

OECD Public Governance Reviews



Improving Corruption Risk Management in the Slovak Republic

RESULTS FROM A 2023 EXPERIMENT IN APPLYING
BEHAVIOURAL INSIGHTS TO PUBLIC INTEGRITY



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Foreword

Insights from behavioural science are increasingly making their way into integrity policymaking. A behavioural approach acknowledges that behind the policies, laws, regulations, and tools there are human beings making decisions. Sometimes, these decisions are not aligned with what policies aim to achieve, undermining their effectiveness and impact.

An effective corruption risk management system is crucial for upholding and promoting public integrity within governmental institutions. It allows government to identify, assess and mitigate integrity risks; respond to such risks efficiently; and track progress and emerging challenges.

Strengthening corruption risk management practices was a central aspect of the Slovak Republic's Anti-Corruption Policy for 2019-2023, which includes a standard corruption risk assessment methodology for ministries and other central authorities. To support these efforts, the OECD partnered with the Corruption Prevention Department in the Government Office of the Slovak Republic to improve corruption risk management from a behavioural insights perspective. Indeed, an effective corruption risk management system is dependent on the behaviours of public officials who are in a crucial position to identify and communicate corruption risks. It is especially important for frontline employees to be alert to corruption risks, as they are typically in a better position than managers and other stakeholders to identify them. Understanding the behaviours, biases and motivations of these public officials is thus important for fine-tuning the implementation of corruption risk management.

This report contributes to the OECD's efforts to help countries effectively implement the OECD Recommendation on Public Integrity. In addition, it builds on the OECD report *Behavioural Insights for Public Integrity: Harnessing the Human Factor to Counter Corruption* and applies the OECD's BASIC methodology for applications of behavioural science to public policy. This report is part of broader support by the OECD to improve public integrity in the Slovak Republic. Based on findings from a survey experiment, the report presents the tailored behavioural recommendations to improve corruption risk management in the Slovak Republic.

The report was reviewed by the OECD Working Party of Senior Public Integrity Officials (SPIO) on 22 February 2024. It was approved by the Public Governance Committee on 20 March 2024 and prepared for publication by the Secretariat.

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Executive summary

Under its Anti-Corruption Policy for 2019-2023, the Slovak Republic made corruption risk management a cornerstone of its strategic efforts to combat corruption and promote public integrity. This report focuses on the challenges faced in implementing corruption risk management practices from a behavioural perspective and proposes concrete avenues for increasing communication about corruption risks in the Slovak public administration.

The OECD BASIC toolkit (BASIC stands for **B**ehaviour, **A**nalysis, **S**trategy, **I**ntervention, **C**hange), a framework to apply behavioural insights in public policymaking, was applied to the Slovak Republic's risk management system. This started with a diagnostic analysis to identify key behaviours impeding effective risk management in the Slovak public administration. The lack of communication about risks was identified as one of the principal behaviours preventing a more effective risk management system. In particular, two barriers to communicating about risks are 1) the lack of understanding of the importance of not only communicating about materialised corruption cases but also communicating about potential corruption *risks*, and 2) the lack of exemplary leadership.

To increase communication about risks, the OECD, in partnership with the Slovak Republic, designed two behaviourally informed interventions to improve the understanding of a risk and appeal to exemplary leadership to increase risk communication. A crucial aspect of the OECD BASIC toolkit is to pilot the interventions with robust evaluation methods. The effects of the two interventions were tested in an anonymous online vignette randomised experiment with over 2500 participants from the Slovak public administration.

A few key insights and recommendations emerged from the analysis and experimental findings:

Make risk communication feel safe and encouraged

- Currently, employees in the Slovak public administration report not feeling safe about communicating potential risks. A culture of silence is prevalent, hindering employees, particularly older ones, from communicating potential corruption risks.
- A crucial facilitator for enabling risk communication is enabling public servants to feel safe when communicating about risks. Experimental results showed that higher feelings of safety while communicating risks could lead to higher rates of risk communication. Fostering safety is therefore vital to promote effective risk communication.

Empower leaders to set the standard through their actions

- The experimental results showed that when public servants are exposed to examples of good ethical behaviours from leaders, they tend to be more likely to communicate corruption risks. Making good leadership salient and adapting communication and people management are therefore key actions to improve the likelihood of communicating corruption risks. This can be done,

for example, through integrity training focussing on the central skills and competences needed as an integrity leader, by incentivising ethical leadership models with rewards or gamifications, and with a communication and people management that supports an open culture and ethical conduct.

- Anti-corruption Co-ordinators and cross-agency working groups could act as important institutional leaders for effective risk management. Empowering the Anti-corruption Co-ordinators to lead and support risk management in respective agencies by equipping them with relevant resources and capacity-building could enhance employees' ability to identify and mitigate risks effectively, contribute to professionalise risk management throughout the administration and strengthen the overall institutional risk management ecosystem. Equally, the Corruption Prevention Department in the Office of the Government of the Slovak Republic could consider establishing cross-agency working groups bringing together representatives for risk assessment activities from different agencies to promote and support risk assessments.

Ensure the risk communication process is easy and well-understood

- Knowledge of the risk communication channels and trust in the risk management system also contribute to a higher likelihood of communicating about corruption risks. Insights from the diagnostic analysis showed that employees do not always know how to communicate potential risks, as the system for risk communication is not always clear. The experimental findings highlighted a positive relationship among knowledge on how to communicate risks and likelihood of communicating risks, trust and safety. Raising awareness of the risk communication channels could facilitate and increase risk communication.
- In addition, the findings revealed a lack of understanding of the importance of communicating integrity risks: it is not always clear to public employees that they should communicate potential corruption risks in addition to actual corruption incidences. This result emphasises the need for raising awareness of the risk management system and its functioning. The Corruption Prevention Department in the Government Office of the Slovak Republic could distribute concise guidelines or launch a web-based campaign leveraging social norms to raise awareness, improve compliance and clarify that there is an expectation for everyone to communicate risks.

1

Behavioural analysis and proposals to strengthen corruption risk management in the Slovak Republic

An effective risk management system is dependent on the behaviours of several stakeholders and public servants' commitment. To improve corruption risk management in the Slovak public sector, the OECD identified the behaviours that hinder an effective corruption risk management and analysed the barriers and enablers of these behaviours in a diagnostic analysis, following the application of the OECD BASIC framework. The key behaviour identified in a diagnostic analysis was that employees are not communicating about potential corruption risks as often as they should. Reasons for limited risk communication include a lack of support from leaders, a lack of feeling of safety when communicating about risks and a lack of awareness of how to communicate risks.

1.1. The role of risk management systems in enhancing public sector integrity

Identifying public integrity risks is imperative for preventing corruption in the public sector. Risk identification is one of the first conditions in making a problem observable and thus, manageable (Monteduro, 2021^[1]; Power, 2007^[2]). Risk management systems can be powerful tools to this end, as they help identify, assess and mitigate risks. The objective is not to get rid of risks entirely, but to reduce risks below an acceptable threshold. Effective internal control and risk management policies reduce the vulnerability of public organisations by guiding officials to adequately assess risks in their duties and develop strategies to manage them (OECD, 2020^[3]). An organised, whole-of-government risk management system, which is connected to key government operations, is crucial to effectively address corruption risks and to avoid the implementation of ad-hoc measures addressing risks (OECD, 2022^[4]).

Corruption risk management consists of a series of distinct steps to timely detect and manage corruption risks. This usually starts with the identification of risks, followed by an assessment, analysis and evaluation of the likelihood and impact of the identified risks. This is then followed by the design of a risk mitigation strategy, to address the most critical risks, and the design of control measures, to monitor the outcomes of these strategies. The final stage calls for a periodical reassessment of risks, and an update of the risk management processes, whenever new risks appear (Monteduro, 2021^[1]; OECD, 2020^[3]; OECD, forthcoming^[5]).

The OECD and other international organisations emphasise the importance of risk management in corruption prevention (OECD, 2020^[3]; GRECO, 2023^[6]). The OECD Recommendation on Public Integrity underlines the relevance of fostering integrity across the public sector and the whole of society, and establishing a context-dependent, behavioural, and risk-based approach (OECD, 2017^[7]). This is in line with other international standards, such as the COSO 2017 ERM Framework (COSO, 2017^[8]), the ISO 31000:2018 (International Organization for Standardisation, 2018^[9]) or the ACFE 2016 Fraud Risk Management Framework (Association of Certified Fraud Examiners, 2016^[10]).

1.2. Risk management practices in the National Anti-Corruption Plan of the Slovak Republic for the years 2019-2023

In the past few years, the Slovak Republic has taken actions to curb corruption, as specified in the Anti-Corruption Policy for the years 2019-2023. The Policy, approved by Government Resolution No. 585/2018, recognises the importance of a risk- and evidence-based approach to integrity, and provides measures to strengthen the framework for mitigating corruption in the entire Slovak public administration (Government of the Slovak Republic, 2018^[11]).

The Corruption Prevention Department (CPD) in the Government Office of the Slovak Republic leads risk management across the public administration, and the CPD oversees the development and implementation of corruption risk management practices in accordance with the Anti-Corruption Policy of the Slovak Republic for 2019-2023. Under the Policy, all ministries and other central authorities are required to appoint an Anti-corruption Coordinator (ACC) to oversee anti-corruption activities in their respective agency, including the implementation of the integrity measures set out in the Anti-Corruption Policy.

In 2019, the CPD also launched government-wide corruption risk assessment guidelines, to support the implementation of the integrity measures set out in the Anti-Corruption Policy. In line with these guidelines, all ministries and other central authorities are required to carry out an annual corruption risk assessment. In addition, the CPD also developed an electronic survey on corruption risk management, an optional and complementary tool to support ministries and other central authorities in identifying corruption risks. The

electronic survey was distributed for the first time in 2020 and since then yearly. Results from the 2022 and 2023 electronic survey are partially published on a dedicated website.¹

The CPD is relatively advanced in its risk management practices compared to other countries' overseeing ministries and other central authorities. In a study carried out by the French Anti-corruption agency (*l'Agence française anticorruption*) (2020) slightly over half of the respondents from 113 countries reported that they have an obligation to carry out risk mapping in their public administrations (OECD, 2022^[4]; L'Agence française anticorruption, 2020^[12]). The CPD also started conducting its own risk analysis to assess broader level integrity risks across the Slovak public sector among others to inform the implementation of the Anti-Corruption Policy (OECD, 2022^[4]). In the Integrity Review of the Slovak Republic, the OECD recommends the Slovak Republic to deepen its problem analysis to identify principal risk areas and to inform strategic policy objectives on anti-corruption across the public sector (OECD, 2022^[4]). However, in its current version, the analysis of corruption risks in the Slovak public sector is focused on identifying thematic and sectoral priorities and could be further improved to consider a variety of sources of risks (OECD, 2022^[4]).

To effectively measure corruption risks across sectors, a diverse portfolio of risk assessments is crucial. Apart from the information received through the electronic survey, the CPD also considers other sources when assessing risks, such as information received from ACCs, legislative gaps and shortcomings, complaints from citizens, recommendations from international organisations, consultation with NGOs and civil society, as well as media reports (OECD, 2022^[4]).

In this regard, officials and civil servants are a key source to identify risks. To maintain and manage an up-to-date risk management system, it is vital to engage civil servants from across government agencies to consider risks arising from across the public administration. Managers and frontline employees may have different perceptions of the likelihood and impact of risks and frontline employees can in certain cases be in a better position than managers to identify emerging risks (OECD, 2022^[4]; OECD, 2020^[3]). For example, previous OECD experimental findings from the field of safety culture in the energy sector found that front line employees tend to have different perception of safety culture in the energy sector than regulators overseeing the sector, illustrating the importance of taking into account different perceptions when designing policies (OECD, 2020^[13]). For an effective identification and assessment of risks, a well-functioning risk management system is dependent on the behaviours of several stakeholders and public servants' commitment, and a timely engagement in risk management is key (OECD, forthcoming^[14]).

To support the Slovak Republic in its efforts to strengthen its risk management practices in the public sector, this report explores how behavioural insights could serve to improve public sector integrity. This work was conducted in the context of the project "Improving integrity of Public Administration in the Slovak Republic" co-financed by the European Economic Area (EEA) and Norway Grants mechanism and the Government of the Slovak Republic and carried out by the OECD in partnership with the Corruption Prevention Department in the Government Office of the Slovak Republic.

To present the study and its findings, the structure of the report is as follows: This Chapter presents a diagnostic analysis of the current behavioural barriers for public integrity in the Slovak public administration, alongside a brief overview of the methodology followed to conduct the diagnostic analysis (OECD BASIC Toolkit). Chapter 2 presents the design and results of a behavioural experiment testing two potential interventions to improve the propensity to communicate potential corruption risks across Slovak public servants. Chapter 3 highlights key policy recommendations based on the experimental findings and directly connects current challenges to potential solutions – this constitutes the key section of reference for Slovak policymakers to review the implications of the study for future initiatives on public sector integrity.

1.3. The value of applying behavioural science to reduce corruption

A better understanding of the behavioural elements that affect corruption risk management can support the design, implementation and development of corruption risk management policies that foster trust and integrity. As such, the starting point for this study was investigating behavioural barriers and biases that affect integrity risk management in the Slovak public administration, to better understand what behaviours currently undermine effective corruption risk management.

Traditional policy instruments aim to strengthen controls and increase sanctions in efforts to curb corruption, however, they overlook two important behavioural dimensions: that integrity is an ethical choice, and that social norms and social dynamics also play a role in how individuals behave (OECD, 2018^[15]). These and many other behavioural factors influence decision-making in the context of public integrity. The design of anti-corruption policies would therefore benefit from policies that are based on context-specific evidence on how people *actually* behave (OECD, 2018^[15]).

The OECD publication Behavioural Insights for Public Sector integrity (2018) outlines how behavioural science can strengthen integrity and anti-corruption policies. In fact, recent years have witnessed an increasing interest in applying behavioural insights in anti-corruption policies (Stahl, C, 2022^[16]). With the help of behavioural science, risk management systems can be designed in a way that ensures vigilance at stages where humans often tend to overlook or misjudge risks, to reduce errors and thus, to minimise risks (OECD, 2018^[15]). To explore how behavioural science can support in improving the risk management practices in the Slovak Republic, the OECD applied a 5-stage framework (BASIC) developed by the OECD to apply behavioural science to public policy, presented in the following section.

1.3.1. Using OECD tools and ethics for applied behavioural insights: The BASIC Toolkit

The BASIC framework seeks to guide the application of Behavioural Insights to public policy through a framework of five stages (OECD, 2019^[17]). The objective is to thoroughly understand a policy problem by getting at the core of the problem, to analyse it, to develop an optimal strategy for the desired behaviour change, to collect evidence on what works through robust experimental methodologies and to eventually improve policy outcomes by scaling up a successful strategy generating the desired behaviour change.

In the context of this study, the BASIC framework was used to guide the sequence of steps needed to conduct a behavioural study on public sector integrity, as follows (see Figure 1.1):

- **Behaviour:** the aim of the first stage is to identify behaviours that should be targeted in order to address a policy problem.
- **Analysis:** understand the drivers and barriers of the target behaviours through behavioural science.
- **Strategies:** design or inform a policy solution with the support of behavioural science.
- **Intervention:** based on a suitable experimental design, conduct a pilot initiative to measure the impact of the behavioural strategies.
- **Change:** The last step involves considering how to use and scale up experimental findings for long-term change, while continuously monitoring and evaluating the impact of the intervention.

Figure 1.1. The 5 stages of the BASIC framework



Source: OECD (2019^[18]), *Tools and Ethics for Applied Behavioural Insights: The BASIC Toolkit*, OECD Publishing, Paris, <https://doi.org/10.1787/9ea76a8f-en>.

1.4. Diagnostic analysis: The behavioural challenges and opportunities in the public administration of the Slovak Republic

In line with the BASIC framework, the first step consisted of a diagnostic analysis to better understand the behaviours that affect corruption risk management in the public administration of the Slovak Republic, and the barriers and enablers of these behaviours. Applying behavioural science to public policy starts by asking which mechanisms drive behaviour in a specific context. Asking these questions in the context of public integrity helps to identify the behaviours that contribute to or impede progress toward public integrity, yet it also takes a step further to analyse and understand the mechanisms behind – the drivers and barriers of – these behaviours.

Evidence for the diagnostic analysis was collected through a focus group session with sixteen Anti-corruption Coordinators, who were divided into two groups, and from seven interviews with representatives from the upper management of various ministries and other central authorities, including, for example, the Ministry of Education, the Ministry of Investment, Regional Development and Informatization (MIRRI) as well as the Ministry of Finance, the Government Office, and the Public Procurement Office². Both the focus group sessions and the interviews were held in September 2022. The rest of this chapter presents the key findings from the diagnostic analysis.

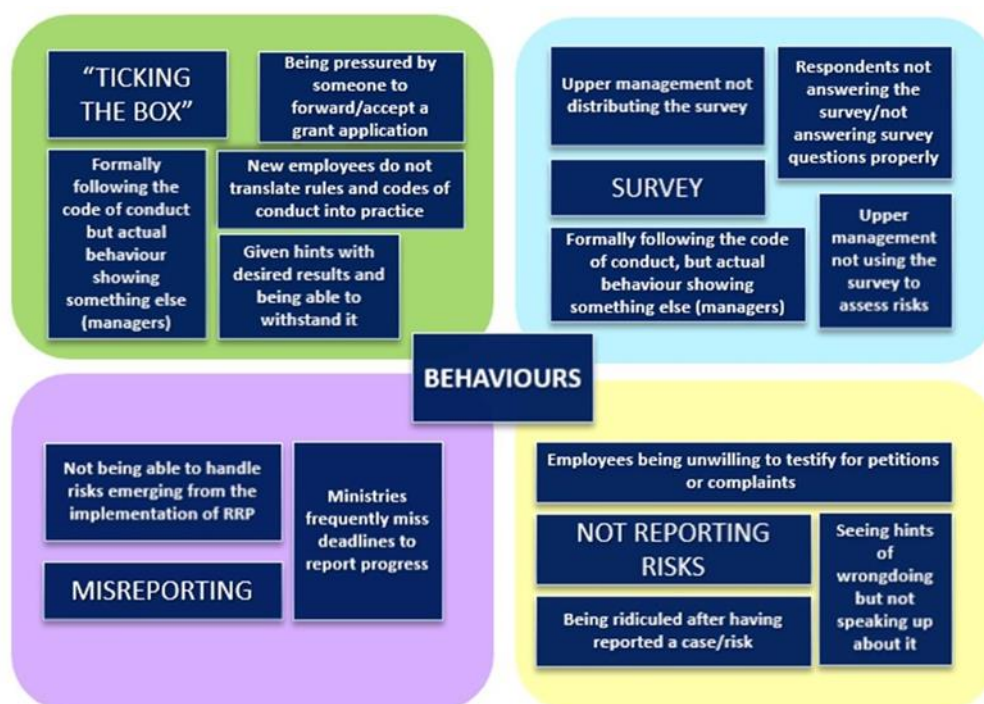
1.4.1. Identifying problem behaviours in the Slovak public administration

In conversations with participants, several problematic behaviours were identified as currently impacting integrity risk management in the Slovak administration. Four wider categories emerged from the diagnostic analysis: behaviours related to “ticking the box”, the electronic survey, misreporting, and not communicating about risks (see Figure 1.2).

For example, ministries sometimes **misreported progress** in implementing the National Recovery and Resilience Plan (NRRP). Equally, some managers did not distribute the **electronic survey** or did not effectively use it to assess risks. Managers sometimes **“ticked the box”** to make it formally seem as if they follow the code of conduct, while in reality engaging in unethical behaviours. Lastly, public sector employees were not **communicating enough about potential corruption risks**.

To narrow down the behaviours to one target behaviour, misreporting was excluded as it only concerned some agencies. The electronic survey was excluded, as it was to undergo changes and development. Between “ticking the box” behaviour and the lack of risk communications, risk communication was a more tangible and measurable behaviour in an online experiment. Risk communication was thus selected as the main target behaviour, as both groups during the focus group sessions identified the lack of risk communication as one of the principal challenges.

Figure 1.2. The behaviours identified and grouped under 4 main categories



1.4.2. Barriers and enablers of key behaviours related to corruption risk management

The interviews evidenced that the maturity of risk assessment and management across the departments largely varies. Some individual departments have more advanced risk assessment procedures in place than others, and overall risk assessment and management capacities across Slovak ministries and other central authorities differ substantially.

To identify behaviours related to corruption risk management, a key activity was the focus group sessions with sixteen Anti-corruption Coordinators, who were divided into two groups. Figure 1.3 and Figure 1.4 visualise findings from the respective groups. Key insights emerged under the themes of 1) limited support from leadership; 2) low feeling of safety; and 3) lack of ease and awareness of how to communicate risks:

Limited support from leaders

- **Public managers do not encourage or prompt employees to fill in the electronic survey which could be used to communicate integrity risks.** The employees viewed filling the survey as a waste of time as no feedback is given on the survey results. The survey was simply not viewed as something useful, and the motivation to fill in the survey was low. The managers had experienced that there had been a lack of political support for the survey.
- **Some managers exhibit so-called "ticking the box"- behaviours** meaning, that they claim to follow rules and codes of conduct, whereas in reality they fail to translate these rules into practice.
- **The Anti-corruption Coordinators do not give feedback to whistleblowers** due to lack of time to provide feedback, lack of knowledge on how to follow up with a whistleblower case, and a fear of consequences in the form of retaliation, despite promised protection.
- Employees also expressed that they do not communicate risks because the **managers are not believed to act upon the risks communicated**. There is a lack of feedback on the reported risks or cases.

- **Managers downplay risks.** Potential conflicts of interest were said to result in managers downplaying risks, alongside a lack of professional interest or experience from knowing how corruption risks should be managed, and a lack of awareness of consequences of one's own behaviour.
- **Managers engage in so called “big fish” behaviours,** due to arrogance, lack of accountability in the system, a lack of open culture, and generally a culture of corruption, ultimately resulting in a lack of trust in managers.
- **Managers do not clearly explain the consequences of corruption risks on a continuous basis.** This is linked to the general and pervasive culture of corruption and the lack of awareness of what the potential consequences from corruption risks are.
- **Lack of good examples from leadership** had left the officials uncertain on how to act upon a risk in an atmosphere where they feel fearful for retaliation, or for being bullied or ridiculed for their concerns and being vulnerable.

Low feeling of safety in communicating risks

- **Public sector employees do not communicate risks even when being aware of them.** Not communicating risks was said to begin within the leaders – despite signalling to follow the code of conduct formally (ticking the box, communicating to follow the code of conduct), still in reality, some leaders fail to do so. The misalignment between a leader's words and actions had been noted to affect what the employees perceive acceptable.
- **Employees perceive that the conditions for speaking up about potential corruption risks are not sufficiently safe.** Creating conditions for safely communicating about corruption risks was not seen as a high priority, and the respondents had experienced a lack of support from the management, as well as a lack of clear communication. Likewise, they reported a lack of anonymous and confidential channels to communicate risks, which in turn affected their ability to feel safe when communicating risks.
- **Avoidance of looking vulnerable to others** reflects a work environment where people do not feel safe voicing their opinions. Respondents do not feel safe to show vulnerability in light of the fear of being bullied, ridiculed, ostracised or not taken seriously when speaking up about risks and voicing their opinions.
- **A culture of fear and silence,** where people are discouraged from speaking out in fear of retaliation, was one of the reasons impeding risk reporting.
- **General mistrust in the corruption risk management system** – i.e., a lack of trust in believing that the system works.

Lack of ease and awareness of how to communicate risks

- **A lack of understanding of the importance of reporting** not only materialised corruption incidences, but also potential corruption risks. Across agencies the respondents had identified a tendency among officials to have difficulties distinguishing between a corruption risk, i.e., something that could happen, and a materialised corruption case, i.e., something that has actually happened. While public servants were aware of their need to report actual corruption cases, the necessity to report potential corruption risks was not as widely recognized.
- **Status quo bias** was found to be prevalent, in the form of resistance towards change. Older people were less willing to speak about risks and preferred to maintain the current state of how things are instead of welcoming change.
- **A lack of understanding of which channels could/should be used to communicate corruption risks.** Currently, a key factor behind why employees do not communicate integrity risks

is the lack of clear and structured channels to do so. Employees can currently communicate risks personally by speaking with Anti-corruption Coordinators, ethics advisors, HR and managers, as well as anonymously via the electronic survey. However, the focus groups highlighted a limited awareness of these potential avenues for risk communication.

