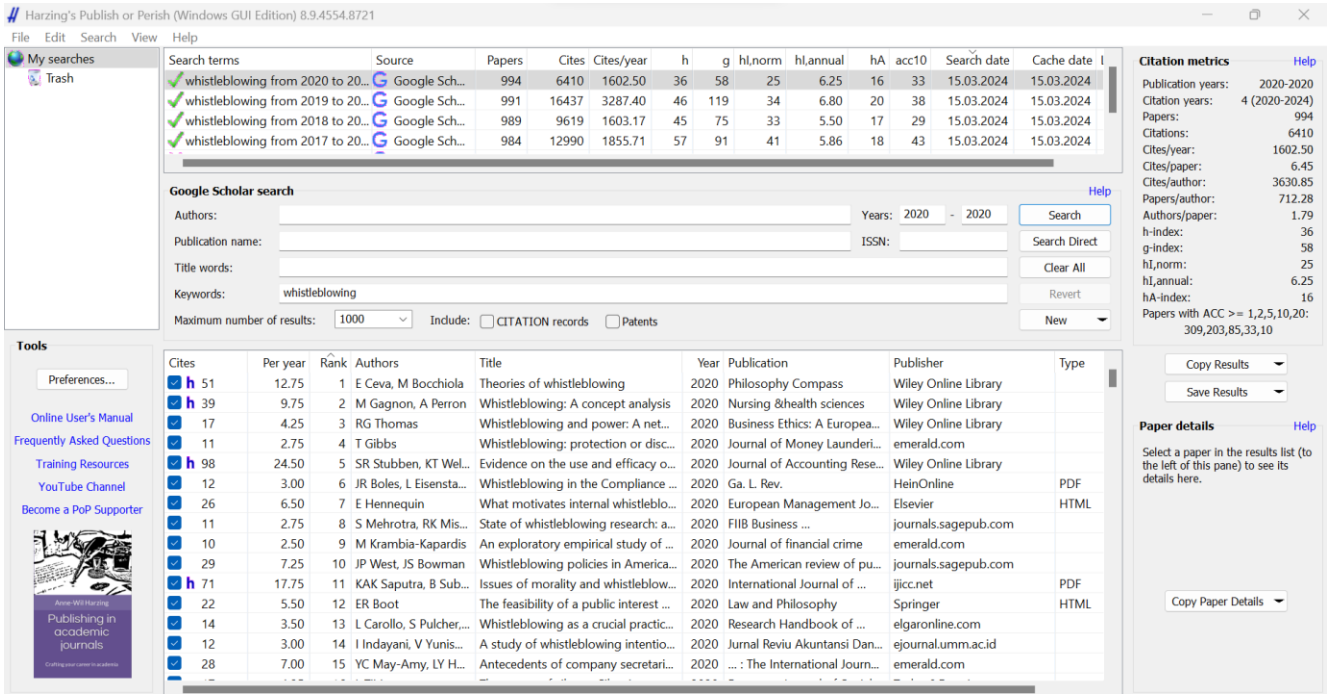
Käesolevas uuringus uuritakse tegureid, mis mõjutavad vilepuhujate hoiakuid ja kavatsusi Eestis tööealise elanikkonna seas, uurides, kuidas individuaalsed ja organisatsioonilised tegurid neid aspekte kujundavad. Kasutades 2023. aasta sügisel läbi viidud mahukat Eesti töötajate küsitlust (n = 8031), rakendavad autorid planeeritud käitumise teoorial põhinevat mitmemõõtmelist regressioonanalüüsi. Uurimistöö keskendub vilepuhumisega seotud hoiakutele ja kavatsustele, laienemata tegelikule vilepuhuja käitumisele. Analüüsist selgub, et turvalised aruandluskanalid, juhtivad ametikohad ja vanus mõjutavad oluliselt töötajate rikkumisest teatamise hoiakuid ja kavatsusi. Turvalised teavituskanalid suurendavad märkimisväärselt suuremate rikkumistest teatamise kavatsuste tõenäosust, rõhutades organisatsiooni infrastruktuuri tähtsust eetiliste tavade edendamisel. Lisaks on vanemaealistel töötajatel kalduvus rikkumistest teatamisse konservatiivsemalt suhtuda ning seda mõjutavad Eesti ajaloolises kontekstis juurdunud kultuurilised tegurid.