Figure 1.3. The key behaviours identified in group 1

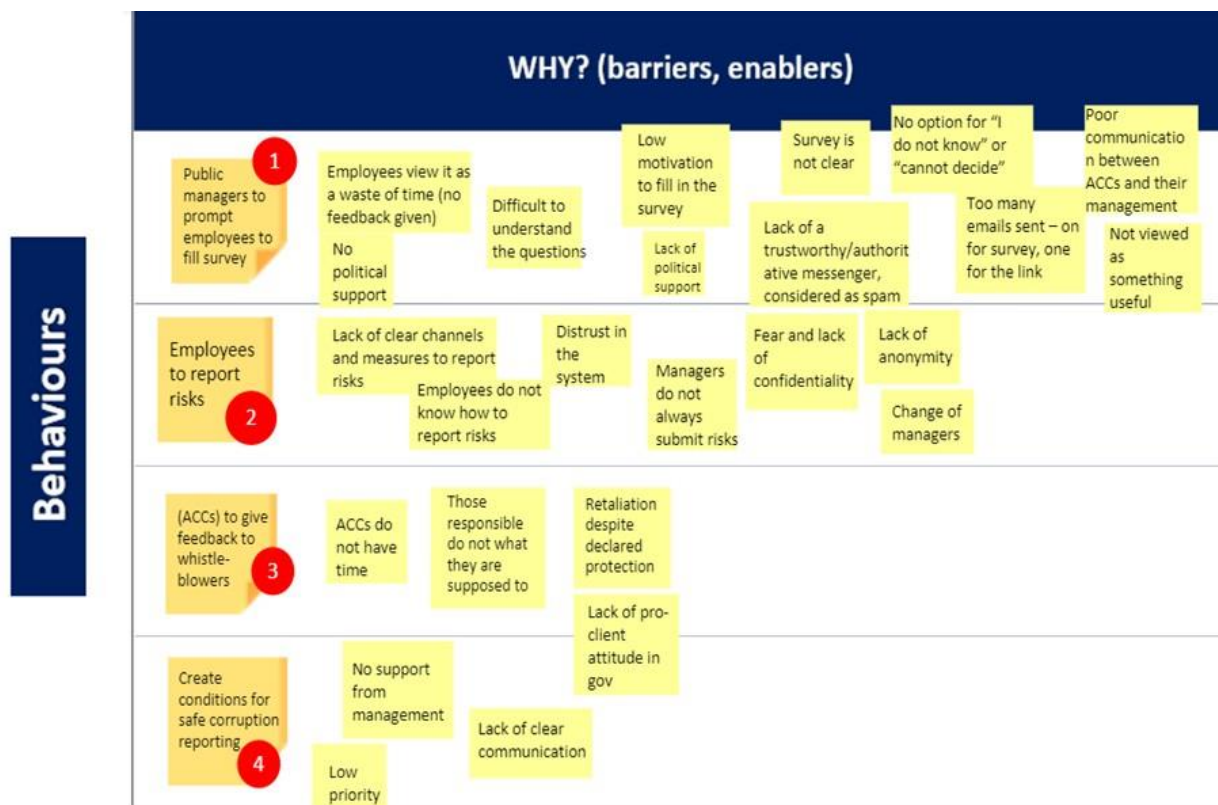
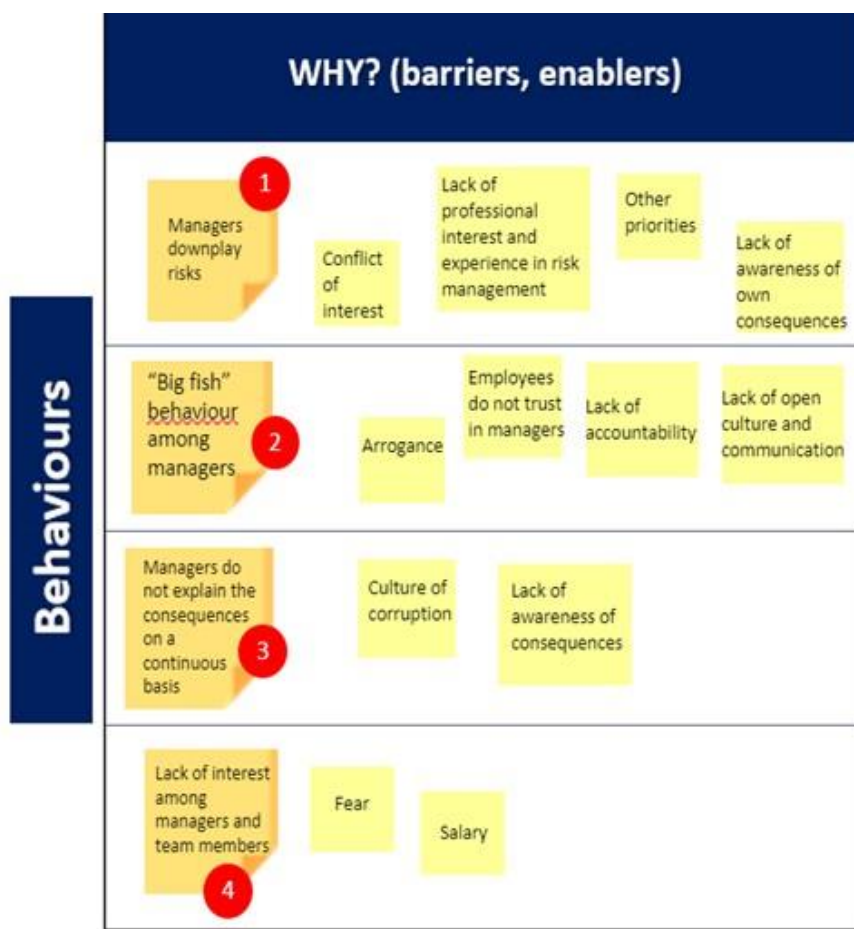


Figure 1.4. The key behaviours identified in group 2



1.5. Connecting the results to previous research to better analyse behaviours

Three themes emerged from the behavioural barriers impeding public integrity and risk reporting in particular: limited support from leaders, low feeling of safety and lack of ease and awareness of how to communicate risks. Regarding leadership support, leaders were engaging in “ticking the box” to ensure superficial compliance. Several also raised the issue of “big fish” behaviour - an arrogance among managers where those with power dominate and shape the culture and downplay those who speak up, or even bully the whistle-blowers by labelling them as the “bad guys”.

The findings showed that people do not feel safe communicating about risks; on one hand, there is a culture dominated by fear and silence, not rewarding those who stand out or speak up about risks. Several viewed this as a generational issue: the older generation is more reserved and afraid to speak up about corruption risks. On the other hand, there is also a lack of safe channels to report integrity risks.

In addition to a lack safe channels and of knowledge on how to communicate risks, a lack of understanding of what a risk entails and the difficulty to understand the distinction between a risk, e.g., something that *could* happen, and an actual, materialised corruption case, e.g., something that *did* happen prevent people from identifying risks. The lack of understanding of a risk had emerged in conflicts of interest within the ministries (third line of defence), but also among the employees, line managers, and other risk owners (first line of defence).

1.5.1. Communicating corruption risks is dependent on the understanding of a corruption risk

Research shows that communicating a risk starts with the realisation that something constitutes a risk (Monteduro, 2021^[1]). Risk perceptions have indeed been found to influence behaviours and intentions (Sheeran et al, 2014^[19]) and a better understanding of risks can lead to improved decision-making and outcomes (Natter and Berry, 2005^[20]). One of the findings in the diagnostic analysis was the lack of understanding of the importance of communicating risks in addition to materialised cases, and the lack of clear channels on how to communicate risks, which were both preventing effective risk communication.

The objective of this study therefore was to improve the understanding of the importance of communicating risks. Box 1.1 presents recommendations from an OECD project in Romania, which explored ways behavioural insights can strengthen the implementation of risk management across the Romanian public administration through the identification of logical behaviours needed for an effective risk management, and the design of strategies to support the identification of risks and other behaviours.

Box 1.1. Strategies to adopt integrity risk management in Romania

In 2018, Romania issued a comprehensive framework for all central government agencies requiring the agencies to implement anti-corruption strategies. Despite Romania's best efforts to promote the adoption of the new anti-corruption strategy in the agencies, its implementation had been irregular, and it is unclear, whether it has succeeded in reducing corruption incidents. To understand the barriers that have led to the uneven adoption of the anti-corruption strategy, the OECD supported Romania in identifying the behavioural bottlenecks and strategies to tackle these. The most common issues included the inconsistent identification of corruption risks, potential miscalculations of risk probability and impact and poorly designed intervention measures.

From this analysis, four principal recommendations emerged:

1. **Redesign of risk registers to include intermediate indicators for intervention measures** to receive feedback on efforts to control corruption. Timely feedback from intermediate indicators could inform the decision-makers on current progress and whether efforts need redirecting.
2. **Design of a government wide user guide for the adoption of a concise corruption risk methodology with examples and recommendations** to increase learning. To harmonise and increase sharing of best practices among agencies, the guide should be consistent such that all examples have the same definitions. Case studies from more advanced agencies could be included to exemplify how the methodology can be used in practice.
3. **Develop a web-based app to guide corruption risk management** to improve risk identification, probability estimation, impact estimation and control measure design ensuring that officials are equipped with a fair understanding of how public institutions work and information of the effectiveness of intervention measures in reducing corruption risks.
4. **Establish a unit within each ministry to assist working groups in managing corruption risks** to provide guidance and support in risk identification, probability and impact assessments and intervention measure design. Specialised units could play an important role in identifying potential risk areas and provide feedback and support on the risk assessment.

Source: OECD (2023^[21]), *Promoting Corruption Risk Management Methodology in Romania: Applying Behavioural Insights to Public Integrity*, OECD Public Governance Reviews, OECD Publishing, Paris, <https://doi.org/10.1787/ceb6faec-en>.

1.5.2. Leaders have a central role in encouraging employees to behave ethically

One of the key findings of the diagnostic analysis was the key role that leaders play in enabling or blocking risk communication behaviours. This is in line with previous work on the importance of leadership for promoting ethical behaviours. Indeed, the OECD previously recommended strengthening integrity standards in public employment and promoting integrity leadership (OECD, 2022^[4]). Senior civil servants at all levels set the standards for public service and organisational values by their own behaviours. Exemplary leaders live up to the written code of conduct and apply it to the daily work, which builds trust in their team.

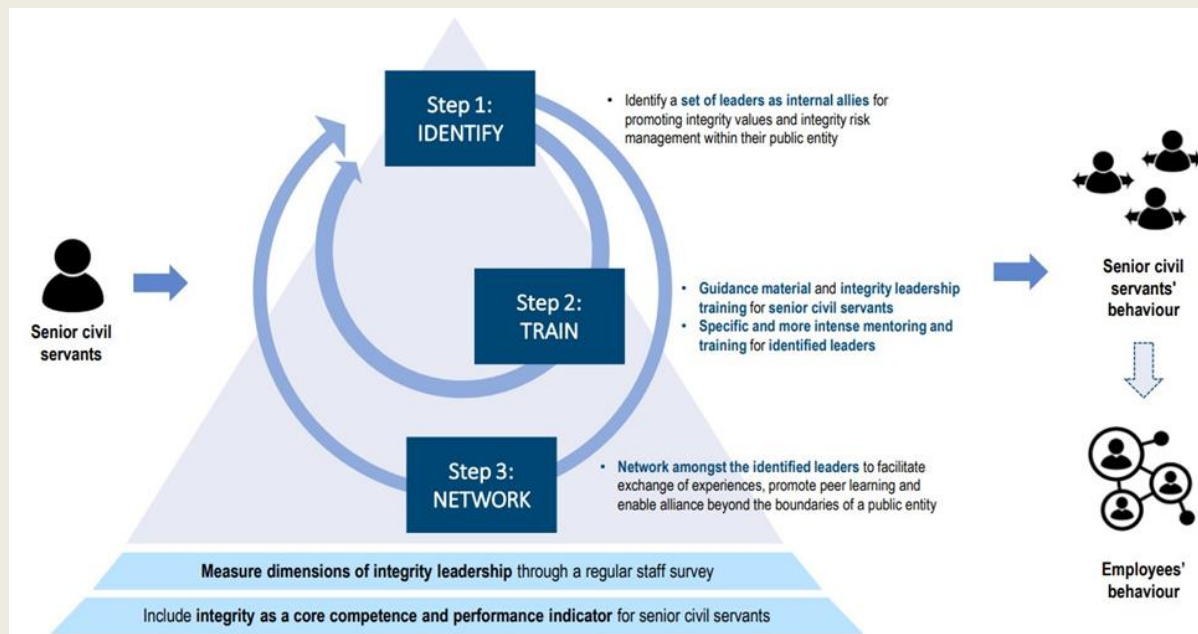
A meta-review by Bedi et al. (2016) found that ethical leadership was positively associated with, among other things, followers' job satisfaction, job performance and job engagement, and followers increasingly perceived that their work context was ethical when they had an ethical leader (Bedi et al., 2016^[22]). Previous research has also reported that followers' perceptions of ethical leadership predict willingness to report issues (Brown and Treviño, 2006^[23]; Brown et al, 2005^[24]; Hassan et al, 2014^[25]). Brown et al. (2005^[24]) predicted that by engaging in ethical behaviours, leaders become attractive and credible, and followers tend to adopt their ethical behaviours. Box 1.2 presents best practices from strengthening integrity leadership in Brazil.

Box 1.2. Strengthening integrity leadership in Brazil's federal entities

Recent reforms in Brazil have focussed on strengthening senior civil service leadership in Brazil. Despite these significant efforts, there still is scope for improving integrity leadership. Currently, integrity is not part of leadership trainings in Brazil, yet evidence suggests that additional efforts are needed to provide leaders with the right skills and abilities to uphold the public administration's ethical standards. Leaders do not currently sufficiently raise awareness about integrity within their organisations. In a recent dedicated project, the OECD suggested the following three stage-model to strengthen integrity leadership in Brazilian civil service, as reflected in Figure 1.5:

- Step 1 starts with **identifying potential integrity leaders** within an organisation. By being identified as a leader, civil servants feel committed to the values of the organisation.
- Step 2 equips the integrity leaders through **training** with the right skills and competences to better promote integrity and open culture in their respective organisations.
- Step 3 focuses on **establishing a network** for the integrity leaders across the public sector. A network could facilitate peer learning, and regular meetings could help to maintain engagement over time.

Figure 1.5. A roadmap for strengthening senior integrity leadership in Brazil



Source: OECD (2023^[26]), *Strengthening Integrity Leadership in Brazil's Federal Public Administration: Applying Behavioural Insights for Public Integrity*, OECD Public Governance Reviews, OECD Publishing, Paris, <https://doi.org/10.1787/50a9a028-en>.

Both Brown et al. (2005^[24]) and Walumbwa and Schaubroeck (2009^[27]) concluded that ethical leadership indeed is associated with willingness to report problems to management. Ethical leadership can create a safe organisational climate in which employees feel comfortable discussing ethical issues and communicating ethical problems without fear of retaliation. When people are afraid to voice concerns about ethical problems in their organisation, ethical leadership can reduce this fear (Walumbwa and Schaubroeck, 2009^[27]).

1.5.3. Psychological safety as a driver of ethical behaviors

Psychological safety influences behaviours and decisions in organisations. Leaders are largely responsible for creating and supporting behaviours and environments where followers feel safe at blowing the whistle (Caillier, 2015^[28]). When employees have a leader who is honest, trustworthy, and fair, their team members are more likely to think that their leader will agree with or understand their concerns and respond to them appropriately (Caillier and Sa, 2017^[29]), and will feel more comfortable discussing sensitive ethical issues and raise concerns (OECD, 2020^[13]).

Walumbwa and Schaubroeck (2009^[27]) found that ethical leadership influence risk communication behaviours through the mediating effect of psychological safety. By creating a safe and fair workplace environment, followers were encouraged to voice their opinions about ethical matters, but also about other, work-related concerns (Walumbwa and Schaubroeck, 2009^[27]). These findings also resonate with an OECD cross-national case study, which explored the role of safety in the energy sector and how perceptions of safety can vary among different actors (Box 1.3).

Box 1.3. A cross-national experiment to foster culture of safety in Canada, Ireland, Mexico and Oman

The OECD, academics and behavioural practitioners collaborated to apply behavioural insights to safety culture in the energy sector, in a two-stage online experiment in Canada, Ireland, Mexico and Oman. The first experiment tested the perceptions of safety and effectiveness of behavioural vignettes. A follow-up survey experiment was also conducted in Ireland to improve conformity with safety regulations among gas and electricity installers.

From the comparative experimental results, a key result on the perception of safety culture was that the closer one is to the front line, the lower one's perception of safety culture. From a system perspective, the study showed that regulators have a more negative perception of safety culture in the regulated entities than the entities themselves, perhaps due to their position overseeing the sector. This result makes sense as frontline workers are directly experiencing unsafe activities, and regulators analyse the sector for potential risks. This result underlines the need to understand the audience and how they perceive the challenges at hand, which can further influence their understanding and actions.

Source: OECD (2020^[13]), *Behavioural Insights and Organisations: Fostering Safety Culture*, OECD Publishing, Paris, <https://doi.org/10.1787/e6ef217d-en>.

Taking into account insights from previous research and the diagnostic analysis, revealing mistrust in the corruption management system, a culture of fear and silence and a lack of safe communication channels – all of which hinder effective risk communication - this study also delved into how feeling psychologically safe can boost the chances of communicating risks.

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Notes

¹ <https://www.integritydata.sk/>

² Ministries and other central authorities involved in the study: Ministry of Economy, Ministry of Finance, Ministry of Transport, Ministry of Agriculture and Rural Development, Ministry of the Interior, Ministry of Defence, Ministry of Justice, Ministry of Foreign and European Affairs, Ministry of Labour, Social Affairs and Family, Ministry of the Environment Ministry of Education, Science, Research and Sports, Ministry of Culture, Ministry of Health, Ministry of Investments, Regional Development and Informatization, Government Office, Antimonopoly Office, Statistical Office, Geodesy, Cartography and Cadastre Authority, Nuclear Regulatory Authority, The Slovak Office of Standards, Metrology and Testing, Public Procurement Office, Industrial Property Office, Administration of State Material Reserves, National Security Office, Office for Spatial Planning and Construction, Supreme Audit Office, Judicial Council, Association of Towns and Communities.

2 Experimenting and assessing the impact of two behavioural strategies in the Slovak Republic

Two behaviourally informed strategies were designed to increase risk communication. The effects of these two strategies were tested in an online randomised controlled trial (RCT). In addition, the relationships between the likelihood of communicating a risk and several secondary outcome variables, such as psychological safety, knowledge on the reporting channels and trust, were also explored. The results indicate that exposing employees to examples of exemplary leadership and social norms can increase the likelihood of communicating a corruption risk. Feeling generally safe when communicating about risks, having hiring responsibility, and having trust and knowledge of reporting channels also play an important role in improving risk communication.

2.1. The experimental design

A key finding from the diagnostic analysis is that the lack of exemplary managers, leading by example on how to behave ethically was a frequent barrier to improvement risk communication across the Slovak public sector. Another key barrier raised in various contexts was the lack of understanding the difference between a corruption risk and a corruption incident.

As such, the study aimed at identifying strategies that could address these two barriers of 1) the lack of understanding of *what* a risk is, and 2) lack of good leadership, thus ultimately contributing to improving risk communications.

It was chosen to test different strategies through a vignette experiment, a research method often used in social and behavioural sciences to study human behaviour, attitudes, or decision-making processes. In a vignette experiment, participants are presented with hypothetical scenarios or brief descriptions ("vignettes") that depict a particular situation or event. Different groups of participants receive slightly different scenarios, and the goal is to understand how individuals respond or make decisions based on these scenarios. Researchers use vignettes to control and isolate certain factors while observing how changes in these factors influence participants' attitudes, perceptions, or behaviours. This controlled approach helps in studying causality and understanding the impact of different variables on human responses.

In the case of the experiment on risk communication in the Slovak public administration, the research exposed participants to a hypothesised scenario (i.e., a vignette) where they would imagine being confronted with a potential integrity risk in their public administration. Specifically, participants were shown the vignette in the form of a short text describing a hypothetical situation of a recruitment process involving a potential corruption risk in hiring processes (Figure 2.1). The goal was to simulate a situation in which risk communication would be preferable and to assess whether behavioural strategies would encourage risk communication.

Figure 2.1. The vignette

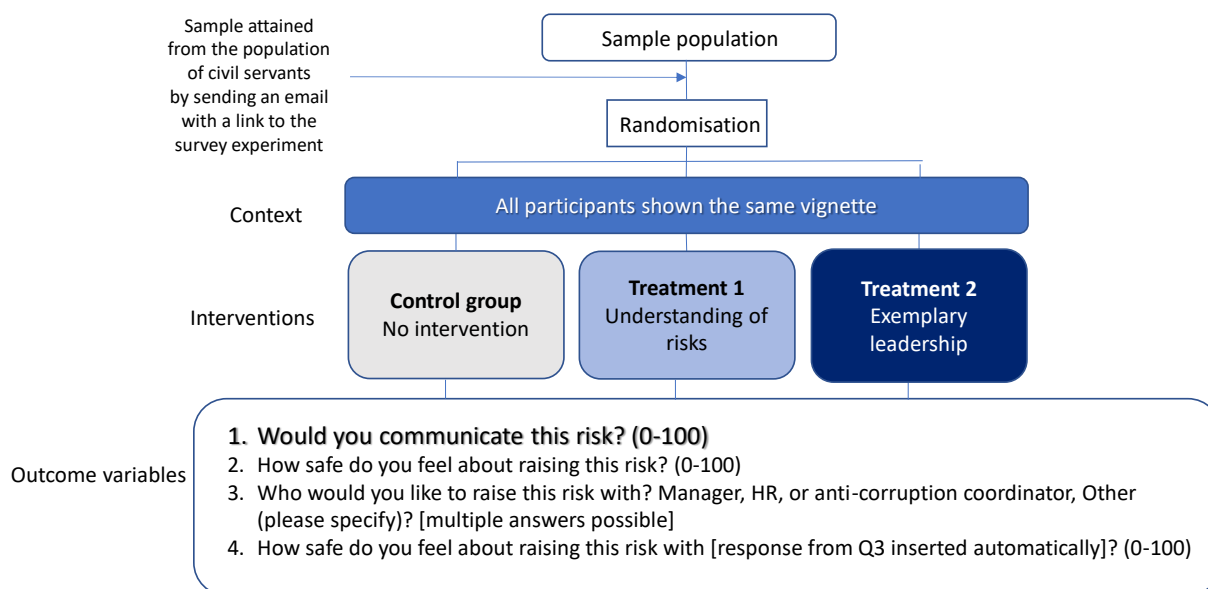
Your institution is regularly hiring new public officials. You heard that public officials with a personal relationship with senior managers may have been hired in the past. You suspect that there is a lack of control measures in hiring procedures to mitigate risks of conflict of interest and risk related to a lack of transparency.

The experiment was conducted by the OECD and the Corruption Prevention Department of the Government Office of the Slovak Republic in the form of a randomised trial, meaning that, after seeing the vignette, different participants were randomly selected to be exposed to slightly different versions of the experiment. This enables analysing how different factors affect participants' decision-making processes.

Specifically, the study tested whether groups of participants that would be exposed to a scenario including behaviourally informed interventions would have higher propensity to risk communication, as compared to a situation where participants were not exposed to any behavioural strategy (see Study Design in Figure 2.2). As such, each participant in the experiment was randomly assigned to one of the three study groups: treatment 1, the "Understanding of a risk"-condition (where participants were exposed to text supporting them in understanding the importance of communicating corruption risks), treatment 2, the "Exemplary leadership"-condition (where participants were exposed to examples of good ethical behaviours of leaders), or the control group which was not subject to any behavioural treatment.

Finally, after the vignette and the randomisation, participants would be asked whether they would speak up about the potential risk, to whom they would communicate it to, along with a series of additional questions to understand, e.g., their feelings of safety/ trust in the communication channels.

Figure 2.2. The trial design

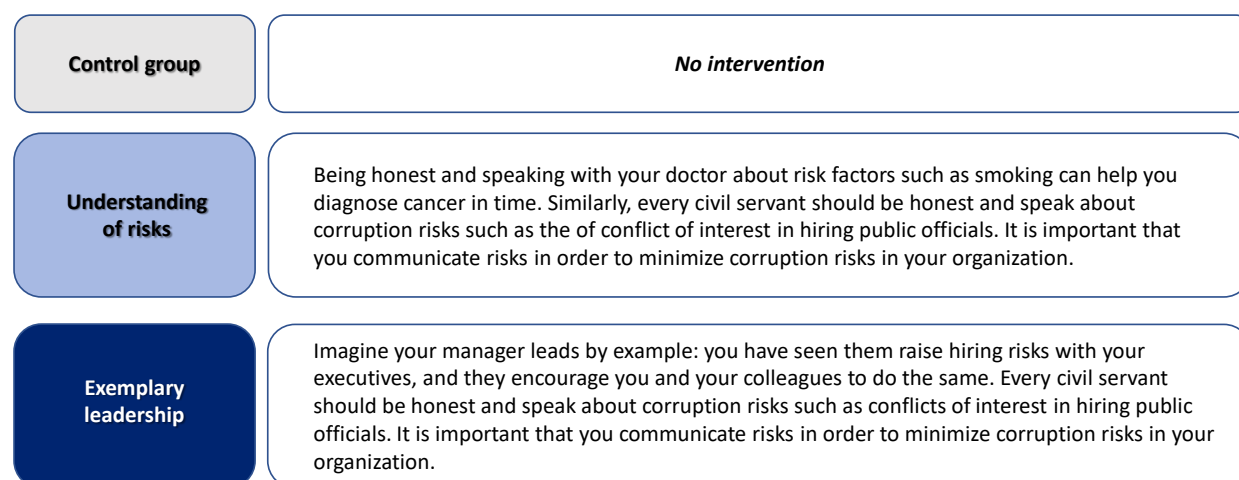


The process of designing a vignette for the experiment and selecting an appropriate topic focused on identifying a public integrity risk that would be relatable for most people across the public administration. Since hiring new officials is an activity that all the agencies and ministries across the public administration must engage in, the vignette was selected to represent a hiring situation with a potential corruption risk. It was hypothesised that the topic of preventing corruption in recruitment processes would be an easily understandable one, and one that employees normally consider important.

Indeed, a merit-based recruitment system is widely recognised as important for a well-functioning public administration. Hiring employees with the right skills can improve performance and productivity and translate into better policies and services (OECD, 2022^[1]). On the contrary, nepotism and favouritism are key concerns in the context of HR and recruitment (OECD, 2022^[1]). The Anti-Corruption Policy for the years 2019-2023 of the Slovak Republic also acknowledges this and includes an objective to “*permanently create conditions to prevent abuse of power, influence and position, clientelism, favouritism and nepotism*” and to reduce corruption risks through a fair evaluation of the skills of the staff against their allocated responsibilities and performance (Government of the Slovak Republic, 2018^[2]). Hence, communicating risks related to hiring practices was considered a suitable domain for the vignette.

On the same screen, together with the vignette, participants in the two treatment groups were shown the interventions: a message aiming at improving the understanding of a risk by drawing on an analogy from the context of health in treatment 1, and a text appealing to exemplary leadership in treatment 2 (Figure 2.3). The two treatment messages were designed orthogonally, i.e., such that they are identical, except for the messages appealing to either understanding of a risk or exemplary leadership, to ensure comparability. To ensure that the two messages were comparable, two identical sentences were embedded in both interventions and drew on social norms, which have been found in previous studies impactful in changing ethical behaviours (Bicchieri, C., & Xiao, E., 2009^[3]; Banerjee, R., 2016^[4]). In contrast, participants in the control condition did not receive exposure to any messaging, they just saw the vignette.

Figure 2.3. The interventions



The diverging sentences appealing to understanding of a risk and exemplary leadership are the ones hypothesised to create the difference between the two treatments. The hypotheses of the direction of the effect of the interventions were the following:

- 1.1. If the understanding of a risk affects the likelihood of communicating corruption risks, the likelihood of communicating a risk will be higher when a public official is prompted with a message aiming at increasing the understanding of a risk, compared to a situation, where he or she is not prompted with such a message.
- 1.2. If having an exemplary leader affects the likelihood of communicating risks, then the likelihood of communicating a risk will be higher when a public official is prompted with a message depicting having an exemplary leader, compared to a situation, where he or she is not prompted with such a message.

Primary and Secondary Outcome variables: After having seen the vignette – or, the vignette and a behavioural message - each participant was asked a series of questions to obtain a measure of the primary outcome variable, i.e. the likelihood of communicating a risk, measured on an interval from 0 to 100 (see Annex C). Additional questions asked (i.e. secondary outcome variables) included general feelings of safety in risk communication (measured on an interval from 0 to 100), to whom one prefers to communicate a risk (*Anticorruption coordinator, Manager, Other*), whether the respondents correctly understand that the situation in the vignette constitutes a corruption risk (*Corruption risk, Corruption incident, I do not know, I would not communicate this*), the appropriateness of the corruption risk management in one's own organisation (measured on a scale from 0 to 100), fairness of the hiring process (measured on a scale from 0 to 100), whether a respondent is responsible for the hiring process (*yes, no, prefer not to say*) and knowledge of the reporting channels (*Yes, rather yes, not before, no*) (see Annex A for the complete survey flow and detailed questions on how data was collected). The answer alternatives for the question measuring knowledge on the reporting channels were identical to the question measuring knowledge on the reporting channel in the Corruption Prevention Department's electronic survey.

These questions were followed by questions on age, gender, career length in the public administration and the agency in which the respondent is employed. Questions about demographics were asked last, to avoid any priming effects, i.e., to avoid that referring to participants' individual characteristics would subconsciously affect their responses. Box 2.1 expands on how these variables were measures and coded to discern the experiment's findings.

Box 2.1. Chosen methodologies for measuring the effects of the experiment

To measure the understanding of the importance of speaking up about risks, the respondents were asked to identify whether the situation in the vignette constitutes 1) *a corruption risk*, 2) *a corruption incident*, 3) *I would not communicate on this* and 4) *I do not know*. Since the relevance of this question for the analysis lies in whether the respondents correctly viewed the situation in the vignette as a risk or not, for the sake of this analysis, this variable was included as a binary variable, taking value 1 if the respondent identified that this situation constitutes a corruption risk (i.e., if a respondent had chosen the answer alternative *corruption risk* – also the alternative *corruption risk and I would not communicate on this* was accepted as correct) and 0, if otherwise.

The variable measuring knowledge on the reporting channels was coded as follows. A binary dummy variable taking value 1 if a respondent has knowledge on the reporting channels (*Yes/Rather yes*), and 0 otherwise. Another variable took the value 1 if a respondent indicated not having knowledge on the reporting channels (*No*), and 0 otherwise.

The following variables were included in all the regressions as binary/categorical dummy variables: Understanding of the importance of speaking up about risks (*binary*), responsible for hiring (*binary, taking value 1 if being responsible for hiring, 0 otherwise*), having knowledge on the reporting channels (*binary, taking value 1 if respondent indicated Yes/Rather yes to having knowledge on reporting channels, 0 otherwise*), not having knowledge on the reporting channels (*binary, taking value 1 if respondent indicated No to having knowledge on reporting channels, 0 otherwise*), male (*binary, taking value 1 if identified as a male, 0 otherwise*), female (*taking value 1 if respondent indicated being a female and 0 otherwise*), whom one prefers communicating a risk to (*HR, reference category for whom to communicate a risk to*).

2.1.1. Survey dissemination and incentives to encourage participation

The survey was conducted in Slovak language, and it was fully anonymous. To recruit participants, the Government Office of the Slovak Republic and the OECD agreed to incentivise the respondents with a lottery in which three public sector employees would be randomly selected to have a conversation with the Prime Minister of the Slovak Republic, upon the condition of having responded to the survey (“regret lottery”). If a selected candidate did not meet the required condition, a lottery ticket was redrawn until a candidate who met the criteria was selected.

The survey was developed and implemented using Qualtrics, a computer-based survey platform designed for survey creation. The link to the survey was embedded in an email which was disseminated by the Government Office of the Slovak Republic via the ACC of each ministry other central government body to all the public sector employees. In addition, the ACCs sent out two follow-up reminder emails encouraging staff to complete the survey (Annex B). The survey was launched on the 15th of June 2023, and it was kept open for approximately two weeks; it was closed on the 30th of June 2023.

2.2. Descriptive statistics to provide insights on the sample

Participant selection criteria: The participants had to be civil servants, working in the public administration of the Slovak Republic. While there are no general age limits applicable across the Slovak public administration, observations were selected based on the Slovak Civil Service Act, which defines a maximum career length of 50 years to account for a career that started at the age of 18 and ended at the age of 68. Hence, 14 observations indicating a career length longer than 50 years were excluded. No

information, other than the age limits, were available on typical career lengths in the public administration of the Slovak Republic.

Sample size: In total, 4760 responses were registered; however, 2179 of them were incomplete responses, and thus had to be excluded from the analysis. From the remaining 2581 responses, an additional 24 observations indicated being younger than 18 or older than 68, and hence based on the acts mentioned above, they were excluded from the analysis. In total, respondents from 22 agencies took part in the survey. These agencies included executive and legislative organs, such as ministries and judicial offices, and various agencies organising general public services. The final, total number of observations included in the regressions is 2537.¹ Annex O presents the sample sizes across the study groups, and the whole sample.

Statistical power analysis: The sample size is in line with power calculations. A “power analysis” was conducted to determine the sample size required to detect an effect with the required degree of confidence. Indeed, an experiment needs to have a certain amount of statistical power (the standard being 80%), to be able to say with 80% certainty that, when an effect is detected, that effect is true. Several aspects, such as sample size and the size of the expected detectable effect size affect the statistical power of a study. Based on past research, similar studies have found effect sizes of 2.9 percentage points (pp) and higher. The goal therefore was to obtain 80% power to detect a minimum effect size of 4 pp (based on an average of similar past research (van Roekel, 2021^[5]; Bhal, K. T., and Dadhich, A., 2011^[6]). For an effect size of 4 pp, a sample size of 3000 was needed, which would result in power of over 80%.

Randomisation checks: The size of the different treatment and control groups was similar, indicating that the randomisation was successful. Indeed, there were 838 observations in Treatment 1, 836 in Treatment 2, 863 in the control group.

Gender distribution: The share of women in the sample represented 45.13% of the sample, and the share of men 37.49%, while 1.18% of the sample indicated to identify themselves as non-binary, and 16.20% preferred not to disclose their gender. Because the sample size for those who identified themselves as non-binary was low, most of the time, they had to be omitted from the analysis. Looking at the wider population of public officials in the Slovak Republic, the female gender represented 60.39% of employees in public sector employment in the Slovak Republic in 2017 (OECD, 2019^[7]). The share of women in the experimental sample is lower, yet, similarly to the 2017 statistics, the share of women is still larger than the share of men.

Age and career-length distribution: The youngest respondent in the sample is 20 years, and the oldest is 68, with a mean age of 44 years old. Career length varied between 0 and 68 years, with a mean career length of 15 years.

2.3. Experimental results

A few key lessons emerged from the experiment, which can be broadly summarised into 5 main takeaways:

1. The two behavioural interventions significantly improved the likelihood of communicating a risk.
2. The two treatments also slightly improved general feelings of safety among the respondents.
3. Respondents felt safest when communicating risks to specific stakeholders.
4. Understanding the importance of communicating a risk was low in the whole sample.
5. Trust in the risk management system is dependent on knowledge of the reporting channels.

The sections that follow explain these findings more in-depth and substantiate them with the statistical findings from the experiment.

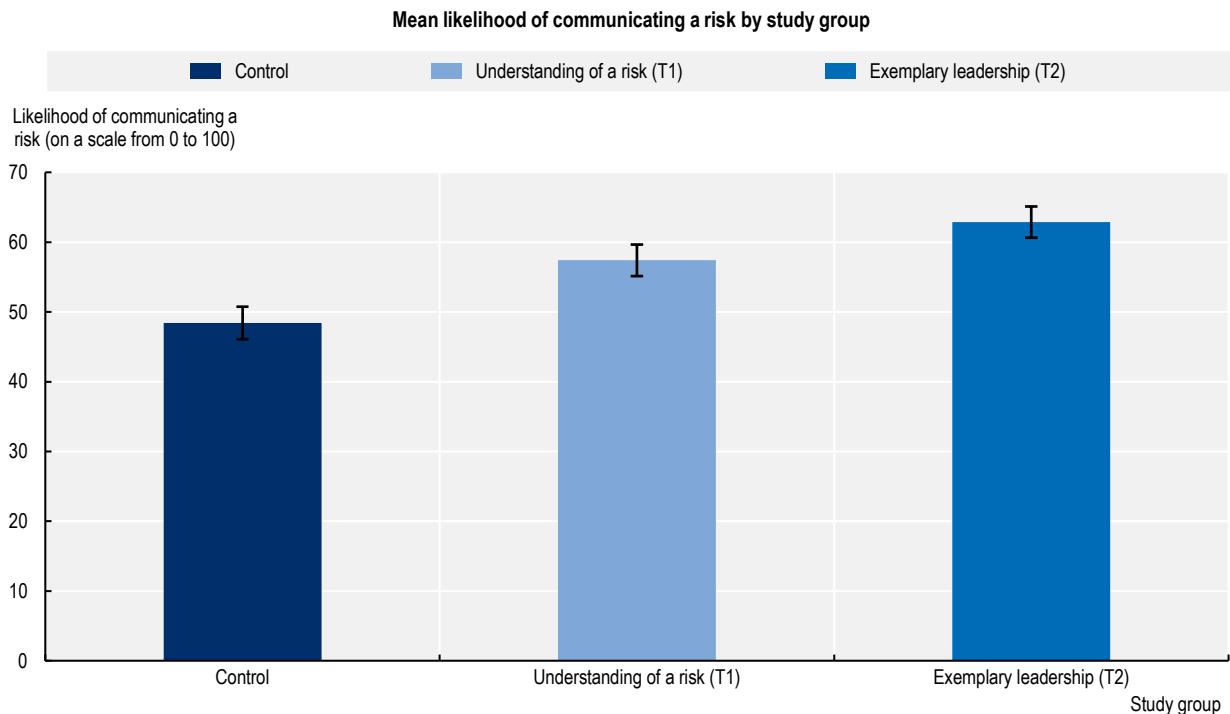
2.3.1. The two behavioural interventions significantly improved the likelihood of communicating a risk

In the control group, 48% of respondents indicated that, in the given scenario, they would communicate the potential risk. This means that the baseline for communicating risks in normal conditions is very low; in absence of the interventions, only less than half of the respondents would communicate risks. In turn, respondents who saw the message aimed at clarifying what a risk is (treatment 1), were more the likely to communicate a risk (around 57%), and those who were exposed to the message on leadership (treatment 2) were even more likely to do so (around 62%). The intervention appealing to exemplary leadership was the most impactful in increasing the likelihood of communicating a risk, but the intervention increasing understanding of a risk also significantly improved the likelihood of communicating a risk compared to the control.

The main results from means tests are illustrated in Figure 2.4. The graph visualises the mean of the likelihood of communicating a corruption risk in the three study groups (treatment 1 (T1), treatment 2 (T2) and control group), with error bars visualising 95% confidence intervals. As mentioned, the likelihood of communicating a risk is the lowest in the control group (at around 48%), the likelihood of communicating a risk is significantly higher for treatment 1 compared to the control group (at around 57%), and the likelihood of communicating a risk is the highest in treatment 2 (at around 62%). These significant results were confirmed through robustness checks in Box 2.2.

Figure 2.4. The two behavioural interventions had a significant effect on the likelihood of communicating a risk, compared to the control group

Bar graph of the mean of likelihood of communicating a risk with error bars, by study group



Note: The error bars display the 95% confidence intervals. The error bars show the spread around the mean. The error bars are relatively short, entailing that there is relatively little variation. The error bars do not overlap vertically, which signals a statistically significant difference between the means across the control and the treatment groups (for statistical means testing, see Table 2.2).

Box 2.2. Robustness checks confirm the significant effect of the two messages on the likelihood of communicating a risk

Two non-parametric means tests were conducted to test the robustness of the experimental results. Since the observations of the primary outcome variable were not normally distributed (see Annex C), two non-parametric tests; a Mann-Whitney U-test and a Kruskal Wallis test, which do not impose any strict assumptions on the shape of the distribution, were conducted. Table 2.1 summarises the number of observations, means, standard errors, standard deviations, the lower and upper bounds of the 95% confidence intervals for the two treatment groups and the control group, and the differences in means between the study groups.

Table 2.1. Number of observations, means, standard errors, and lower and upper bounds of a 95% confidence interval for the likelihood of communicating a risk, by treatment

Group (N)	Mean	Standard error	Lower limit	Upper limit
Treatment 1 (N = 838)	57.40089	1.1591	55.12581	59.67598
Treatment 2 (N = 836)	62.86821	1.141664	60.62734	65.10907
Control (N = 863)	48.41282	1.189361	46.07843	50.7472
T1-C	-8.988079	1.661739	12.24735	5.728809
T2-C	-14.45539	1.650117	17.69187	11.21891
T2-T1	5.467311	1.626964	2.276209	8.658413

Table 2.2 presents the results from the means tests. Both the difference in means between the treatment 1 and the control group is (-8.99 pp), and the difference between the treatment 2 and the control group (-14.46pp) were statistically significant - confirming, that both treatments do significantly influence the likelihood of communicating a risk. In addition, the statistical difference of the means between the two treatment groups (-5.47pp) was also found significant, indicating treatment 2's significantly higher impact on the likelihood of communicating a risk, compared to treatment 1.

Table 2.2. Results from the means tests

Test	Mean	Mann-Whitney			Kruskal-Wallis	
		Rank sum	Z	p-value	X ²	p-value
T1-C	-8.988079	765490.5	-5.182	0.000	26.852	0.0001
		682060.5				
T2-C	-14.45539	794636.5	-8.332	0.000	69.429	0.0001
		649513.5				
T2-T1	5.467311	733072.0	3.340	0.000	11.159	0.0008
		668903.0				

The results from the OLS regression show that both treatments have a highly statistically significant effect on the likelihood of communicating a risk, as was confirmed by the means tests and from visual illustration of the results (for the graph see Figure 2.4, for means tests see Table 2.2). Table 2.3 presents the results from an Ordinary Least Squares (OLS)-regression with robust standard errors, with the likelihood of communicating a corruption risk as the dependent variable. An OLS regression with robust standard errors investigates whether a linear relationship exists between the two treatments, and the likelihood of communicating a risk. A table summarising results from all the robustness checks can be found in Annex E.

The likelihood of communicating a risk was measured on a scale from 0 to 100. All the effects are relative to the baseline of 31.50 (the intercept, the estimate for the control group). All the results are calculated based on the assumption that all the other variables are held constant.

Table 2.3. The two treatments have a highly statistically significant effect on the likelihood of communicating a risk

The table summarises the results from the main regression: OLS with robust standard errors. Dependent variable: likelihood of communicating a risk

	OLS with robust standard errors
Understanding of a risk (T1)	8.209*** (1.493)
Exemplary leadership (T2)	11.98*** (1.494)
General feeling of safety	0.293*** (0.0247)
Agency	-0.185 (0.119)
Responsible for hiring	3.897* (1.941)
Understanding of the importance of speaking up about risks	14.06*** (1.247)
Appropriateness of risk management	0.130*** (0.0324)
Perceived fairness of the hiring process	0.0280 (0.0301)
Knowledge of reporting channels	
Yes	2.452 (1.424)
No	-4.307* (2.081)
Age	-0.252*** (0.0741)
Gender	
Female	1.170 (1.778)
Male	3.214 (1.844)
Career length in the public administration	0.0867 (0.0745)
Intercept	31.50*** (3.917)
N	2537
R ²	0.248
adj. R ²	0.244

Note: Standard errors in parentheses, * p < 0.05, ** p < 0.01, *** p < 0.001.

The respondents in the Exemplary leadership-treatment were 12.00 percentage points (pp) more likely to communicate a risk compared to the respondents in the control group. The respondents in the Understanding of a risk-treatment were 8.21 pp more likely to communicate a risk, compared to control group. The effect sizes for the treatments slightly differ from those reported above (see Box 2.2) as the estimation methods differ (statistical tests estimate whether the average effects are equal between the study groups, whereas regression analysis looks at partial effects, keeping all the other variables included in a regression equation constant). The direction of these results is confirmed by the robustness checks (see Annex E) where the effect of both treatments is statistically significant on 0.1%-level.

General feelings of safety when communicating about risks (*How safe do you feel about raising this risk?*) was also measured on a scale from 0 to 100. General feelings of safety significantly correlate with the likelihood of communicating a risk across all the regressions (Annex E). According to the results, a unit increase in general feelings of safety is estimated to increase the likelihood of communicating a risk by 0.29 pp.

Being responsible for hiring decisions was significant and positively correlated with the likelihood of communicating a corruption risk. For those being responsible for hiring employees the estimated increase in the likelihood of communicating a corruption risk was 3.90 pp. Those who are directly involved in hiring may be more likely to speak about corruption risks being more often involved in situations that entail a hiring risk.

Understanding of the importance of communicating risks was positively correlated with the likelihood of communicating a risk and statistically significant on 0.1%-level. On average, correctly indicating that the situation in the vignette constituted a risk increased the likelihood of communicating a risk by 14.06 pp (see Section 2.3.4 for a further analysis on the understanding of the importance of communicating risks in the sample).

Trust in the appropriateness of the risk management system was also significantly correlated with the likelihood of communicating a risk. A unit increase of trust in the appropriateness of corruption risk management increased the likelihood to communicate risks on average by 0.13 pp.

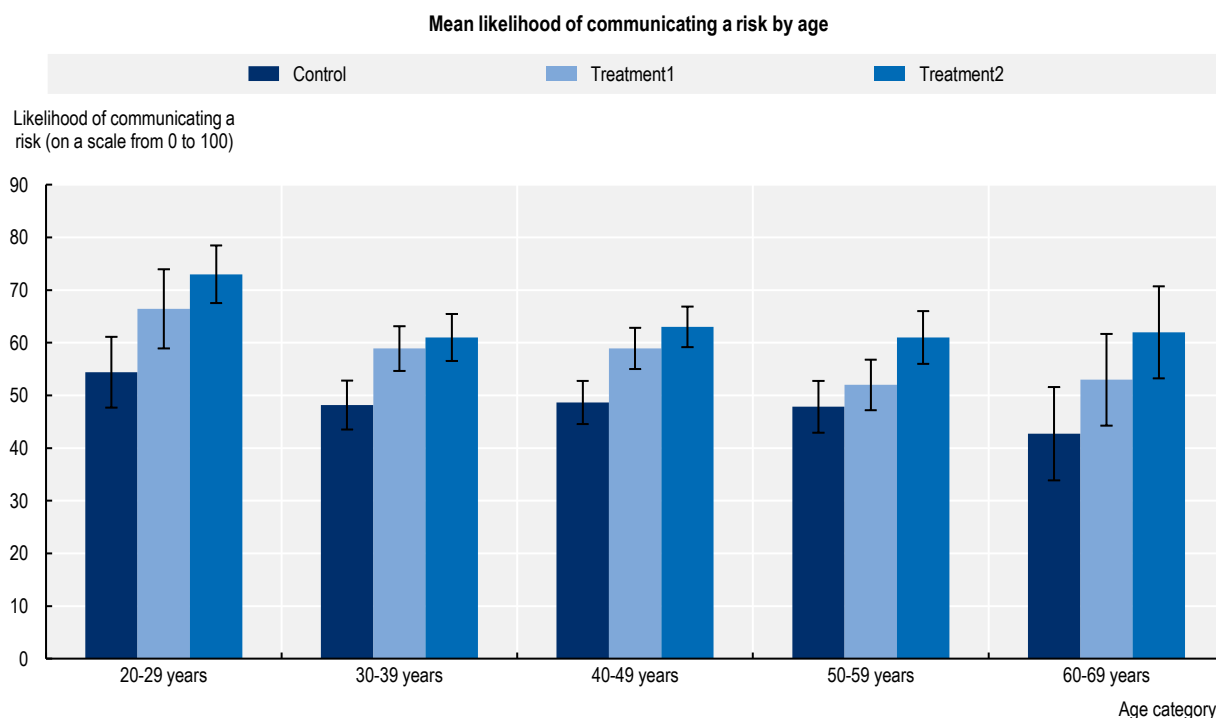
Not having knowledge on the reporting channels was also associated with the likelihood of communicating risks. Responding “No” to having knowledge on the reporting channels significantly decreased the likelihood of communicating by -4.31 pp. Having knowledge (responding “Yes/Rather yes”) on the reporting channel was found insignificant. An additional regression to test the interaction between hiring responsibility and knowledge on the reporting channels found a positive and statistically significant effect on the likelihood of communicating risks from being responsible for hiring and having knowledge on reporting channels, emphasising the need to provide those responsible for hiring officials the information on how to communicate risks (Annex N).