See uurimus aitab kaasa rikkumistest teatamise akadeemilisele diskursusele, rõhutades toetavate organisatsioonikultuuride ja tugevate eetiliste raamistike vajalikkust. Samuti rõhutab see eetilise käitumise alase jätkuhariduse ja koolituse tähtsust, et tugevdada rikkumistest teatamise kavatsusi. Keskendudes rikkumistest teatamise hoiakutele ja kavatsustele, pakub uuring väärtuslikku teavet organisatsioonidele, mille eesmärk on suurendada eetilist käitumist ja läbipaistvust mitmekesisel, areneval ettevõtlusmaastikul.

Appendix

Appendix A

Demonstration of The Usage of Publish or Perish Tool



Source: compiled by the thesis authors

Appendix B

Whistleblowing Questions Section from Salary Information Agency Survey

Parameter			Questionnaire Question(s)	Response	Coded Value
Dependent Variables	Attitude	Attitude Towards Non-Reporting A Misconduct	Employee does not notify anybody of the breach.	Strongly disapprove Disapprove Neither approve, nor disapprove Approve Strongly approve	1 2 3 4 5
	Intention	Whistleblowing Intention	Would you notify anybody in any way of the breach?	Definitely not Probably not Don't know Probably yes Definitely yes	1 2 3 4 5
Independent Variables	Individual	Age	Please indicate your age range from the options below.	16-24 25-34 25-44 45-54 55-64 65-74	1 2 3 4 5 6
		Sex	Please indicate your sex.	Male Female	1 2
		Tenure	Please indicate a tenure that best describes your main job in the organisation.	Less than a year 1–2 years 3–4 years 5–9 years 10 or more years	1 2 3 4 5
		Managerial Position	Please indicate if you currently hold a managerial position.	Yes No	1 0

		Level of Education	Please indicate your level of education (if there are several answers applicable, please select highest level achieved).	Less than basic education Basic education Vocational education after basic education Vocational secondary education General secondary education Post-secondary vocational education Professional higher education (polytechnic) Bachelor's degree Master's degree Doctoral degree	1 1 1 2 2 2 3 3 3 3
	Organisational	Sector	Please indicate what best describes the nature of your organisation.	Public company, owned by the state or local government Government department, incl. administrative authorities Local government, incl. local authorities and administrative units Juridical person in public law, incl. schools, libraries, etc. Private Company Non-profit association or foundation	1 1 1 1 2 3
		Secure Reporting Channel Availability	Please indicate if your organisation set up a secure channel for notifying about professional breaches.	No Don't know Yes	0 0 1
Control Variables	Gen[1]	Questionnaire Language	Select questionnaire language.	EE RU	1 2
	Organisational Factors	Job Location	Select which country or countries you work in.	Estonia Other	1 0
		Industrial Classification[2]	Select the primary industry classification that best describes the sector your organisation operates within.	Accommodation and food services activities Administrative, and support services Agriculture, forestry, and fishing Arts, entertainment, and recreation Construction Education	1 2 3 4 5 6

			Financial and insurance activities	7
			Human health and social work activities	9
			Manufacturing	11
			Mining and quarrying	12
			Real estate activities	13
			Transportation and storage	15
			Information and communication	16
			Electricity, gas, steam, and air conditioning supply	17
			Other services and activities	18
			Professional, scientific, and technical activities	21
			Public administration and defence	23
			Water supply, sewerage, and waste management	26
			Wholesale and retail trade; repair of motor vehicles/motorcycles	27
	Organisation Employee Count	Select the employee count for your organisation.	Less than 10	1
			10-49 employees	2
			50-249 employees	3
			250 or more	4
	Organisational Commitment	Average Employee Engagement statements: "I Like working in my organisation". "Well-being of my organisation is important to me". "I am proud to work in my organisation".	Strongly disagree	1
			Slightly disagree	2
			Neither agree, nor disagree	3
			Slightly agree	4
			Strongly agree	5

[1]General demographic information about the questionnaire filling language preference
[2]Nace Rev.2 Industrial Classification Codes (*NACE Rev. 2 - Statistical Classification of Economic Activities*, n.d.)