The agency where one works at, career length in the public administration measured in years, gender and perceived fairness of the hiring system were not found to significantly impact with the likelihood of communicating a risk. Interactions between treatment and covariates were also found insignificant (see Annex K). The result of no statistical differences in the likelihood of risk communication between the agencies indicates that the risk communication culture is relatively similar across Slovak ministries and other central authorities.

Age, measured in years, was negatively correlated with the likelihood of communicating a risk: the older the respondent, the less likely the respondent is to report a risk and the younger someone is, the likelier they are to communicate a corruption risk. An increase in age by one unit is expected to decrease the likelihood of communicating by -0.25 pp, assuming, that all other factors are held constant. Previous literature has reported that people may have a tendency to prefer to maintain the current state of affairs instead of welcoming change, which could also explain senior officials lower likelihood for communicating risks (Samuelson, W. and Zeckhauser, R., 1988^[8]). The result is visually presented in Figure 2.5, and is also consistent across the treatments; the bars for the youngest age group are higher than for the remaining age groups across the treatments.

Figure 2.5. Younger respondents (20-29 years) were significantly more likely to communicate risks, compared to older respondents

Bar graph of the mean likelihood of communicating a risk by age and treatment assignment, with error bars



Note: The error bars display the 95% confidence intervals.

2.3.2. The treatments slightly improve general feelings of safety among the respondents

The general feeling of safety among the respondents was fairly low - overall, less than half of the respondents felt safe when communicating risks (i.e., approximately half of the respondents feel less safe than 50 on a scale from 0 to 100 when they communicate risks). The regression output table for the analysis with the dependent variable “General feelings of safety” is summarised in Table 2.4. An OLS regression with robust standard errors estimated the effect of the two treatments, secondary outcome variables and covariates on general feelings of safety.

To investigate whether general feelings of safety while communicating a risk were correlated with who participants prefer communicating a risk to, feelings of safety were measured twice on a scale from 0 to 100 (see Annex A). First, a general question on How safe do you feel about raising this risk? was asked (henceforth referred to as “General feelings of safety”), after which participants were asked to whom they would prefer communicating a corruption risk (Who would you prefer to raise this risk with? your manager; HR; the Anti-corruption Coordinators or others) after which they were asked how safe they would feel about raising the risk with the entity they indicated (e.g. How safe do you feel about raising this risk with your manager?) (referred to as “Feelings of safety when communicating to preferred stakeholder”).

Table 2.4. The treatments had a relatively small yet significant effect on general feelings of safety among the respondents

Regression output table, OLS with robust standard errors. Dependent variable: General feelings of safety

	OLS with robust standard errors
Understanding of a risk (T1)	3.168* (1.348)
Exemplary leadership (T2)	3.356* (1.329)
Whom to communicate	
ACC	-3.685 (1.894)
Manager	3.309 (1.846)
Other	-9.606*** (2.515)
Agency	0.0672 (0.111)
Responsible for hiring	8.702*** (1.814)
Understanding of the importance of speaking up about risks	4.858*** (1.171)
Appropriateness of risk management	0.262*** (0.0305)
Perceived fairness of the hiring process	0.236*** (0.0293)
Knowledge on the reporting channels	
Yes	6.752*** (1.258)
No	1.149 (1.972)
Age	0.00923 (0.0706)
Gender	
Female	-0.878 (1.545)
Male	1.264 (1.623)
Career length in public administration	0.0471 (0.0692)
Intercept	6.403 (3.691)
N	2537
R2	0.291
adj. R2	0.286

Note: Standard errors in parentheses, * $p < 0.05$, ** $p < 0.01$, *** $p < 0.001$.

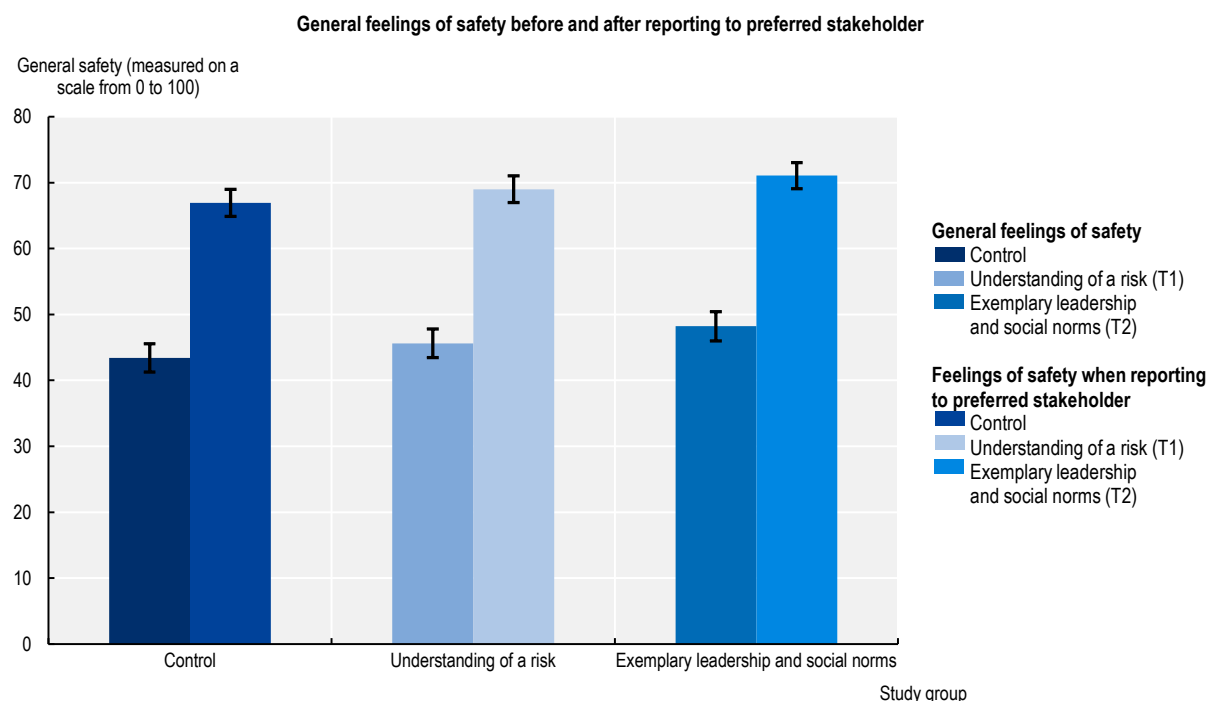
All the effects are relative to the baseline of 6.40 (the intercept, the estimate for the control group). All the results are calculated based on the assumption that all the other variables are held constant.

The two treatments do increase general feelings of safety among the respondents, yet the effect sizes are small. Respondents in the Understanding of a risk-treatment felt on average 3.17 pp safer compared to the control group, *ceteris paribus*. Respondents in the Exemplary leadership-treatment felt on average 3.36 pp safer compared to the control group.

Figure 2.6 visually presents this result - after the respondents had a clearer idea of whom to communicate a corruption risk, they felt safer, irrespective of the study group. The sense of safety after being asked to whom respondents prefer communicating a risk is significantly higher, compared to the values for general safety, entailing, that people reported feeling safer once taking into account their responses to “Who would you like to raise this risk with?”.

Figure 2.6. The respondents felt safer communicating a risk when communicating it to their preferred stakeholder

Bar graph of general feelings of safety before and after communicating to preferred stakeholder, by treatment



Note: The error bars display the 95% confidence intervals.

Preferring to communicate a risk to 'other' decreased general feeling of safety by -9.61 pp, compared to communicating a risk to HR (the intercept, 6.40). The relationships between preferring to report a risk to ACC or a manager, and general safety, were insignificant.

Being responsible for hiring was significantly and positively associated with general feelings of safety. Overseeing hiring decisions was associated with an increase in general feelings of safety by 8.70 pp.

Respondents correctly judging the situation in the vignette as a risk felt on average safer, compared to those who did not identify the situation in the vignette as a risk. On average, understanding of the importance of speaking up about risks improved general feelings of safety by 4.86 pp.

Trust in the risk management system was significantly correlated with general feeling of safety. A unit increase in trust in the corruption risk management was associated with an increase of 0.26 pp in general safety.

The fairer the respondents view the hiring process, the safer they feel. A unit increase in the perceived fairness of a hiring process significantly increased feeling of general safety by 0.24 pp.

Lastly, having knowledge on the reporting channels (*Yes/Rather yes*) was positively and significantly associated with general feelings of safety. Having knowledge on the reporting channels increased general feelings of safety by 6.75 pp. The relation between not having knowledge on the reporting channels and general feelings of safety was insignificant.

2.3.3. Respondents feel safest when communicating risks to specific stakeholders

Majority of the respondents (n = 1116) indicated a preference to report a risk to their manager meaning that communicating a risk to manager is the most common option. The next preferred channel for risk communication (n = 838) were the Anti-corruption Coordinators, and HR was the least preferred channel to communicate risks (n = 279). 304 respondents indicated a preference for not communicating a risk at all, or to report a risk to someone else. The regression results for Feelings of safety when communicating to preferred stakeholder, are summarised in Table 2.5. All the effects are relative to the baseline of 38.12 (the intercept, the estimate for the control group) and all the results are calculated based on the assumption that all the other variables are held constant.

Table 2.5. Those who responded preferring communicating a risk to their manager feel the safest, compared to other communication alternatives

Regression output table, OLS with robust standard errors. Dependent variable: Feelings of safety when communicating to preferred stakeholder

	OLS with robust standard errors
Understanding of a risk (T1)	2.819* (1.278)
Exemplary leadership (T2)	2.495* (1.259)
Whom to communicate	
ACC	-0.149 (1.752)
Other	3.484 (2.587)
Manager	11.08 *** (1.704)
Agency	-0.0353 (0.105)
Responsible for hiring	3.414* (1.629)
Understanding of the importance of speaking up about risks	6.517*** (1.037)
Appropriateness of risk management	0.225*** (0.0281)
Perceived fairness of the hiring process	0.206*** (0.0273)
Knowledge on the reporting channels	
Yes	5.194*** (1.260)
No	-0.718 (1.976)
Age	-0.182** (0.0663)
Gender	
Female	2.016 (1.534)
Male	-0.605 (1.600)
Career length in public administration	0.0507 (0.0640)
Intercept	38.12*** (3.534)
N	2537
R2	0.266
adj. R2	0.261

Note: Standard errors in parentheses, * p < 0.05, ** p < 0.01, *** p < 0.001.

The “Understanding of a risk” treatment is significantly and positively associated with Feelings of safety when communicating to preferred stakeholder. Respondents in the “Understanding of a risk” treatment felt 2.82 pp safer, than respondents in the control group. The relationship between the “Exemplary leadership” treatment and Feelings of safety was also significant and positive. The “Exemplary leadership” treatment was estimated to increase feeling of safety by 2.50 pp.

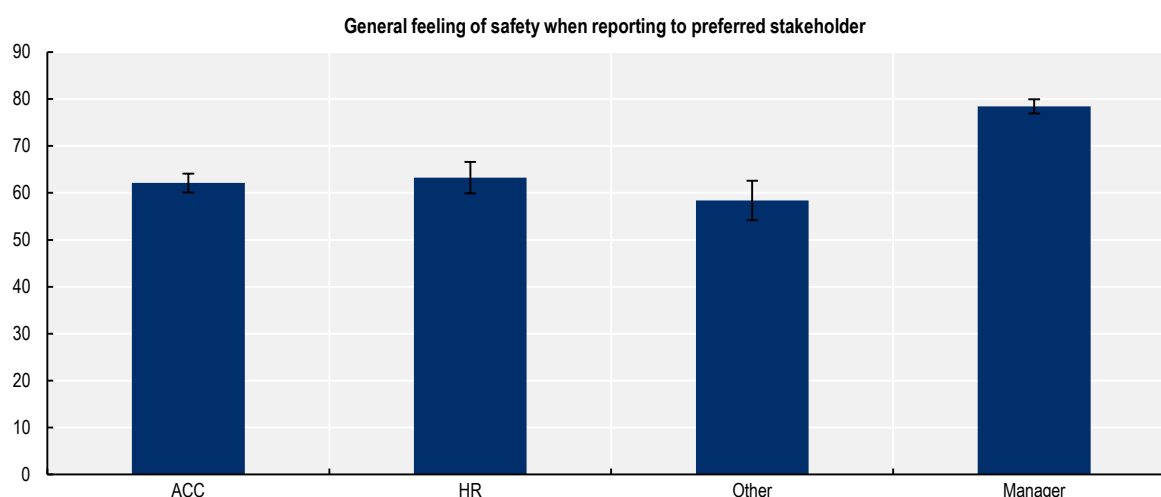
Preferring to communicate a risk to manager was positively and significantly correlated with Feelings of safety when communicating to preferred stakeholder. Preferring to report a risk to manager increased

safety by 11.08 pp, compared to preferring to communicate to HR (the intercept, 38.12). The relationships between communicating a risk to ACC, HR and Feelings of safety when communicating to preferred stakeholder were not statistically significant.

Figure 2.7 presents the means of the Feelings of safety when communicating to preferred stakeholder, plotted by the four risk communication alternatives. Those who prefer communicating a risk to a manager clearly felt the safest, whereas respondents who prefer communicating to other felt the least safe.

Figure 2.7. The respondents felt the safest when preferring to report a risk to a manager, and the least safe when communicating a risk to 'other'

Bar graph of Feelings of safety when communicating to preferred stakeholder, by the reporting channels



Note: Error bars display the 95% confidence intervals.

Hiring responsibility was significantly associated with the feelings of safety when communicating to preferred stakeholder. Being responsible for hiring decisions and while communicating a risk to a preferred stakeholder increased feeling of safety by 3.41 pp.

Understanding of the importance of speaking up about risks was positively and significantly correlated with Feelings of safety when communicating to preferred stakeholder. A unit increase in understanding the importance of speaking up about a corruption risk increased general safety by 6.52 pp.

Trust was significantly and positively associated with Feelings of safety when communicating to preferred stakeholder. A unit increase in trust increased general safety by 0.23 pp.

Having knowledge on reporting channels (*Yes/Rather yes*) was positively and significantly correlated with feeling of safety when communicating to preferred stakeholder. Having knowledge on reporting channels was associated with a 5.19 pp increase in general safety.

Senior respondents were less likely to feel safe while communicating a risk. A unit increase in age significantly decreased safety by -0.18 pp. Younger respondents therefore felt safer communicating a risk after being asked the respondents whom they prefer communicating a corruption risk to.

2.3.4. Understanding the importance of communicating a risk is low in the whole sample

On average, 30.8% of the respondents in the total sample correctly indicated that the situation in the vignette constitutes a risk which confirms the finding in the diagnostic analysis that the general understanding of a risk in the public administration is low. Understanding of a risk was highly significantly correlated with the likelihood of communicating a corruption risk and general feeling of safety. The understanding of a risk was further investigated, as one of the objectives of the treatment 1 (Understanding of a risk) was to improve the understanding of a risk among the respondents and in the diagnostic analysis, one of the key findings was that the understanding of a risk among the public sector employees was lacking.

Table 2.6 summarises the descriptive statistics for measuring understanding the importance of communicating a risk by the treatment variable. The percentages for correctly indicating that the situation constitutes a risk is similar across the treatments.

There is a slight difference in the means in understanding the importance of speaking up about a risk between the three study groups, however the difference is not statistically significant. This means that the Understanding of a risk-treatment did not significantly improve the understanding of the importance of communicating risks compared to the other study groups. Instead, the effect of the treatments could be caused by appealing to social norms. Previous studies have found a significant effect simply from prompting and reminding people to encourage favourable behaviours with messages appealing to social norms in the context of anti-corruption policies (Stahl, C, 2022^[9]).

Table 2.6. Descriptive statistics for the variable “Understanding of a risk”, by treatment

Group (N)	Mean	Nr correct responses*	% correct responses of the sample	Standard deviation
Treatment 1 (838)	0.318	267	31.9%	0.466
Treatment 2 (836)	0.338	283	33.8%	0.473
Control (863)	0.286	247	28.6%	0.452
Total (2537)	0.314	783	30.8%	0.464

Note: *number of respondents who correctly indicated that the situation is a risk.

2.3.5. Trust in the risk management system is dependent on knowledge of the reporting channels

Table 2.7 presents the results from an OLS regression with trust in the risk management system as the dependent variable. All the effects are relative to the baseline of 9.44 (the intercept, the estimate for the control group) and all the results are calculated based on the assumption that all the other variables are held constant.

Table 2.7. Those who indicated preferring to communicate a risk to ‘other’ (rather than managers, anticorruption coordinators or the HR) had the lowest trust

Regression output results. Dependent variable: appropriateness of a risk management system

	OLS with robust standard errors
Understanding of a risk (T1)	-0.525 (0.975)
Exemplary leadership (T2)	-1.135 (0.968)
General feelings of safety	0.140*** (0.0164)
Agency	0.120 (0.0778)
Responsible for hiring	-1.329 (1.304)
Understanding of the importance of speaking up about risks	0.851 (0.858)
Perceived fairness of the hiring process	0.561*** (0.0182)
Knowledge on the reporting channels	
Yes	5.889*** (0.973)
No	-2.691 (1.543)
Whom to communicate	
ACC	1.350 (1.499)
Other	-2.144 (1.922)
Manager	2.176 (1.442)
Age	0.0575 (0.0498)
Gender	
Female	0.338 (1.145)
Male	1.241 (1.207)
Career length in the public administration	-0.0495 (0.0500)
Intercept	9.443** (2.767)
N	2537
R ²	0.517
adj. R ²	0.513

Note: Standard errors in parentheses, * p < 0.05, ** p < 0.01, *** p < 0.001.

The relationship between the two treatments and trust is not statistically significant.

General safety is statistically significantly correlated with trust in the risk management system. A unit increase in general safety increases trust by 0.14 pp.

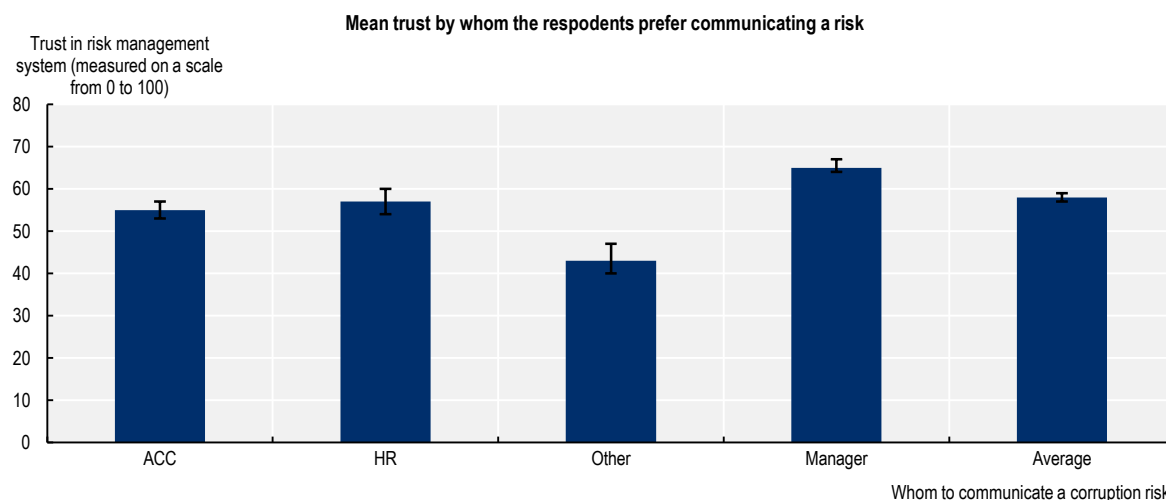
Perceived fairness of the hiring process is significantly and positively associated with trust in the risk management system. An increase in fairness of the hiring process increased trust by 0.56 pp.

Knowledge on reporting channels was also positively and significantly related to trust in the risk management system. Having knowledge of the reporting channels increased trust by 5.89 pp.

None of the reporting channels (ACC, other, manager (HR is the baseline) were significantly correlated with trust. Figure 2.8 illustrates the mean of trust in a risk management system by whom to communicate a corruption risk. Respondents who preferred to communicate a risk to a manager seem to report the highest trust on the risk management system. As the regression results shows, respondents who preferred to communicate a risk to “other”, seemed to have the lowest trust in the risk management system. The last column presents average trust in risk management system.

Figure 2.8. Respondents who preferred to communicate a risk to a manager had the highest trust in the risk management system, and those who communicate to ‘other’, had the lowest

Bar graph of the appropriateness of a risk management system by whom to communicate



Note: The error bars display the 95% confidence intervals.

In addition, from analysing the comment box for those the respondents who indicated communicating a risk to “other”, these respondents mainly preferred to report a risk to nobody, or to a reliable instance outside of the organisation. Many of these respondents indicated that they do not know whom they would communicate a risk to. Many reported that they would not communicate the risk in the vignette, especially to anyone working in the same organisation – examples of whom the respondents would consider communicating a risk to were independent and impartial instances, such as at high level in the European Union. Some respondents reported that they would communicate a risk to a corruption coordinator outside of the organisation, but not an ACC within the organisation. Many also indicated that they would communicate to a colleague if they felt they can trust their colleagues. A few also chose to communicate a risk to family or friends, i.e., to none of the official risk communication channels. Some of those who indicated communicating a risk to “other” also expressed having low trust in the system, which could be one of the factors explaining the seemingly negative relationship between communicating to “other”, and trust in the risk management system.

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Note

¹ No responses were received from the following departments: Judicial Council of the Slovak Republic, National Security Office, Statistical Office of the Slovak Republic and Supreme Audit Office. The General Prosecutor’s Office was not included in the experiment. Due to the low sample sizes, the following categories of the Agency-variable was excluded from the analysis: Association of Towns and Municipalities in the Slovak Republic, the Ministry of Economy, and the Ministry of Education, Science, Research and Sports.

3 Lessons to strengthen corruption risk management in the Slovak Republic

One of the central measures set out in the Anti-Corruption Policy of the Slovak Republic for the years 2019-2023 is to strengthen the identification and mitigation of corruption risks across the Slovak public sector. The experimental findings demonstrate the potential of applying behavioural insights to enhance already-existing corruption risk management policies. Both the intervention appealing to leadership, and the one supporting a better understanding of risks, when coupled with social norms messaging, significantly improved the likelihood of communicating integrity risks. This chapter outlines the recommendations that emerged from the analysis and experimental findings.

3.1. Last step of BASIC: Scaling up the successful results

To better understand systematic errors and biases in decision-making in the context of risk communication, and to improve procedures and practices, insights from behavioural sciences were applied to improve the current risk management system in the public administration of the Slovak Republic. In line with Government resolution No. 585 on the Anti-Corruption Policy for the years 2019-2023, ministries and other central authorities in the Slovak Republic are required to conduct their own risk assessments for sectoral anti-corruption programmes. The OECD Public Integrity Review of the Slovak Republic (2022) recommends making use of a wide range of resources when analysing corruption risks. The first line of defense - i.e., employees and managers - are in a crucial position to detect risks, and their input for risk assessment is valuable. In line with these recommendations, a central aspect of this study was to encourage civil servants to communicate more about potential integrity risks.

This study demonstrated the promise behavioural science holds for improving public sector integrity and specifically for increasing risk communication in the Slovak public administration. Both behaviourally informed treatments significantly improved the likelihood of communicating a corruption risk among employees, indicating that using behavioural insights can indeed help to encourage the communication of risks among public servants, as was hypothesised at the start of the study.

Of the two treatments, the one exposing employees to exemplary leadership treatment was the most impactful in improving risk communication. The results also showed that employees in hiring roles feel safer and are more likely to report integrity risks related to hiring. This is encouraging, since people who oversee hiring are more likely to report hiring risks, and they are most likely also to be involved in assessing and managing these risks in reality.

Moreover, results showed that people feel more or less safe in communicating risks depending on who they report to. This underscores the critical need for optimising the design of risk communication systems to harmonise with employees' preferences and foster a sense of comfort and confidence in communicating risks.

Based on the experimental results, this chapter presents a set of key recommendations with concrete actions on how the Corruption Prevention Department can improve risk communication in the Slovak public administration. The high-level recommendations and concrete policy actions are presented below and summarised in Table 3.1. As the Slovak Republic develops its new Anti-Corruption Strategy for the period 2024-2029, these recommendations can serve as guidance to help inform future integrity policies in the public administration.

Table 3.1. Key findings and recommendations

Key findings	Policy recommendations	Potential policy actions
Make risk communication feel safe and encouraged		
<ul style="list-style-type: none"> • Less than 50% of respondents felt safe when communicating corruption risks. • Often, officials do not communicate risks even if they are aware of one. • A culture of fear and silence prevents officials from speaking up and communicating risks. • The experiment found that when employees feel safer to speak up, they are significantly more likely to communicate risks. • Behaviourally informed interventions were successful in increasing feelings of safety as well as risk communications. 	<p>Cultivate a safer environment for employees to communicate risks and feel heard</p> <ul style="list-style-type: none"> • Foster a culture a safety where employees feel safe raising issues and communicating risks • Allow employees to raise risks through the channels that they feel safest using 	<ul style="list-style-type: none"> • Consult employees on potential structural changes to the risk management system that would make them feel safer. • Ensure that corporate policies stress that employees are free to communicate risks to the actors they feel safest communicating risks to, including their managers. • Help employees feel heard, e.g., through regular check-ins and follow-ups to reassure that concerns on potential risks are taken seriously and acted upon. • Promote a social norm of communicating risks, for example by acknowledging and reporting those who communicate on

Key findings	Policy recommendations	Potential policy actions
<ul style="list-style-type: none"> Respondents felt safest when communicating risks to specific stakeholders. 		potential risks
<ul style="list-style-type: none"> The experimental findings suggest that senior officials, specifically, are less likely to communicate risks. <ul style="list-style-type: none"> This is potentially due to status quo bias in which a preference for the current state of affairs prevents new changes from taking place. Literature suggests this could also be linked to higher retaliation risk for seniors, from which greater organizational loyalty is expected. 	<p>Conduct further research to understand the differences in perceptions and behaviours between younger and senior employees</p> <ul style="list-style-type: none"> Tailoring policies to different age segments could be effective in improving risk communication 	<ul style="list-style-type: none"> Ministries and other central authorities and Anti-corruption Coordinators should clarify to employees that communicating risks will not result in retaliation. Organising targeted focus groups could help understand the different perceptions on risk communication between the young and senior civil servants and how to address these.
Empower leaders to set the standard through their actions		
<ul style="list-style-type: none"> A lack of exemplary leadership: public managers do not encourage or prompt employees to communicate risks and exhibit ticking-the-box and big-fish behaviours. Experimental results showed that when public employees are exposed to examples of good leadership, they display a higher likelihood of communicating a corruption risk. 	<ul style="list-style-type: none"> Encourage good leadership and make it salient Encourage officials in leadership positions to adopt better integrity behaviours to increase safety and risk communication Actively emphasise and elevate good behaviors from leaders Equip leaders with the right skills and knowledge to support an open culture and ethical code of conduct 	<ul style="list-style-type: none"> Provide integrity trainings to civil servants in leadership roles to equip them with relevant competences, skills and knowledge on how to create culture of safety and open communication in teams, and how to effectively communicate risks, and communicate about risk detection, mitigation and management in their teams. Support leaders in aligning communication and people management with the objective of enhancing ethical conduct and open culture. Acknowledge and emphasise positive leadership models, for example through new recognitions for good ethical behaviours.
<ul style="list-style-type: none"> The lack of understanding of the importance of communicating prevents employees from communicating risks. Diagnostic analysis showed that it is not always clear to public employees that they should report potential corruption risks, and not only actual corruption incidences. ACCs have a key potential as leaders supporting corruption risk management. 	<p>Empower Anti-corruption Coordinators and cross-agency working groups to act as risk management leaders and review risk management practices on a regular basis</p> <ul style="list-style-type: none"> Empower ACCs to enhance public officials' ability to identify and mitigate risks effectively. Consider making corruption risk management a standard feature of meetings of the Council of ACC and establishing cross-agency working groups to share best practices and support the implementation of risk management practices across the public sector. Review risk management practices on a regular basis to strengthen the harmonisation of corruption risk management as part of internal control policies. 	<ul style="list-style-type: none"> Ensure ACCs receive targeted training and resources to lead and support risk assessment and management in respective agencies. Strengthen the ACCs' role to support and lead the strengthening of risk management practices in entities. Integrate dedicated agenda items on corruption risk management during Council of ACC meetings to foster regular discussions and updates on the subject. Facilitate regular meetings of cross-agency working groups bringing together representatives from various ministries and other central authorities. To discuss challenges, share best practices, and collaborate on the implementation of effective risk management practices. Integrate corruption risk management aspects into annual government-wide reviews on the internal control and internal audit systems, to assess the maturity and reliability of risk management practices.
Ensure the process is easy and well-understood		
<ul style="list-style-type: none"> There is a lack of understanding about what constitutes an integrity risk and a lack of understanding of the importance of communicating integrity risks. Currently, employees do not communicate integrity risks due to the 	<p>Raise awareness of integrity policies: ensure employees know what they should do and how they should do it</p> <ul style="list-style-type: none"> Make the understanding of integrity risks a priority across the public sector Communicate the norm for 	<ul style="list-style-type: none"> Create concise and illustrative guidelines for public servants guiding the employees through a situation involving a corruption risk and clarifying that there is an expectation to communicate risks Design a web-based whole-of-government campaign where the concise guidelines take

Key findings	Policy recommendations	Potential policy actions
<p>lack of clear channels to do so.</p> <ul style="list-style-type: none"> Communicating to employees the expectation that every civil servant should speak up about corruption risks (injunctive social norms) was a crucial element of the two successful behaviourally informed interventions that encouraged risk communication. 	<p>everyone to follow integrity policies</p> <ul style="list-style-type: none"> Leverage social norms for enhancing favourable norms and for more effective risk communication 	<p>the form of visual how-to illustrations on the various reporting channels</p> <ul style="list-style-type: none"> Truthfully apply social norms in communication to raise awareness and improve compliance, emphasising the importance for everyone to engage in risk communication

3.2. Make risk communication feel safe and encouraged

3.2.1. Cultivate a safer environment for employees to communicate risks and feel heard

Many of the barriers in the diagnostic analysis were related to not feeling safe when communicating risks, and the experimental findings confirmed that less than 50% of the respondents felt safe while doing so. The findings from the diagnostic analysis demonstrated that public officials were not communicating risks also due to the lack of safe channels for risk communication, which again should not be confused with whistleblowing channels, serving another purpose. The findings also revealed that respondents tended not to communicate a risk even if they were aware of one. In the experiment, even in a hypothetical, simulated example where there clearly is a risk, only 30.8% of the respondents identified the situation as a risk, and less than 50% were likely to communicate about a risk in control group. These results emphasise the need and potential to improve feelings of safety to support integrity objectives.

On the other hand, the experiment showed that when employees feel safe, they are significantly more likely to communicate risks. In addition, both behaviourally informed interventions helped participants in feeling safer in communicating risks. Even if the effects of the two interventions on psychological safety were small, these results make sense as the primary objective of the interventions was not to improve general safety, yet they were successful in increasing general safety as a side effect. Behaviourally informed communications targeted specifically at increasing psychological safety could be designed with this aim in mind, which may prove even more impactful and could be a good follow-up to this first study.

Fostering a culture of openness and safety, in which employees feel comfortable communicating risks, is therefore essential for effective risk communication. Respondents also felt safer after they knew to whom they would report a risk, and how they can communicate risks. As such, **it will be important for the Slovak Republic to take measures to ensure that employees feel safe to communicate risks**. For example, communications around risk management policies could stress that employees are free to communicate risks to whoever they can feel safest communicating risks, including their managers, which in the experiment were found to be one of the go-to actors for risk communications. Alternatively, a suggestion box could be created to seek inputs from employees on what structural changes to the risk management system would increase their own willingness to communicate risks.

In addition, **it will be important to make employees feel heard when they communicate about risks**. In fact, a key finding in the diagnostic analysis was a lack of trust in believing that the system works, and that action will be taken after an employee speaks up about a potential risk. Regular check-ins and follow-ups could help in this sense. This could mean promoting a system for regular follow-ups after potential risks are raised. This reassures employees that their concerns are taken seriously and investigated appropriately. It could also be useful to celebrate employees who communicate on potential risks: acknowledging and rewarding those who report concerns can encourage others to come forward. This is also in line with evidence on social norms: people are more likely to communicate on risks if they think others are doing so as well, or if there is a shared understanding that speaking up is the right thing to do.

3.2.2. Conduct further research to understand the differences in perceptions and behaviours between younger and senior employees

Another finding in the diagnostic analysis was a culture of fear and silence. Respondents reported being fearful of retaliation for speaking up about risks; especially senior officials were less likely to communicate risks, compared to younger officials. The experimental results confirmed that senior officials were more reserved to speak up about corruption risks and senior respondents also felt less safe than younger respondents when communicating risks, which could reflect a status quo bias among senior officials, in which a preference for the current state of affairs prevents new changes from taking place.

Previous literature suggests that older employees are more likely to be retaliated for speaking up compared to younger employees. For senior employees at higher management levels potentially a greater organisational loyalty is expected (Mesmer-Magnus, J.R. and Viswesvaran, C., 2005^[11]) and when a senior employee speaks up, this may create a higher sense of betrayal, which may result in stronger retaliatory behaviours. Ministries and other central authorities and Anti-corruption Coordinators should thus make it clear to employees that speaking up about risks and other wrongdoings will not result in retaliation against the whistle-blower.

Experimental findings from an OECD experiment fostering safety in the energy sector found that frontline workers tend to have a different perception on safety, compared to management, as frontline workers are more often involved in unsafe activities (OECD, 2020^[2]). Similarly, in the context of risk reporting different age segments may have different risk perceptions. Policies tailored to the specific needs of different population segments could more effectively increase risk reporting and general safety. **Yet further research is needed on the perception on risk between the young and senior civil servants to understand what creates the age difference in risk communication behaviours.** This could, for example, take the form of targeted focus groups.

3.3. Empower leaders to set the standard through their actions

3.3.1. Encourage good leadership and make it salient

The diagnostic analysis revealed low levels of exemplary leadership in the Slovak public administration. Some managers exhibited “ticking the box”- behaviours meaning that they claimed to follow rules and codes of conduct when in reality they failed to translate these rules into practice. The lack of exemplary leaders had left officials uncertain on how to act upon a risk in an atmosphere where they feel fearful for retaliation, or for being bullied or ridiculed for their concerns. Employees expressed that they do not communicate risks because the managers were not believed to act upon the risks reported.

The experimental findings indeed show that when public servants are exposed to good ethical behaviours from their leadership this can have a significant and positive effect on the likelihood of communicating risks. In fact, appealing to exemplary leadership was the most impactful of the two treatments in significantly improving the likelihood of communicating a corruption risk. Exemplary leadership was also found to increase employees’ feelings of safety when communicating. Even if the experiment was conducted in a hypothetical setting online, the results were indicative of exemplary leadership being key in supporting ethical conduct in public organisations.

Encouraging good leadership and making it more salient can therefore help civil servants in the Slovak public administration to promote risk communication across teams. As in the case of Brazil (see Box 1.2), encouraging leaders to lead by example and to facilitate communicating risks could involve the provision of training to equip leaders with the right skills and competences. Training on integrity leadership would ensure that officials in leader roles know how to effectively communicate risks, and how to effectively communicate about risk detection, mitigation and management in their teams.

In addition to promoting improved leadership practices, **it will also be crucial to make good leadership more salient to highlight and reinforce this behaviour**, for instance through recognition and rewards, thereby amplifying exemplary instances of effective leadership. New incentives, and even gamification elements, could be introduced to ensure acknowledging and incentivising positive leadership models.

Exemplary leadership was also significantly correlated with general feelings of safety and highlights the responsibility leaders have in creating a safe space and open culture in their teams. Leaders have a crucial role in encouraging their team members and creating a safe space where employees feel comfortable communicating risks. The experimental results also showed that knowledge on the reporting channels, and trust in the risk management system – i.e., the belief that it functions appropriately, are positively associated with general safety. **Risk communication and people management should therefore be aligned with and support the objective of enhancing ethical conduct and open culture.**

3.3.2. Empower Anti-corruption Coordinators and cross-agency working groups to act as leaders for effective risk management and review risk management practices on a regular basis

Diagnostic analysis revealed that officials have difficulties distinguishing between a corruption risk and a materialised corruption case, and the experimental results confirmed this finding. The experimental findings found that it is not always clear to public employees that they can and are encouraged to communicate corruption risks, and not only actual corruption incidences. Less than one-third (30.8%) of the respondents across the whole sample correctly indicated that the situation in the vignette is a risk. On the other hand, understanding the importance of communicating risks was highly significantly associated with the likelihood of communicating risks and with feeling safe when communicating risks.

The “Understanding of a risk” treatment aimed to improve the understanding of a risk among the respondents and, by doing so, to increase risk communications. The effect of the treatment on risk communications was significant and positive. Given the high correlation between understanding of the importance of communicating risks and likelihood of communicating risks, improving the understanding of risks is key in going forward.

The current agency-specific risk management practices for identifying and communicating integrity risks in the Slovak Republic could be enhanced across the public administration. The insignificant correlation between agencies and the likelihood of communicating risks indicated that the risk communication culture across ministries and other central authorities is similar, and currently employees are not participating enough in this exercise.

The Corruption Prevention Department in the Office of the Government of the Slovak Republic has a central role in leading, overseeing and providing guidelines for the identification and mitigation of corruption risks across ministries and other central authorities in the Anti-Corruption Policy. In addition to raising awareness of integrity policies to improve the understanding of risk, the CPD could consider strengthening the ACCs role and capacities to lead and support corruption risk management in their respective agencies by giving them appropriate training and resources for such activities. The ACCs could then reach out to those in leader and manager positions, who are responsible for risk assessment and management (OECD, 2023^[3]). This could allow to effectively tailor risk management practices to each agency’s unique context and to contribute to professionalise risk management throughout the administration. The ACC could be given appropriate training and resources to lead and support risk management in their respective agencies.

The CPD could also consider making corruption risk management a standard feature of the meetings of the Council of the ACC and establishing cross-agency working groups bringing together representatives for risk assessment activities from different agencies to promote and support risk assessments. While each agency has its specific sectoral risks, some risks are also cross-sectoral. This could facilitate horizontal knowledge sharing and help harmonising risk management practices across the public administration

(OECD, 2022^[4]), but it could also help in identifying new potential risk areas and provide feedback and support on risk management practices (OECD, forthcoming^[5]). This can be particularly beneficial for the less advanced agencies, as knowledge sharing could facilitate and encourage these agencies to adapt practices that have worked elsewhere.

The CPD could also consider collaborating with the central harmonisation function in the Ministry of Finance to strengthen the harmonisation of corruption risk management as part of internal control policies. Toward this end, corruption risk management aspects could be integrated into the annual government-wide reviews on the internal control and internal audit systems produced by the Ministry of Finance, to assess the maturity and reliability of risk management practices across ministries and other central authorities and identify areas for improvement.

3.4. Ensure the process is easy and well-understood

3.4.1. *Raise awareness of integrity policies: ensure employees know what they should do and how they should do it*

In addition, the diagnostic analysis showed that employees do not always know how to communicate risks, as the system for communicating risks is not always clear. Conversely, a key tenet of behavioural science is making the desired behaviours (risk communication, in this case) easy, aiming to streamline processes and experiences. Meanwhile, the experiment also showed that the higher employees' trust is in the risk management system, the higher is their likelihood of communicating a risk. This finding is intuitive, as the more appropriate and well-functioning a corruption risk management system is, the more likely individuals are to trust that the system functions and are more willing to communicate risks. The higher the respondents' trust in the risk management system was, the safer respondents also felt in communicating risks. Having knowledge on the reporting channels was also significantly associated with the likelihood of communicating a risk: intuitively, when employees know how to communicate risks, they are more likely to communicate risks and felt safer communicating risks.

To support the efforts that the CPD has already made in disseminating risk management guidelines to all ministries and other central authorities, **concise guidelines aimed for public servants could also be created with illustrative and relatable examples on risk detection and assessment, the purpose and function of the various risk communication channels, and what happens after a risk has been reported**. More specifically, guidelines could guide the employees stepwise through a process in a situation where there is a risk providing a good overview on how to act and proceed in such situation. These guidelines should promote the understanding of risks, the importance of risks, and clarify that risk assessment and management is part of the responsibilities of public managers, yet each civil servant is expected to contribute to it by communicating risks. They should clarify that there is an expectation for public officials to communicate potential corruption risks, and not only actual corruption incidences, and that there exists an injunctive social norm such that every civil servant should speak up about corruption risks.

Equally, one aspect of an effective communication strategy could be a web-based whole-of-government campaign where the concise guidelines take the form of visual how-to illustrations on the various reporting channels. The campaign could also include a timeline to illustrate how the complaints will be processed, and when whistle-blowers can expect a follow-up on their risk reported. A campaign could raise awareness and buy-in across ministries and other central authorities to institutionalise corruption management and support them in their risk management efforts (OECD, 2022^[4]). These efforts could be further informed by behavioural insights for effective communications.

One of the elements in the interventions were social norms, which have been effective in shaping behaviours in other contexts (Cialdini, Kallgren and Reno, 1990^[6]; Goldstein, Cialdini and Griskevicius, 2008^[7]). Leveraging injunctive or descriptive social norms could enhance the favourable ethical norms in

an organisation. Indeed, in the experiment, communicating to employees the expectation that every civil servant can communicate corruption risks (injunctive social norms) was a crucial element of the two successful behaviourally informed interventions that encouraged risk communication. This is in line with previous research from the context of anti-corruption suggesting that using social information can support the idea that a positive change for the better is possible (Stahl, C, 2022^[8]). Normative messaging may also be effective, if it is tailored to the context accordingly. As such, social norms could be harnessed to raise awareness of and compliance with integrity policies. Any references to social norms must be truthful to build trust, and to avoid any backfiring effects.

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Annex A. Online vignette experiment-survey script (in English)

Introduction

Welcome and thank you for participating in this survey.

This survey is conducted in collaboration between the Organisation for Economic Cooperation and Development (OECD) and the Government Office of the Slovak Republic to better understand the contributing factors and improve practices related to public sector integrity.

The survey takes about 10 minutes to complete. First, we will present a hypothetical situation regarding human resources (HR) and recruitment. We will then ask you to answer a few questions about the hypothetical situation.

Participation in this survey is voluntary. Responses to the survey are anonymous and confidential, and the information provided cannot be traced back to the respondent. No personally identifiable information is captured unless you voluntarily offer personal or contact information in any of the comment fields.

To participate, you must be an employee in the public administration of the Slovak Republic. We would kindly ask you not to share the link to the survey with others.

If you have any questions, please contact the Corruption Prevention Department at tel. number xxxxxxxx.

Control

Please carefully read this short text about a situation in HR and recruitment:

Your institution is regularly hiring new public officials. You heard that public officials with a personal relationship with senior managers may have been hired in the past. You suspect that there is a lack of control measures in hiring procedures to mitigate risks of conflict of interest and risks related to a lack of transparency.

Treatment 1

Please carefully read this short text about a situation in HR and recruitment:

Your institution is regularly hiring new public officials. You heard that public officials with a personal relationship with senior managers may have been hired in the past. You suspect that there is a lack of control measures in hiring procedures to mitigate risks of conflict of interest and risks related to a lack of transparency.

Being honest and speaking with your doctor about risk factors such as smoking can help you diagnose cancer in time. Similarly, every civil servant should be honest and speak about corruption risks such as conflicts of interest in hiring public officials. It is important that you communicate risks in order to minimize corruption risks in your organization.

Treatment 2

Please carefully read this short text about a situation in HR and recruitment:

Your institution is regularly hiring new public officials. You heard that public officials with a personal relationship with senior managers may have been hired in the past. You suspect that there is a lack of control measures in hiring procedures to mitigate risks of conflict of interest and risks related to a lack of transparency.

Imagine your manager leads by example: you have seen them raise hiring risks with your executives, and they encourage you and your colleagues to do the same. Every civil servant should be honest and speak about corruption risks such as conflicts of interest in hiring public officials. It is important that you communicate risks in order to minimize corruption risks in your organization.

Outcome variables

Q1. Would you communicate this risk?

0 represents “No, I would not communicate this risk” and 100 represents “Yes, I would certainly communicate this risk”

Q2. How safe do you feel about raising this risk?

0 represents “extremely unsafe” and 100 represents “extremely safe”

Q3. Who would you prefer to raise this risk with?

your manager

HR

the anti-corruption coordinators

other (please specify)

Q4. How safe do you feel about raising this risk with *[Insert response from Q3]*

0 represents “extremely unsafe” and 100 represents “extremely safe”

Control variables

Q5. Would you communicate this situation as a (multiple answers allowed)

corruption risk

corruption incident

I would not communicate on this

I do not know

Q6. In general, do you believe that the hiring process in your institution is fair?

0 represents “extremely unfair” and 100 represents “extremely fair”

Q7. In general, how appropriately do you believe your institution manages corruption risks?

0 represents “extremely inappropriate” and 100 represents “extremely appropriate”

Q8. Are you responsible for hiring officials?

Yes

No

Prefer not to say

Q9. Do you know who and how to report the existence of a conflict of interest?

No

Not before

Rather yes

Yes

Q10. How many years have you worked in the public administration of the Slovak Republic in total?

Q11. In which department do you work in the public administration of the Slovak Republic? (ex. Ministry of Finance)

Ministry of Economy of the Slovak Republic

Ministry of Finance of the Slovak Republic

Ministry of Transport of the Slovak Republic

Ministry of Agriculture and Rural Development of the Slovak Republic

Ministry of the Interior of the Slovak Republic

Ministry of Defence of the Slovak Republic

Ministry of Justice of the Slovak Republic

Ministry of Foreign and European Affairs of the Slovak Republic

Ministry of Labour, Social Affairs and Family of the Slovak Republic

Ministry of the Environment of the Slovak Republic

Ministry of Education, Science, Research and Sports of the Slovak Republic

Ministry of Culture of the Slovak Republic

Ministry of Health of the Slovak Republic

Ministry of Investments, Regional Development and Informatization of the Slovak Republic
 Government Office of the Slovak Republic
 Antimonopoly Office of the Slovak Republic
 Statistical Office of the Slovak Republic
 Geodesy, Cartography and Cadastre Authority of the Slovak Republic
 Nuclear Regulatory Authority of the Slovak Republic
 The Slovak Office of Standards, Metrology and Testing
 Public Procurement Office
 Industrial Property Office of the Slovak Republic
 Administration of State Material Reserves of the Slovak Republic
 National Security Office
 Office for Spatial Planning and Construction of the Slovak Republic
 Supreme Audit Office
 Judicial Council of the Slovak Republic
 Association of Towns and Communities of the Slovak Republic
 other (please specify)

Q12. What is your age (in years)?