Source: compiled by the thesis authors and surveying organisation

Appendix C

Descriptive Statistics Table

Variable	Obs	Mean	Std. dev.	Min	Max
Dependent Variable*					
Attitude Towards Non-Reporting a Misconduct	7,909	1.850	0.808	1	5
Whistleblowing Intention	6,826	3.389	0. 582	1	4
Individual Level Independent Variables					
Age	7,856	3.685	1.278	1	6
Sex	7,570	1.637	0.481	1	2
Tenure	6,142	3.366	1.456	1	5
Managerial Position	8,031	0.229	0.420	0	1
Level of Education	7,848	2.503	0.609	1	3
Organisational Level Independent Variables					
Sector	5,671	1.721	0.534	1	3
Control Variables					
Background Characteristics					
Questionnaire Language	8,031	1.133	0.340	1	2
Job Location	8,031	0.739	0.439	0	1
Organisation's Characteristics					
Industrial Classification	6,016	13.782	7.701	1	27
Organisational Employee Count	5,799	2.783	1.010	1	4
Organisational Commitment	6,071	3.910	0.827	1	5

Source: compiled by the thesis authors

Appendix D

Attitude Towards Non-Reporting a Misconduct: Multicollinearity Test Results

Variable	VIF	1/VIF
Age	1.19	0.84337
Tenure	1.16	0.86553
Sector	1.1	0.90506
Sex	1.09	0.91374
Level of Education	1.09	0.91825
Organisational Employee Count	1.05	0.94789
Managerial Position	1.05	0.95467
Organisational Commitment	1.03	0.97043
Questionnaire Language	1.03	0.97492
Industrial Classification	1.02	0.98258
Job Location	1.01	0.98797
Mean VIF	1.07	

Source: compiled by the thesis authors

Appendix E

Attitude Towards Non-Reporting a Misconduct: Detailed Regression Table

Source	SS	df	MS			
Model	140.193	39	3.595	Number of obs	=	5,168
Residual	3055.175	5,128	0.596	F (39, 5128)	=	6.03
				Prob > F	=	0.000
Total	3195.368	5,167	0.618	R-squared	=	0.044
				Adj R-squared	=	0.037
				Root MSE	=	0.772

Attitude Towards Non-Reporting a Misconduct		Coeff.	Std. err.	t	P>t	[95% conf.	interval]
Individual Level Independent Variables							
Age							
	2	-0.0585	0.0865	-0.680	0.499	-0.2281	0.1110
	3	-0.0349	0.0859	-0.410	0.684	-0.2034	0.1335
	4	-0.0910	0.0862	-1.060	0.291	-0.2600	0.0780
	5	-0.0477	0.0874	-0.550	0.586	-0.2191	0.1238
	6	0.0528	0.0993	0.530	0.595	-0.1418	0.2475
Sex							
	2	0.0047	0.0249	0.190	0.852	-0.0442	0.0535
Tenure							
	2	-0.0707	0.0383	-1.850	0.065	-0.1459	0.0044
	3	-0.0823	0.0404	-2.040	0.042	-0.1616	-0.0031
	4	-0.0626	0.0384	-1.630	0.103	-0.1378	0.0126
	5	-0.0447	0.0367	-1.220	0.223	-0.1166	0.0272
Managerial Position							
	1	-0.0938	0.0240	-3.900	0.000	-0.1409	-0.0467
Level of Education							
	2	-0.0797	0.0595	-1.340	0.181	-0.1963	0.0370
	3	-0.0926	0.0593	-1.560	0.119	-0.2088	0.0237
Organisational Level Independent Variables							
Sector							
	2	-0.0495	0.0382	-1.300	0.195	-0.1244	0.0253
	3	0.0425	0.0605	0.700	0.483	-0.0761	0.1610
Control Variables							
Questionnaire Language							
	2	0.0542	0.0367	1.480	0.140	-0.0177	0.1261
Job Location							
	1	-0.1630	0.0870	-1.870	0.061	-0.3336	0.0077
Industrial Classification							
	2	0.0417	0.1271	0.330	0.743	-0.2075	0.2909