Q13. What is the gender you most identify with?

Male

Female

Non-binary

Prefer not to say

End of Survey

We thank you for your time spent taking this survey. Your response has been recorded.

If you have any questions, please contact the Department at tel. number xxxxxxxxxx.

Annex B. Emails to disseminate the survey

Figure A B.1. Initial email to disseminate the survey

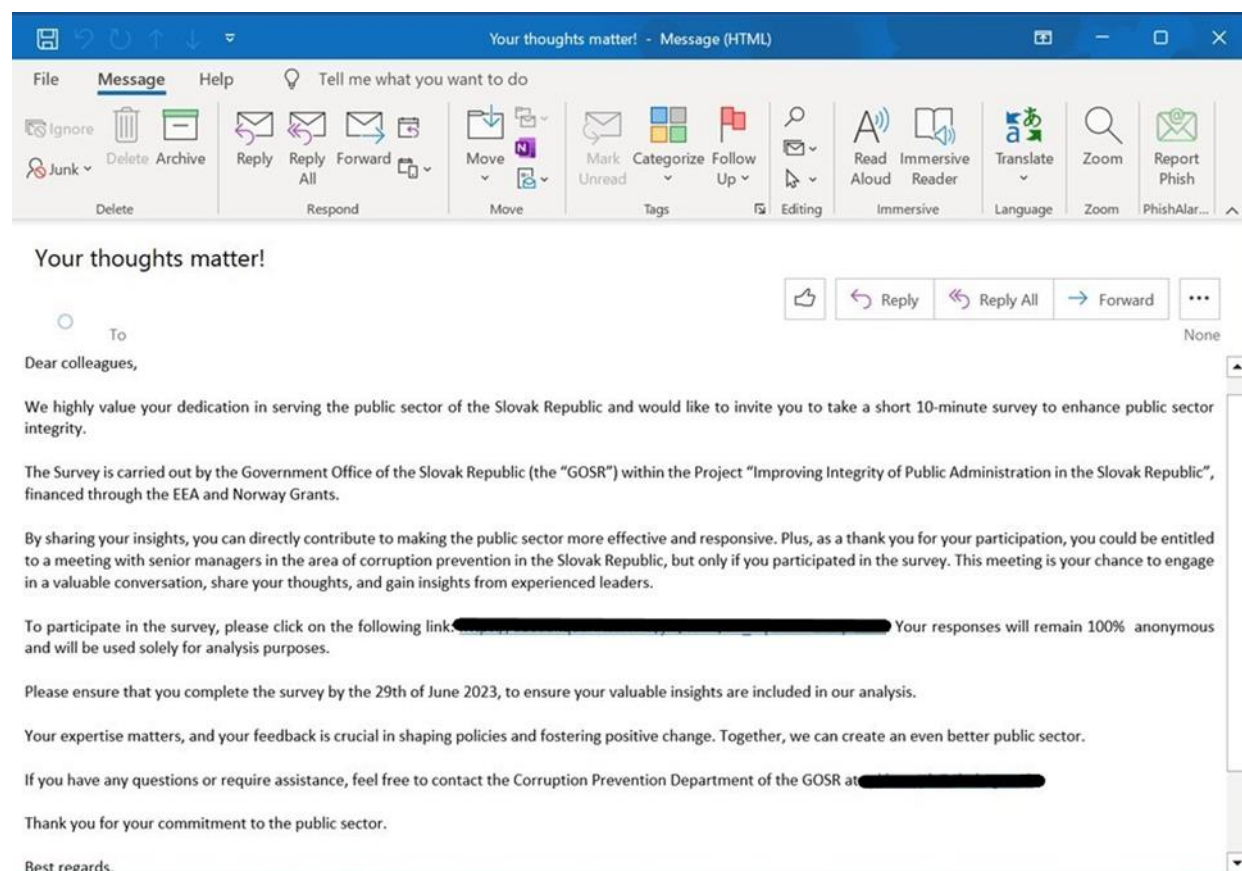


Figure A B.2. Email reminder the survey participants

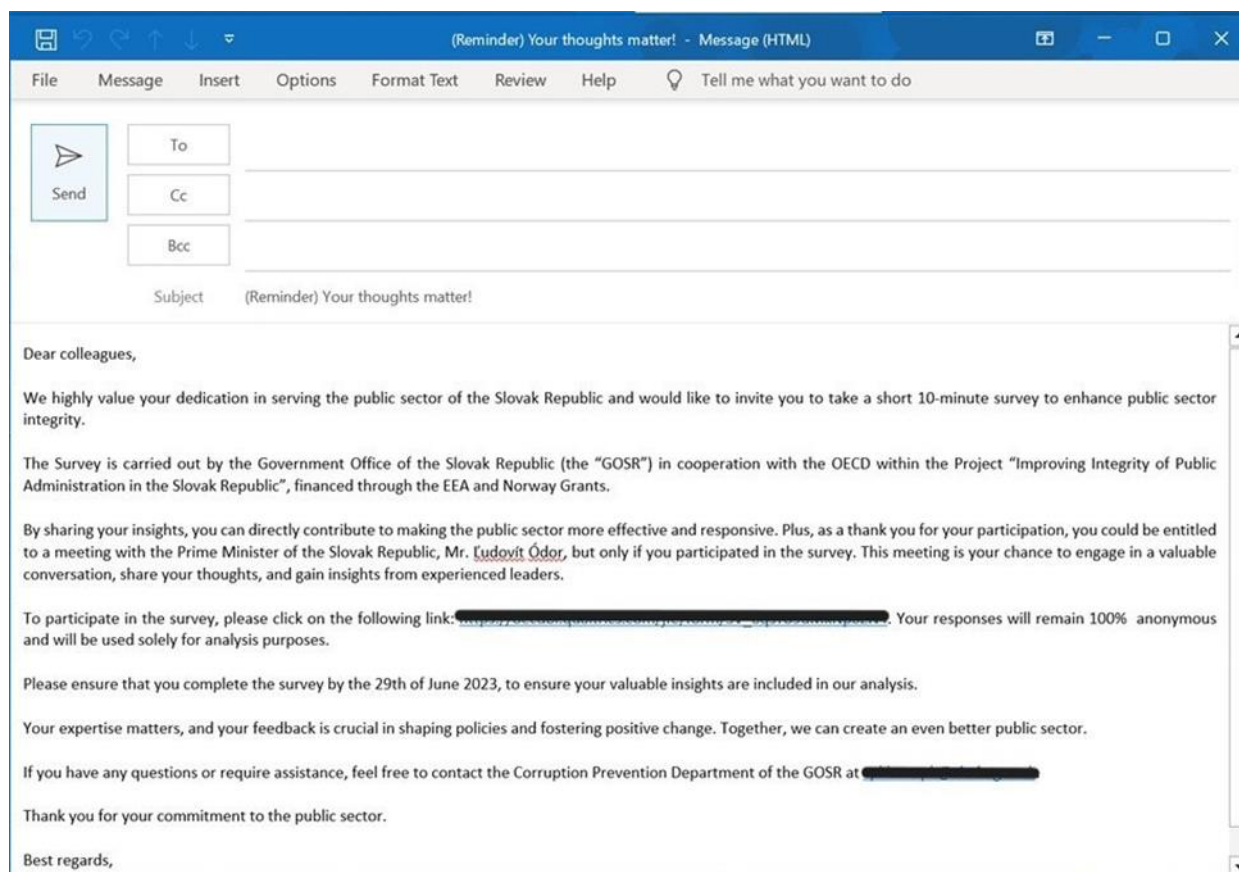
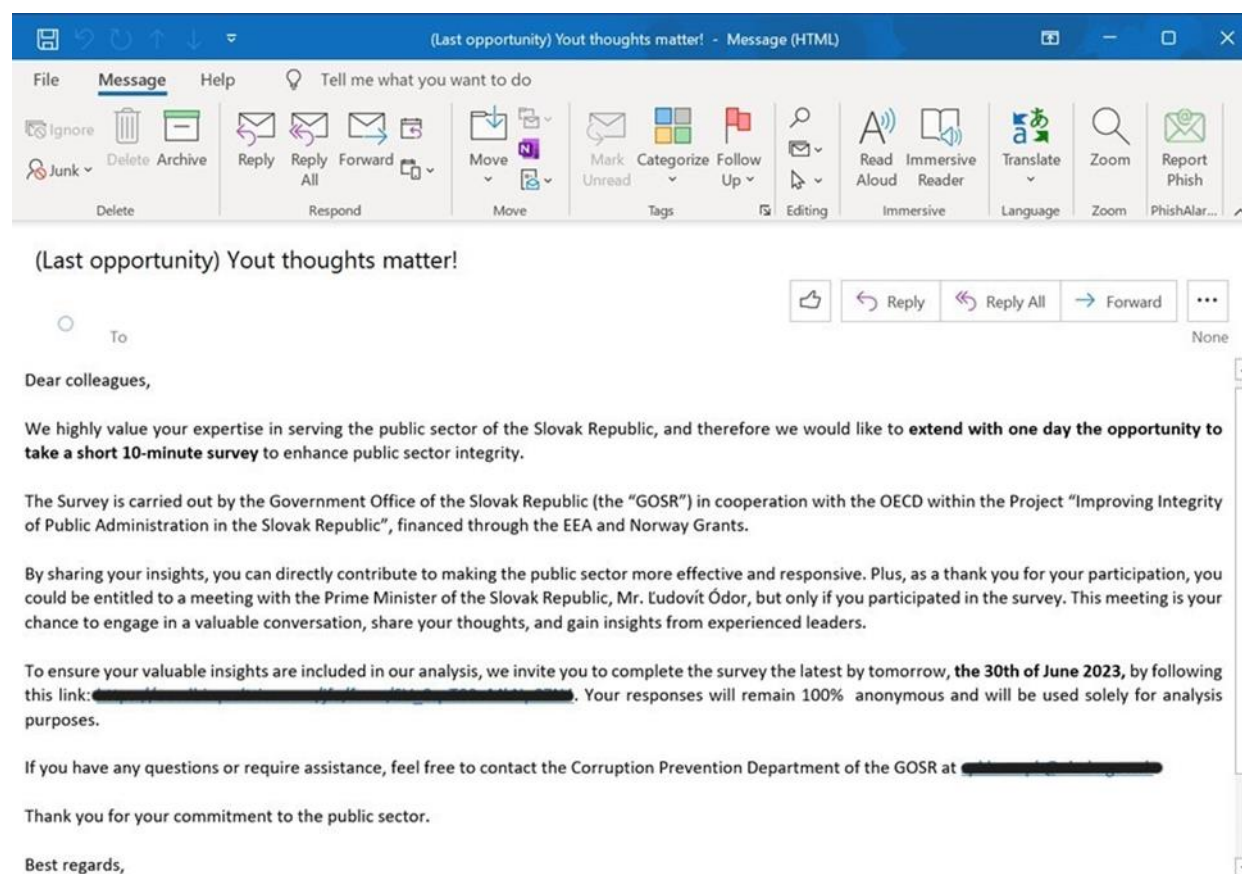


Figure A B.3. Email 2 reminder the survey participants



Annex C. Distribution of the primary outcome variable

Figure A C.1. Histogram of the distribution the primary outcome variable

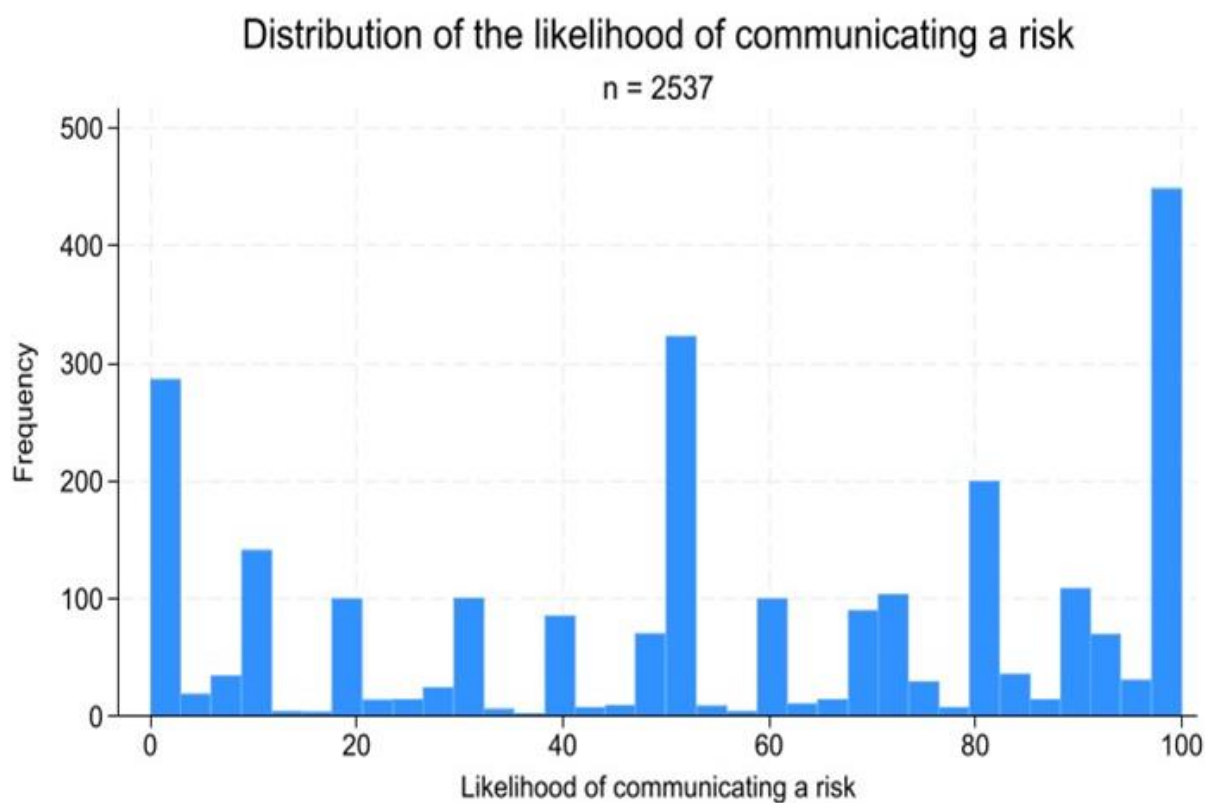
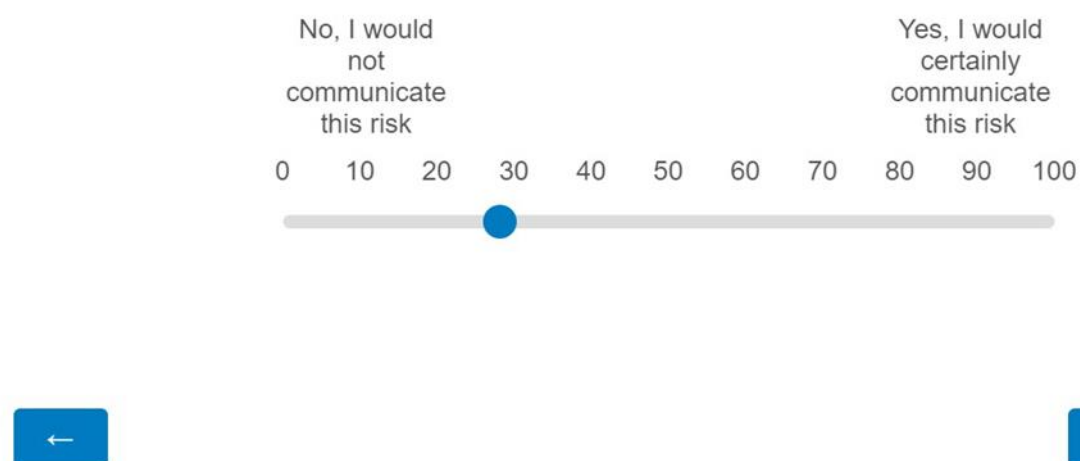


Figure A C.2. Slider to measure the likelihood of communicating a risk

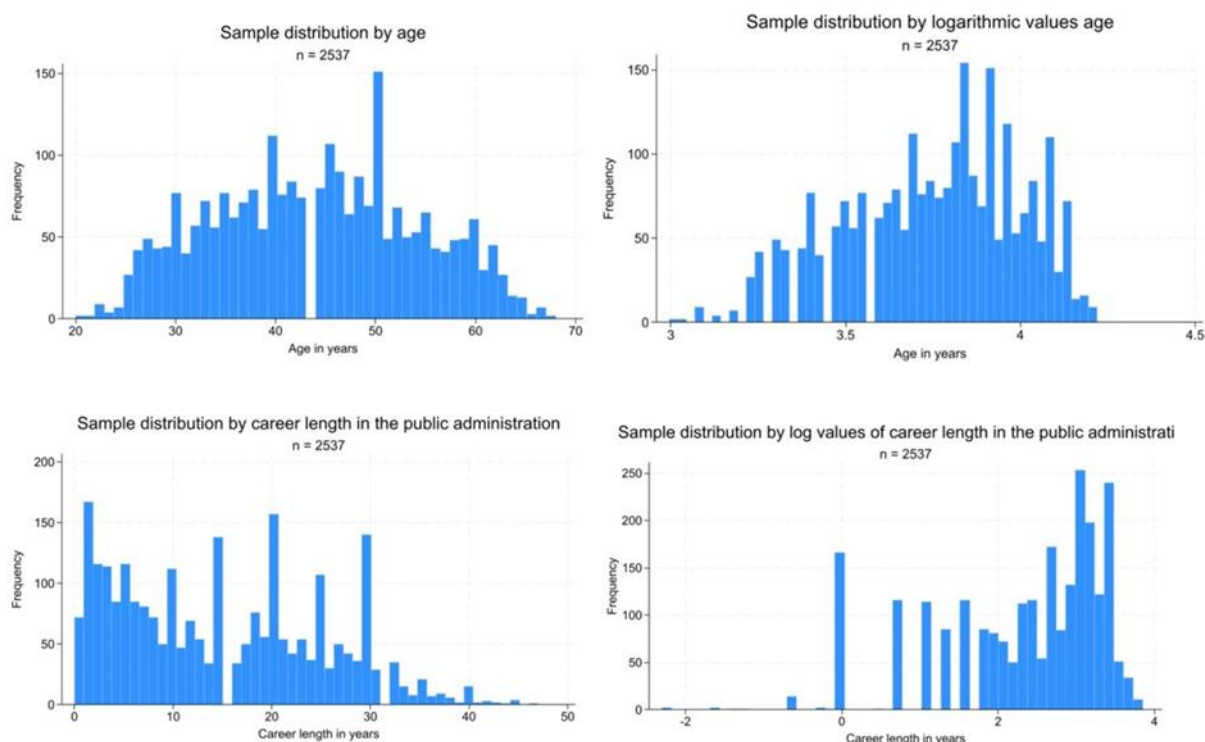
Would you communicate this risk of conflict of interest in hiring processes?

0 represents 'extremely unlikely' and 100 represents 'extremely likely'



Annex D. Distributions of logarithmic and non-logarithmic values of age and years in public administration

Figure A D.1. Distribution of logarithmic and non-logarithmic values of Age and Career length in the public administration



Note: From left to right, upper row: graph of the sample distribution by age, graph of the sample distribution by career length in public administration (in years). From left to right, lower row: sample distribution by age (in logarithmic values), sample distribution by career length in public administration (in years, logarithmic values).

Annex E. The results from the OLS regression, dependent variable: likelihood of communicating a risk

Table A E.1. Regression output table. Dependent variable: likelihood of communicating risks

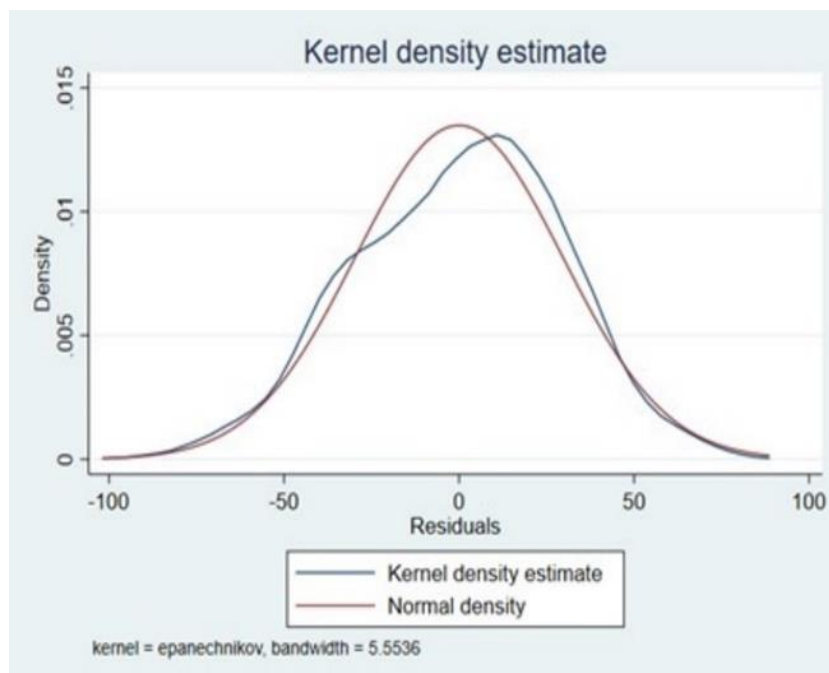
The table summarises the results from an OLS with robust standard errors, and from the following robustness checks: and OLS with primary outcome variable with rounded frequencies, a Logit regression with the primary outcome variable transformed into binary, and a double-bounded Tobit-regression

	OLS with robust standard errors	OLS with robust standard errors (with rounded frequencies)	Logit with binary outcome variable (robustness check)	Double-bounded Tobit (robustness check)
Treatment 1	8.209*** (1.493)	8.201*** (1.487)	0.466*** (0.107)	10.51*** (1.876)
Treatment 2	11.98*** (1.494)	12.00*** (1.489)	0.677*** (0.108)	14.96*** (1.882)
Feeling of Safety 1	0.293*** (0.0247)	0.293*** (0.0246)	0.0162*** (0.00160)	0.393*** (0.0283)
Agency	-0.185 (0.119)	-0.192 (0.119)	-0.0182* (0.00908)	-0.195 (0.157)
Responsible for hiring	3.897* (1.941)	4.019* (1.943)	0.294 (0.164)	4.579 (2.751)
Understanding of a risk	14.06*** (1.247)	14.06*** (1.244)	0.837*** (0.0989)	18.20*** (1.703)
Appropriateness of a risk management	0.130*** (0.0324)	0.129*** (0.0323)	0.00846*** (0.00218)	0.158*** (0.0387)
Perceived fairness of the hiring process	0.0280 (0.0301)	0.0258 (0.0298)	0.00179 (0.00212)	0.0358 (0.0375)
Knowledge of reporting channels				
No	-4.307* (2.081)	-4.450* (2.068)	-0.166 (0.150)	-4.745 (2.608)
Yes	2.452 (1.424)	2.512 (1.417)	0.178 (0.105)	2.840 (1.859)
Age	-0.252*** (0.0741)	-0.261*** (0.0736)	-0.0172** (0.00566)	-0.256** (0.0978)
Gender				
Female	1.170 (1.778)	1.822 (1.766)	0.0964 (0.125)	2.912 (2.177)
Male	3.214 (1.844)	3.882* (1.833)	0.230 (0.129)	4.893* (2.259)
Years in the public administration	0.0867 (0.0745)	0.0860 (0.0740)	0.00620 (0.00551)	0.108 (0.0956)
Intercept	31.50*** (3.917)	31.87*** (3.899)	-1.090*** (0.290)	22.78*** (5.047)
<i>N</i>	2537	2537	2537	2537
<i>R</i> ²	0.248	0.250		
adj. <i>R</i> ²	0.244	0.246		
var(e.likelihood_to_communicate)				1407.0*** (48.35)

Note: Standard errors in parentheses, * $p < 0.05$, ** $p < 0.01$, *** $p < 0.001$. Given the high concentration of observations at 50, the transformation of the primary outcome variable is expected to create noise, as values clustered around 50 will be assigned to either 0 or 100 and may this negatively affect the reliability of the results.

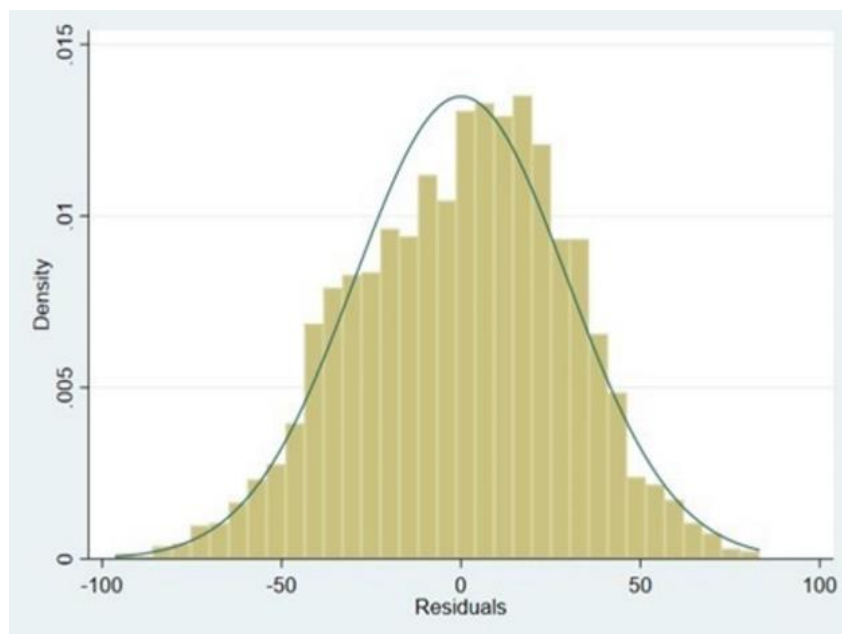
Annex F. Plots for the normality of residuals

Figure A F.1. Kernel density plot of the distribution of the residuals. Dependent variable: likelihood of communicating a risk



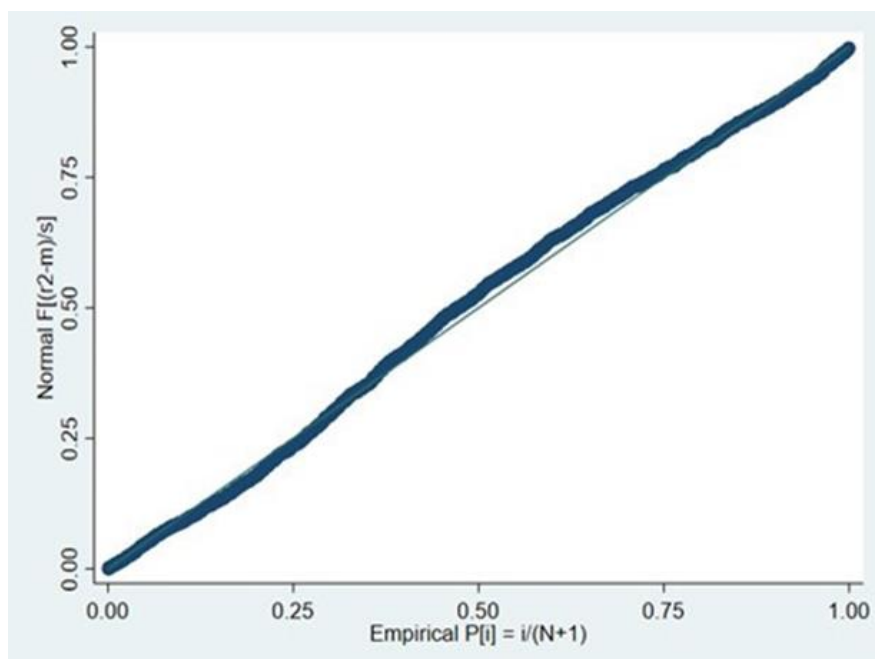
Note: OLS with robust standard errors, dependent variable: likelihood of communicating a risk.

Figure A F.2. Histogram of the distribution of the residuals. Dependent variable: likelihood of communicating a risk



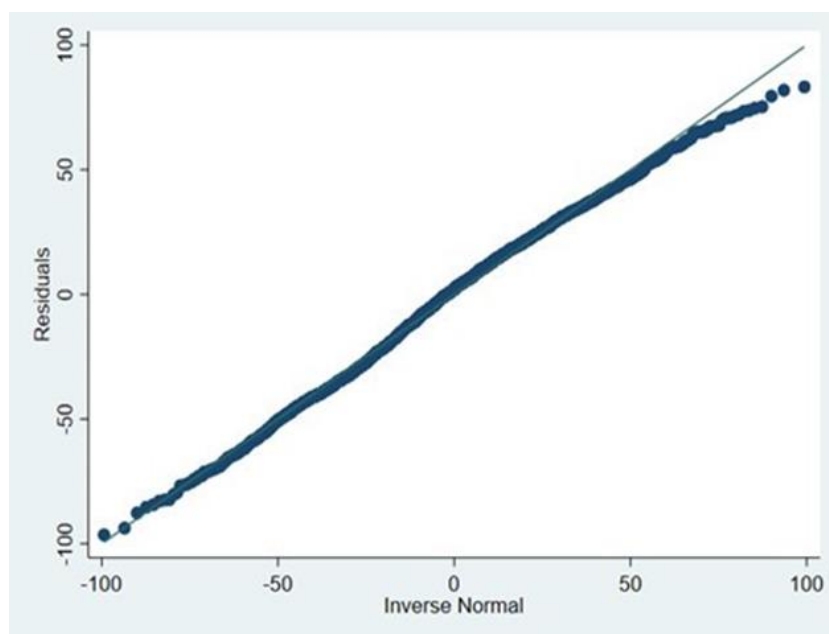
Note: OLS with robust standard errors, dependent variable: likelihood of communicating a risk.

Figure A F.3. Q-Q plot of the distribution of the residuals. Dependent variable: likelihood of communicating a risk



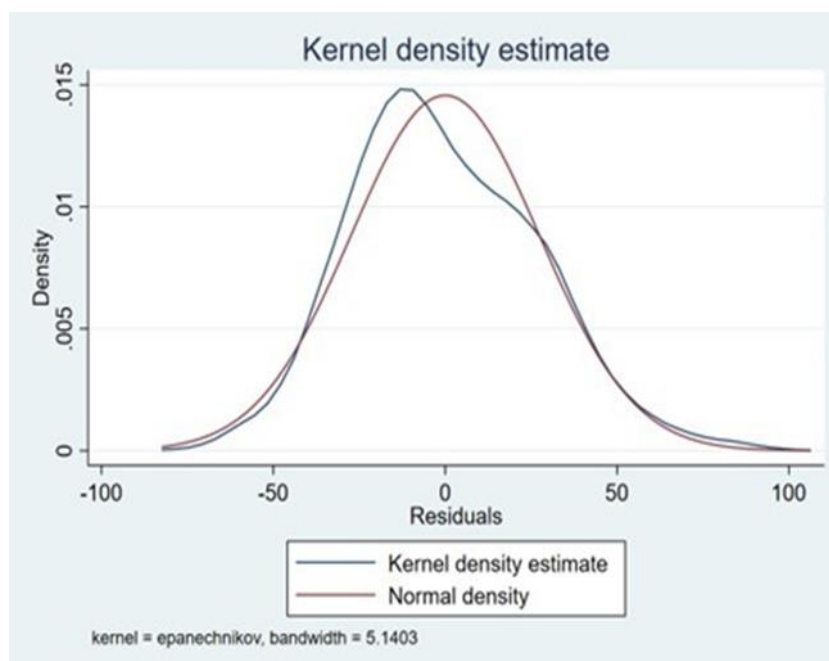
Note: OLS with robust standard errors, dependent variable: likelihood of communicating a risk.

Figure A F.4. P-P plot of the distribution of the residuals. Dependent variable: likelihood of communicating a risk



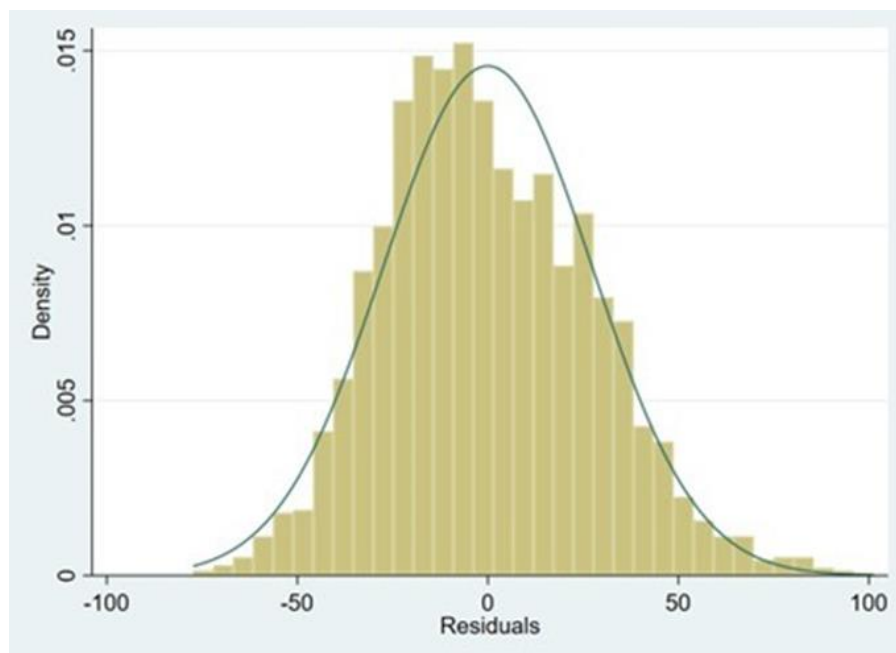
Note: OLS with robust standard errors, dependent variable: likelihood of communicating a risk.

Figure A F.5. Kernel density plot of the distribution of the residuals. Dependent variable: general feeling of safety



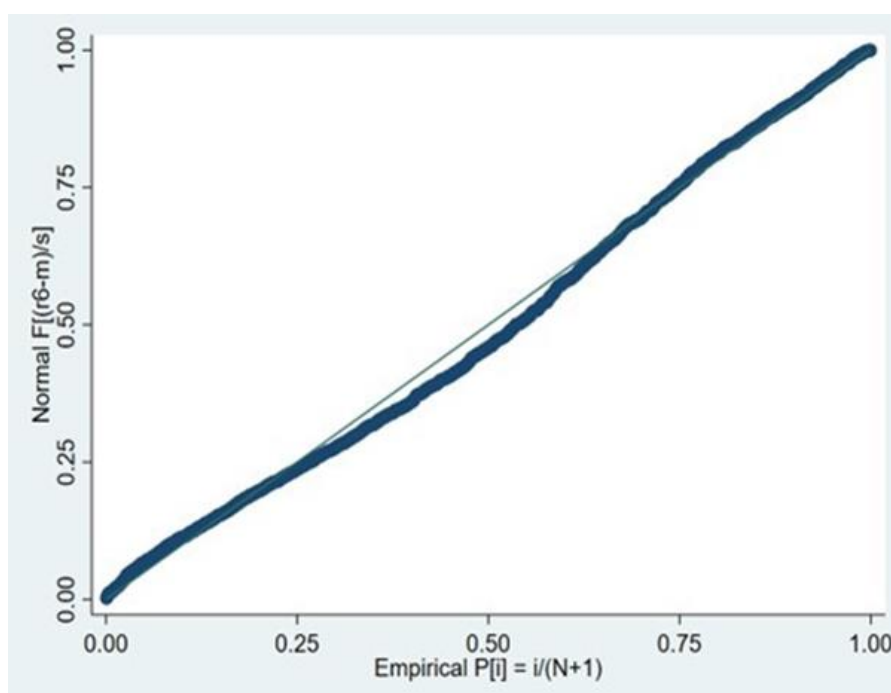
Note: OLS with robust standard errors, dependent variable: General feeling of safety.

Figure A F.6. Histogram of the distribution of the residuals. Dependent variable: general feeling of safety



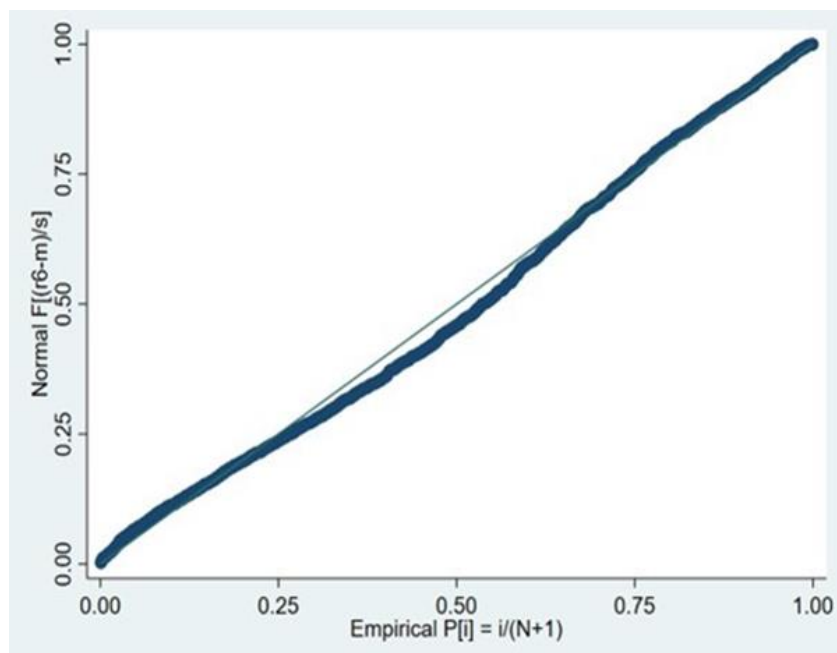
Note: OLS with robust standard errors, dependent variable: General feeling of safety.

Figure A F.7. Q-Q plot of the distribution of the residuals. Dependent variable: general feeling of safety



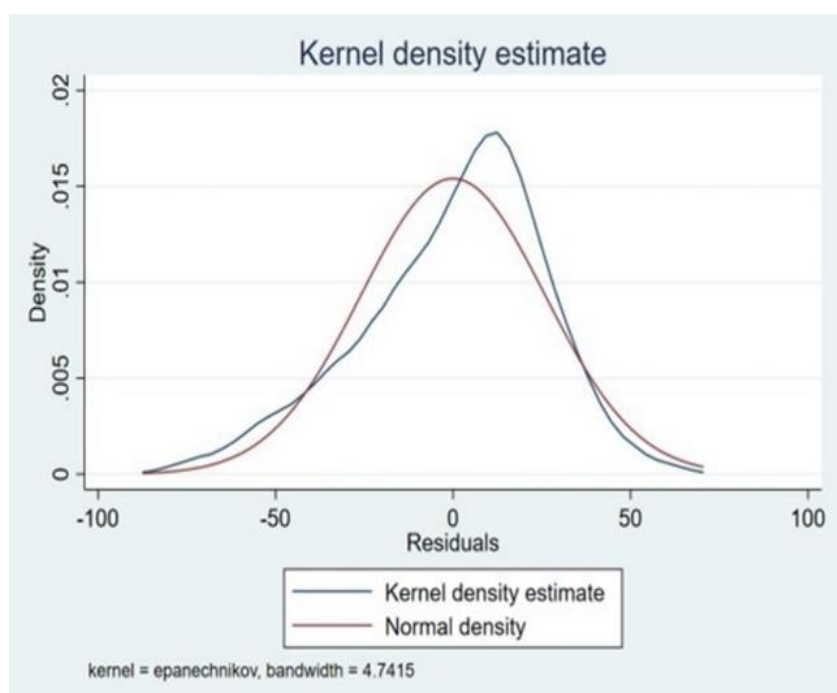
Note: OLS with robust standard errors, dependent variable: General feeling of safety.

Figure A F.8. P-P plot of the distribution of the residuals. Dependent variable: general feeling of safety



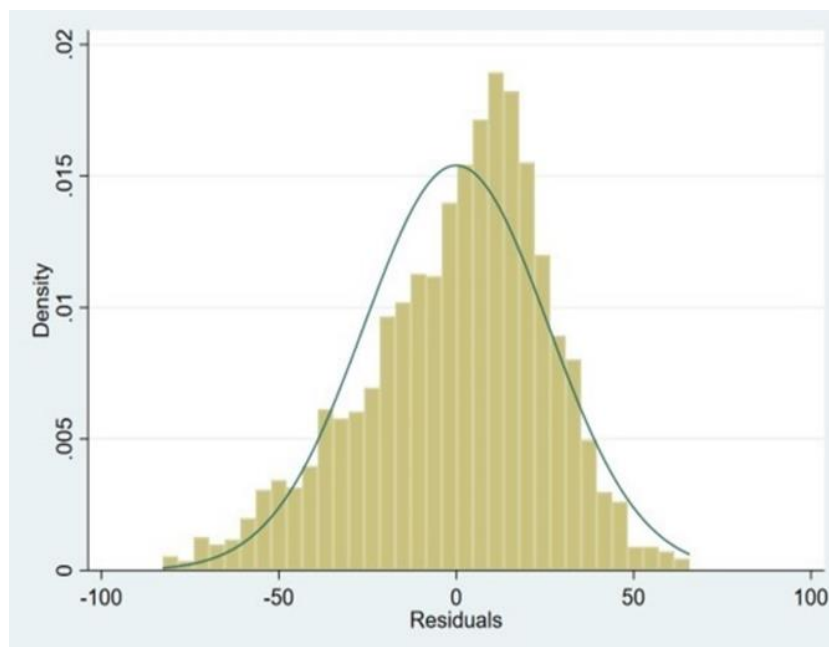
Note: OLS with robust standard errors, dependent variable: General feeling of safety.

Figure A F.9. Kernel density plot of the distribution of the residuals. Dependent variable: Feelings of safety when reporting to preferred stakeholder



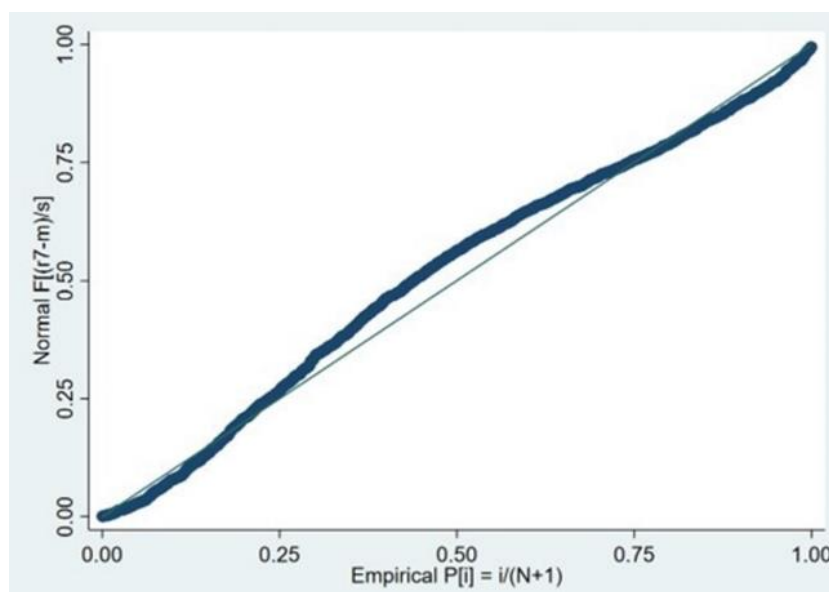
Note: OLS with robust standard errors, dependent variable: Feelings of safety when reporting to preferred stakeholder.

Figure A F.10. Histogram of the distribution of the residuals. Dependent variable: Feelings of safety when reporting to preferred stakeholder



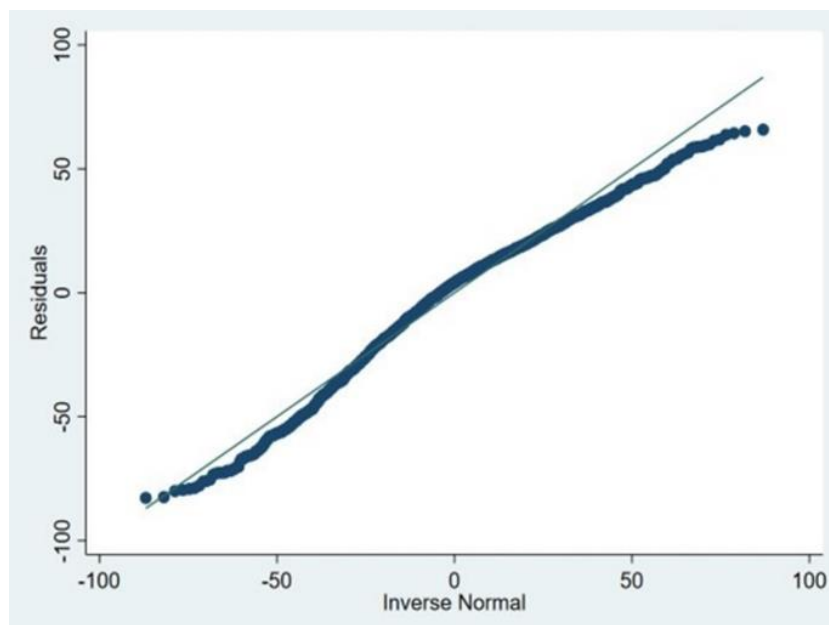
Note: OLS with robust standard errors, dependent variable: Feelings of safety when reporting to preferred stakeholder.

Figure A F.11. Q-Q plot of the distribution of the residuals. Dependent variable: Feelings of safety when reporting to preferred stakeholder



Note: OLS with robust standard errors, dependent variable: Feelings of safety when reporting to preferred stakeholder.

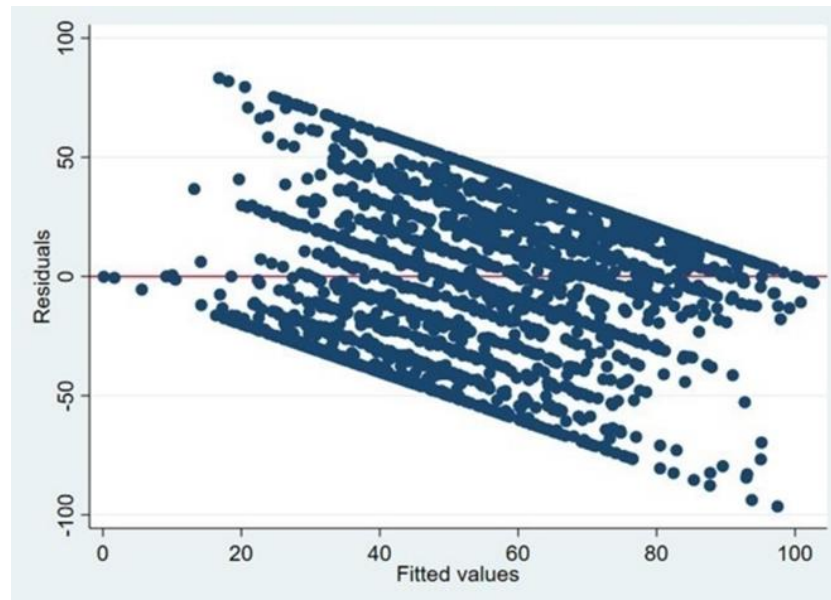
Figure A F.12. P-P plot of the distribution of the residuals. Dependent variable: Feelings of safety when reporting to preferred stakeholder



Note: OLS with robust standard errors, dependent variable: Feelings of safety when reporting to preferred stakeholder.

Annex G. Test for heteroskedasticity

Figure A G.1. Plotted residuals versus fitted (predicted) values. Dependent variable: likelihood of communicating a risk



Note: OLS, dependent variable: likelihood of communicating a risk.

Figure A G.2. White's test to test for the heteroskedasticity of the error terms. Dependent variable: likelihood of communicating a risk

Cameron & Trivedi's decomposition of IM-test				
Source	chi2	df	p	
Heteroskedasticity	619.45	424	0.0000	
Skewness	427.99	36	0.0000	
Kurtosis	19.54	1	0.0000	
Total	1066.98	461	0.0000	

Note: OLS, dependent variable: likelihood of communicating a risk.