	3	0.0567	0.1031	0.550	0.582	-0.1454	0.2588
	4	-0.1002	0.0982	-1.020	0.308	-0.2927	0.0923
	5	-0.0469	0.0865	-0.540	0.588	-0.2164	0.1227
	6	-0.0296	0.0794	-0.370	0.709	-0.1853	0.1261
	7	-0.1311	0.0877	-1.490	0.135	-0.3030	0.0409
	9	-0.0137	0.0801	-0.170	0.865	-0.1706	0.1433
	11	-0.0876	0.0724	-1.210	0.226	-0.2295	0.0543
	12	0.1943	0.1901	1.020	0.307	-0.1783	0.5669
	13	-0.0936	0.1229	-0.760	0.446	-0.3346	0.1474
	15	-0.0672	0.0814	-0.830	0.409	-0.2268	0.0923
	16	-0.0597	0.0786	-0.760	0.448	-0.2139	0.0944
	17	-0.1016	0.0969	-1.050	0.294	-0.2915	0.0883
	18	-0.0182	0.0764	-0.240	0.812	-0.1679	0.1315
	21	-0.0594	0.1013	-0.590	0.558	-0.2579	0.1392
	23	-0.1833	0.0840	-2.180	0.029	-0.3480	-0.0187
	26	-0.0860	0.1400	-0.610	0.539	-0.3604	0.1884
	27	-0.0792	0.0729	-1.090	0.277	-0.2222	0.0638
Organisational Employee Count							
	2	-0.0050	0.0384	-0.130	0.896	-0.0803	0.0703
	3	-0.0522	0.0388	-1.340	0.179	-0.1283	0.0239
	4	-0.0954	0.0396	-2.410	0.016	-0.1731	-0.0177
Organisational Commitment							
		-0.1503	0.0136	-11.080	0.000	-0.1769	-0.1237
_cons		2.8611	0.1692	16.910	0.000	2.5294	3.1928

***** indicates a p-value < 0.05, signifying statistical significance.

****** indicates a p-value < 0.01, signifying higher statistical significance.

******* indicates a p-value < 0.001, signifying the highest level of statistical significance.

Source: compiled by the thesis authors

Appendix F

Whistleblowing Intention: Multicollinearity Test Results

Variable	VIF	1/VIF
Age	1.20	0.83522
Tenure	1.16	0.86388
Secure Reporting Channel Availability	1.11	0.89795
Sector	1.10	0.90594
Organisational Employee Count	1.10	0.90828
Sex	1.09	0.9137
Level of Education	1.08	0.92274
Organisational Commitment	1.07	0.9371
Managerial Position	1.05	0.94902
Questionnaire Language	1.03	0.97062
Attitude Towards Non-Reporting a Misconduct	1.03	0.97239
Industrial Classification	1.02	0.98211
Job Location	1.01	0.98625
Mean VIF	1.08	

Source: compiled by the thesis authors

Appendix G

Whistleblowing Intention: Detailed Regression Table

Whistleblowing Intention		Coeff.	Std. err.	t	P>t	[95% con. interval]	
Variable from the First Regression Model (Theory of Planned Behaviour Variable)							
Attitude Towards Non-Reporting a Misconduct		-0.3154	0.0105	-30.050	0.000***	-0.3360	-0.2948
Individual Level Independent Variables							
Age							
	2	-0.0579	0.0596	-0.970	0.331	-0.1748	0.0589
	3	-0.0901	0.0593	-1.520	0.128	-0.2063	0.0261
	4	-0.1298	0.0595	-2.180	0.029*	-0.2466	-0.0131
	5	-0.1476	0.0605	-2.440	0.015*	-0.2663	-0.0290
	6	-0.1398	0.0693	-2.020	0.044*	-0.2757	-0.0039
Sex							
	2	0.0328	0.0177	1.860	0.063	-0.0018	0.0675
Tenure							
	2	0.0307	0.0271	1.130	0.257	-0.0223	0.0838
	3	0.0242	0.0286	0.850	0.398	-0.0319	0.0802
	4	0.0062	0.0271	0.230	0.819	-0.0470	0.0594
	5	-0.0286	0.0261	-1.100	0.274	-0.0797	0.0226
Managerial Position							
	1	0.0862	0.0170	5.080	0.000***	0.0529	0.1195
Level of Education							
	2	-0.0083	0.0447	-0.180	0.853	-0.0959	0.0794
	3	0.0316	0.0444	0.710	0.476	-0.0555	0.1188
Organisational Level Independent Variables							
Sector							
	2	0.0279	0.0271	1.030	0.303	-0.0252	0.0809
	3	0.0288	0.0432	0.670	0.505	-0.0558	0.1134
Secure Reporting Channel Availability							
	1	0.0892	0.0171	5.210	0.000***	0.0556	0.1227
Control Variables							
Questionnaire Language							
	2	-0.0455	0.0270	-1.680	0.092	-0.0985	0.0075
Job Location							
	1	-0.0356	0.0647	-0.550	0.582	-0.1623	0.0912
Industrial Classification							
	2	0.0796	0.0926	0.860	0.390	-0.1020	0.2612
	3	0.0451	0.0755	0.600	0.551	-0.1030	0.1931
	4	-0.1310	0.0713	-1.840	0.066	-0.2708	0.0088

5	-0.0487	0.0622	-0.780	0.434	-0.1707	0.0733
6	0.0002	0.0571	0.000	0.997	-0.1118	0.1121
7	-0.0433	0.0627	-0.690	0.489	-0.1662	0.0795
9	-0.0025	0.0576	-0.040	0.965	-0.1155	0.1104
11	0.0003	0.0521	0.010	0.995	-0.1018	0.1024
12	-0.0284	0.1415	-0.200	0.841	-0.3058	0.2491
13	-0.0157	0.0870	-0.180	0.857	-0.1862	0.1549
15	0.0124	0.0586	0.210	0.833	-0.1025	0.1273
16	-0.0292	0.0561	-0.520	0.603	-0.1391	0.0808
17	-0.0426	0.0692	-0.610	0.539	-0.1783	0.0932
18	0.0214	0.0550	0.390	0.698	-0.0865	0.1292
21	0.0567	0.0708	0.800	0.423	-0.0821	0.1956
23	0.0280	0.0600	0.470	0.641	-0.0897	0.1456
26	0.0284	0.1007	0.280	0.778	-0.1689	0.2258
27	0.0034	0.0525	0.060	0.949	-0.0996	0.1063
Organisational Employee Count						
2	0.0208	0.0277	0.750	0.454	-0.0336	0.0752
3	0.0554	0.0280	1.980	0.047*	0.0006	0.1103
4	0.0576	0.0287	2.000	0.045*	0.0013	0.1140
Organisational Commitment						
	0.0719	0.0100	7.210	0.000***	0.0524	0.0915
_cons	3.6638	0.1261	29.060	0.000	3.4167	3.9110

* indicates a p-value < 0.05, signifying statistical significance.

** indicates a p-value < 0.01, signifying higher statistical significance.

*** indicates a p-value < 0.001, signifying the highest level of statistical significance.

Source: compiled by the thesis authors

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