Figure A G.3. Breusch-Pagan test for heteroskedasticity of the error terms. Dependent variable: likelihood of communicating a risk

```
. estat hettest

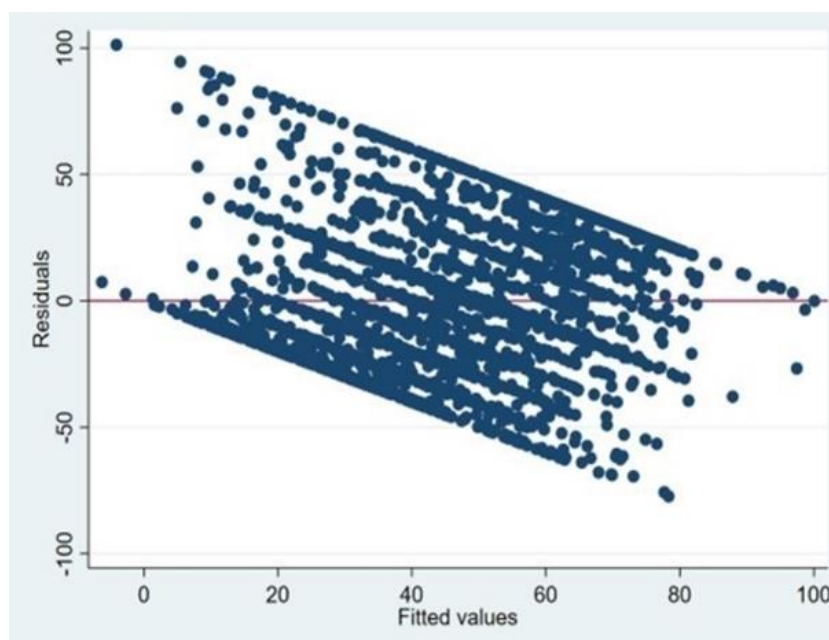
Breusch-Pagan/Cook-Weisberg test for heteroskedasticity
Assumption: Normal error terms
Variable: Fitted values of likelihood_to_communicate

H0: Constant variance

      chi2(1) = 20.09
Prob > chi2 = 0.0000
```

Note: OLS, dependent variable: likelihood of communicating a risk.

Figure A G.4. Plotted residuals versus fitted (predicted) values. Dependent variable: general feeling of safety



Note: OLS with robust standard errors, dependent variable: General feeling of safety.

Figure A G.5. White's test and Breusch-Pagan test for heteroskedasticity of the error terms.
Dependent variable: general feeling of safety

Cameron & Trivedi's decomposition of IM-test				
Source	chi2	df	p	
Heteroskedasticity	562.55	487	0.0100	
Skewness	378.89	38	0.0000	
Kurtosis	0.06	1	0.8014	
Total	941.50	526	0.0000	


```

*
* Breuch-Pagan:
*
* estat hettest

Breusch-Pagan/Cook-Weisberg test for heteroskedasticity
Assumption: Normal error terms
Variable: Fitted values of feeling_of_safety1

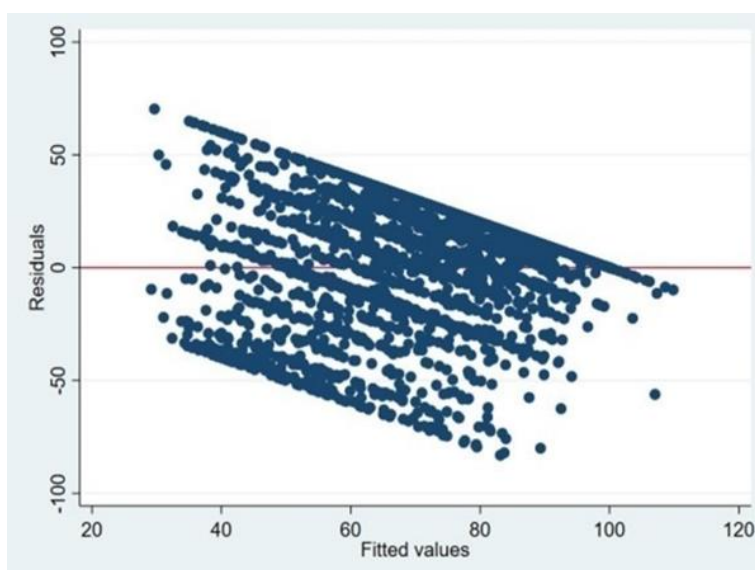
H0: Constant variance

      chi2(1) =   5.25
Prob > chi2 = 0.0220

```

Note: OLS with robust standard errors, dependent variable: General feeling of safety.

Figure A G.6. Plotted residuals versus fitted (predicted) values. Dependent variable: Feelings of safety when reporting to preferred stakeholder



Note: OLS with robust standard errors, dependent variable: Feelings of safety when reporting to preferred stakeholder.

Figure A G.7. White's test and Breusch-Pagan test for heteroskedasticity of the error terms.
Dependent variable: Feelings of safety when reporting to preferred stakeholder

Cameron & Trivedi's decomposition of IM-test			
Source	chi2	df	p
Heteroskedasticity	625.16	347	0.0000
Skewness	244.55	33	0.0000
Kurtosis	0.53	1	0.4654
Total	870.25	381	0.0000


```

*
. * Breuch-Pagan:

*
. estat hettest

Breusch-Pagan/Cook-Weisberg test for heteroskedasticity
Assumption: Normal error terms
Variable: Fitted values of feeling_of_safety2

H0: Constant variance

      chi2(1) = 179.96
Prob > chi2 = 0.0000

```

Note: OLS with robust standard errors, dependent variable: Feelings of safety when reporting to preferred stakeholder.

Annex H. Tests for Logit-regression

Figure A H.1. Misspecification test, Logit regression

```
. linktest
```

Iteration 0: log likelihood = -1750.7017
 Iteration 1: log likelihood = -1490.7583
 Iteration 2: log likelihood = -1488.392
 Iteration 3: log likelihood = -1488.3912
 Iteration 4: log likelihood = -1488.3912

Logistic regression

Log likelihood = -1488.3912

Number of obs = 2,537
 LR chi2(2) = 524.62
 Prob > chi2 = 0.0000
 Pseudo R2 = 0.1498

bin_likeliho~m	Coefficient	Std. err.	z	P> z	[95% conf. interval]	
_hat	.9839561	.051636	19.06	0.000	.8827515	1.085161
_hatsq	.0482492	.0433512	1.11	0.266	-.0367177	.133216
_cons	-.0368186	.0555044	-0.66	0.507	-.1456053	.0719681

Source: OECD.

Figure A H.2. Goodness of fit-test, Logit-regression

```
. lfit, group(10) table
```

note: obs collapsed on 10 quantiles of estimated probabilities.

Goodness-of-fit test after logistic model
 Variable: bin_likeliho~m

Table collapsed on quantiles of estimated probabilities

Group	Prob	Obs_1	Exp_1	Obs_0	Exp_0	Total
1	0.2349	45	47.0	209	207.0	254
2	0.3199	83	71.0	171	183.0	254
3	0.3992	89	90.9	165	163.1	254
4	0.4713	105	109.9	148	143.1	253
5	0.5451	118	129.3	136	124.7	254
6	0.6152	154	146.9	100	107.1	254
7	0.6831	161	164.4	92	88.6	253
8	0.7548	183	182.7	71	71.3	254
9	0.8346	198	202.3	56	51.7	254
10	0.9616	232	223.6	21	29.4	253

Number of observations = 2,537
 Number of groups = 10
 Hosmer-Lemeshow chi2(8) = 9.53
 Prob > chi2 = 0.2997

Source: OECD.

Figure A H.3. Fitstat, Logit-regression

. fitstat		logit
Log-likelihood		
Model		-1489.015
Intercept-only		-1750.702
Chi-square		
Deviance(df=2500)		2978.030
LR(df=36)		523.374
p-value		0.000
R2		
McFadden		0.149
McFadden(adjusted)		0.128
McKelvey & Zavoina		0.251
Cox-Snell/ML		0.186
Cragg-Uhler/Nagelkerke		0.249
Efron		0.191
Tjur's D		0.191
Count		0.693
Count(adjusted)		0.333
IC		
AIC		3052.030
AIC divided by N		1.203
AIC divided by N		1.203
BIC(df=37)		3268.063
Variance of		
e		3.290
y-star		4.390

Source: OECD.

Figure A H.4. Residual inspection, Logit-regression

. summarize residual					
Variable	Obs	Mean	Std. dev.	Min	Max
residual	2,537	.5392196	.2179478	.0498295	.9615969
. summarize rstandard					
Variable	Obs	Mean	Std. dev.	Min	Max
rstandard	2,537	.5392196	.2179478	.0498295	.9615969
. summarize residual, detail					
Pr(bin_likelihood_to_comm)					
	Percentiles	Smallest			
1%	.1349524	.0498295			
5%	.1920951	.0566662			
10%	.234882	.0648073	Obs	2,537	
25%	.3574133	.0789982	Sum of wgt.	2,537	
50%	.5451421		Mean	.5392196	
		Largest	Std. dev.	.2179478	
75%	.7202035	.9502821			
90%	.8345917	.9507058	Variance	.0475012	
95%	.8806427	.9551328	Skewness	-.0452719	
99%	.9315571	.9615969	Kurtosis	1.939539	

Source: OECD.

Annex I. Tests for Tobit-regression

Figure A I.1. Tobit tests

```
. predict yhat
(option xb assumed; fitted values)
```

```
.
. correlate likelihood_to_communicate yhat
(obs=2,537)
```

	likelihood	yhat
likelihood	1.0000	
yhat	0.5072	1.0000

```
. predict r5
(option xb assumed; fitted values)
```

```
. summarize r5, detail
```

Linear prediction				
	Percentiles	Smallest		
1%	14.09835	-12.99686		
5%	23.56434	-5.659654		
10%	29.05954	-.0562237	Obs	2,537
25%	41.22101	.1039146	Sum of wgt.	2,537
50%	57.79486		Mean	58.42742
		Largest	Std. dev.	22.45084
75%	73.95766	114.0873		
90%	88.86611	114.1623	Variance	504.0403
95%	96.49404	116.485	Skewness	.1246646
99%	109.4138	117.5324	Kurtosis	2.46185

Source: OECD.

Figure A I.2. Misspecification test, Tobit-regression

```
. linktest
```

Iteration 0: log likelihood = -12194.435
Iteration 1: log likelihood = -12194.435

Tobit regression

Number of obs = 2,537
Uncensored = 2,537
Left-censored = 0
Right-censored = 0

Limits: Lower = -inf
Upper = +inf

LR chi2(2) = 757.03
Prob > chi2 = 0.0000
Pseudo R2 = 0.0301

Log likelihood = -12194.435

likelihood_to_communicate	Coefficient	Std. err.	t	P> t	[95% conf. interval]	
_hat	.9565101	.1189537	8.04	0.000	.7232538	1.189766
_hatsq	-.0015048	.0009698	-1.55	0.121	-.0034064	.0003968
_cons	6.153888	3.401248	1.81	0.071	-.5156192	12.82339
var(e.likelihood_to_communicate)	876.025	24.59638			829.0976	925.6084

.

Source: OECD.

Annex J. Regression to show the effect of agencies

Table A J.1. Regression output table. Dependent variable: likelihood of communicating a risk.

	OLS with robust standard errors
Treatment 1	8.282215*** (1.502501)
Treatment 2	12.09*** (1.502)
Feeling of Safety 1	0.291293*** (0.02480244)
Government Agency	
Agency 1	-5.599 (8.239268)
Agency 2	-0.199 (10.29)
Agency 3	-1.998 (6.061635 ()
Agency 4	(omitted)
Agency 5	0.859888 (7.343362)
Agency 6	2.239 (7.636607)
Agency 7	-1.171 (6.0550.720 ()
Agency 8	-3.281 (6.668)
Agency 9	-1.775 (5.907)
Agency 10	2.851 (6.484431)
Agency 11	-5.485 (6.681601)
Agency 12	-1.169 (5.831)
Agency 13	-7.705 (7.567)
Agency 14	-4.511 (7.020394 ()
Agency 15	-10.65 (6.874)
Agency 16	-6.441 (6.866810)
Agency 17	1.900 (8.372360)
Agency 18	-4.691 (5.961)
Agency 19	3.488 (8.760781)
Agency 20	(omitted)
Agency 21	-8.456 (11.9490)
Agency 22	-1.679 (8.500)
Responsible for hiring	4.068* (1.953)
Understanding of a risk	14.0560*** (1.249249)
Appropriateness of a risk management	0.131152*** (0.03270273)
Perceived fairness of the hiring process	0.0316 (0.0305)
Knowledge of reporting channels	
No	-4.458* (2.093075)
Yes	2.697 (1.444)
Age	-0.263***244** (0.07430750)
Gender	
Female	1.863 (1.780)

Male	3.535 (1.848)
Years in the public administration	0.06560637 (0.07730773)
Intercept	31.33*** (7.019)
<i>N</i>	2537
<i>R</i> ²	0.252257
adj. <i>R</i> ²	0.242247

Note: Standard errors in parentheses, * $p < 0.05$, ** $p < 0.01$, *** $p < 0.001$.

Ministries and other central authorities involved in the study: Ministry of Economy of the Slovak Republic, Ministry of Finance of the Slovak Republic, Ministry of Transport of the Slovak Republic, Ministry of Agriculture and Rural Development of the Slovak Republic, Ministry of the Interior of the Slovak Republic, Ministry of Defence of the Slovak Republic, Ministry of Justice of the Slovak Republic, Ministry of Foreign and European Affairs of the Slovak Republic, Ministry of Labour, Social Affairs and Family of the Slovak Republic, Ministry of the Environment of the Slovak Republic, Ministry of Education, Science, Research and Sports of the Slovak Republic, Ministry of Culture of the Slovak Republic, Ministry of Health of the Slovak Republic, Ministry of Investments, Regional Development and Informatization of the Slovak Republic, Government Office of the Slovak Republic, Antimonopoly Office of the Slovak Republic, Statistical Office of the Slovak Republic, Geodesy, Cartography and Cadastre Authority of the Slovak Republic, Nuclear Regulatory Authority of the Slovak Republic, The Slovak Office of Standards, Metrology and Testing, Public Procurement Office, Industrial Property Office of the Slovak Republic, Administration of State Material Reserves of the Slovak Republic, National Security Office, Office for Spatial Planning and Construction of the Slovak Republic, Supreme Audit Office, Judicial Council of the Slovak Republic, Association of Towns and Communities of the Slovak Republic.

Annex K. Regression to test interactions between treatments and covariates

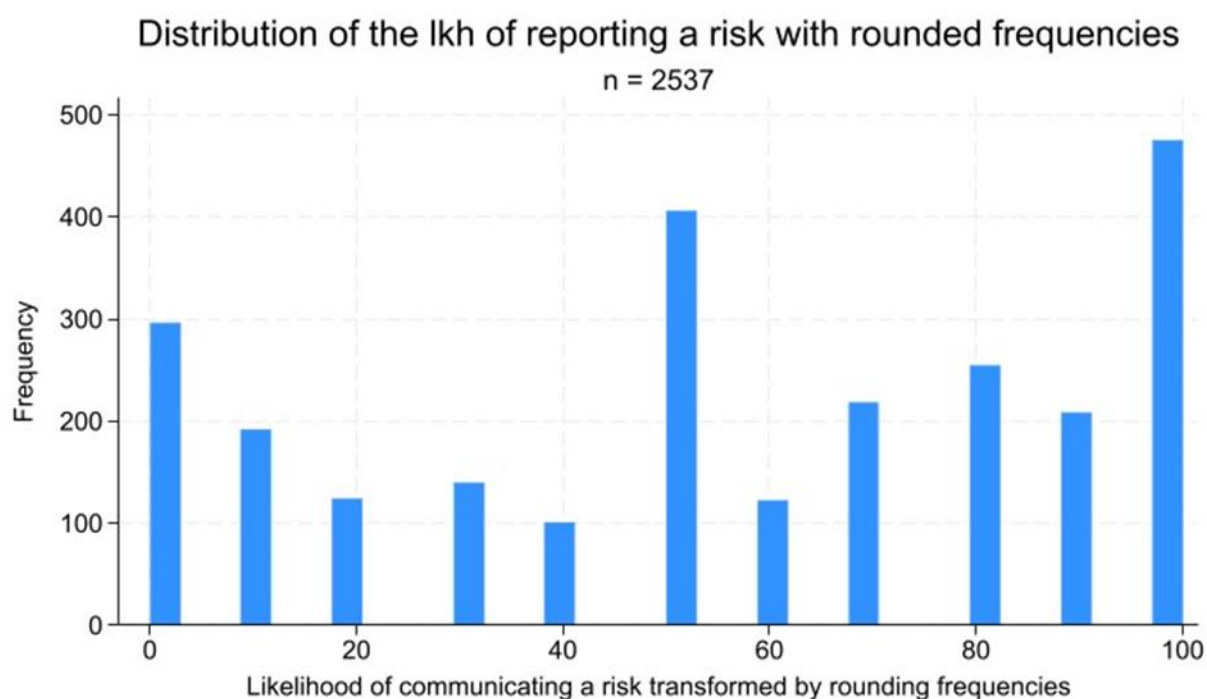
Table A K.1. Regression output table. Dependent variable: likelihood of communicating a risk

	OLS with robust standard errors
Treatment 1	13.50* (6.206)
Treatment 2	15.92** (5.481)
Feeling of Safety 1	0.292*** (0.0247)
Agency	-0.184 (0.120)
Responsible for hiring	4.041* (1.957)
Understanding of a risk	14.03*** (1.252)
Appropriateness of a risk management	0.129*** (0.0324)
Perceived fairness of the hiring process	0.0277 (0.0302)
Knowledge of reporting channels	
No	-4.560* (2.085)
Yes	2.378 (1.426)
Age categories	
20-29 years	(omitted)
30-39 years	-3.082 (4.171)
40-49 years	-2.216 (4.168)
50-59 years	-3.977 (4.367)
60-69 years	-10.87* (5.511)
Treatment1##20-29yo	(omitted)
Treatment1##30-39yo	-2.503 (5.819)
Treatment1##40-49yo	-5.899 (5.666)
Treatment1##50-59yo	-9.930 (5.853)
Treatment1##60-69yo	-3.817 (7.346)
Treatment2##20-29yo	(omitted)
Treatment2##30-39yo	-3.987 (5.227)
Treatment2##40-49yo	-3.340 (5.021)
Treatment2##50-59yo	-4.160 (5.338)
Treatment2##60-69yo	1.490 (6.827)
Gender	
Female	2.195 (3.220)
Male	3.715 (3.358)
Treatment1##female	0.414 (4.448)
Treatment1##male	-0.0659 (4.606)
Treatment2##female	-2.101 (4.330)
Treatment2##male	-10.51 (12.37)
Career length in public administration	0.0695 (0.0729)
Intercept	23.97*** (4.817)
N	2537
R ²	0.251
adj. R ²	0.243

Note: Standard errors in parentheses, * p < 0.05, ** p < 0.01, *** p < 0.001.

Annex L. Regression output, dependent variable: likelihood of communicating a risk (with rounded frequencies)

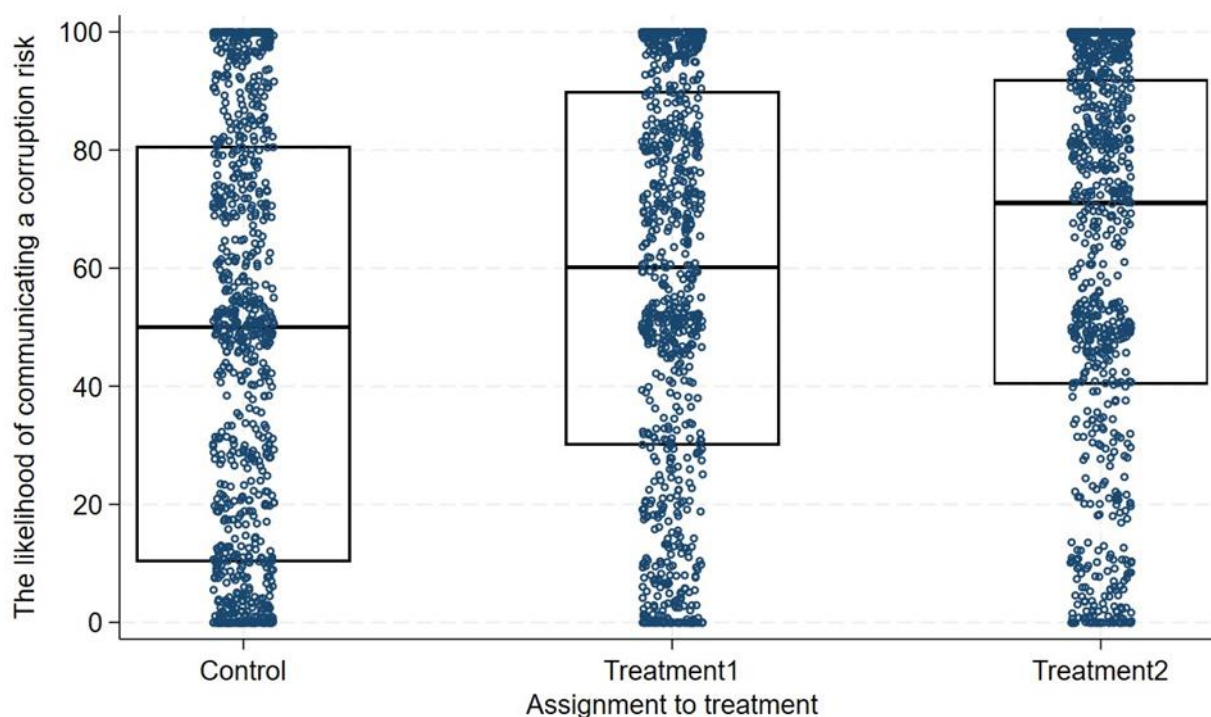
Figure A L.1. Likelihood of communicating a risk with rounded frequencies at tens.



Annex M. Box plot of the likelihood of communicating a risk with jitter

Figure A M.1. More observations reported a likelihood of communicating of over 50% in treatment 1 and 2, than in control group

Box plot of the likelihood of communicating a risk by treatment group, with jitter visualising the spread of the observations



Note: The number of observations responding over 50 is perceptibly higher in treatment 1 and in treatment 2 (note the concentration of observations close to and around 100), compared to the control group. The number of respondents indicating a likelihood of communicating a risk that is less than 50, is also noticeably lower in treatment 1 and treatment 2, compared to the control group (note the sparser concentration of observations between 0 and 50 in treatment 1 and 2, compared to control). This visualisation illustrates that the higher likelihood of communicating a risk in treatment 1 and treatment 2, compared to control, is due to a higher number of respondents indicating a likelihood of communicating a risk of above 50%, compared to the control group.

Annex N. Regression to test interactions between hiring responsibility and knowledge on reporting channels

Table A N.1. Regression output table. Dependent variable: likelihood of communicating a risk.

	OLS with robust standard errors
Treatment 1	8.299*** (1.492)
Treatment 2	11.98*** (1.495)
Feeling of Safety 1	0.293*** (0.0247)
Agency	-0.180 (0.119)
Responsible for hiring	-6.467 (4.527)
Understanding of a risk	14.08*** (1.245)
Appropriateness of a risk management	0.128*** (0.0325)
Perceived fairness of the hiring process	0.0276 (0.0301)
Knowledge of reporting channels	
No	-4.627* (2.119)
Yes	1.854 (1.462)
Interactions	
Responsible for hiring## not having knowledge	6.818 (11.05)
Responsible for hiring## Having knowledge	12.16* (5.005)
Age	-0.255*** (0.0740)
Gender	1.766
Female	(1.772)
Male	3.848* (1.839)
Prefer not to say	-8.713 (6.119)
Years in the public administration	0.0899 (0.0745)
Intercept	31.94*** (3.915)
N	2537
R ²	0.249
adj. R ²	0.244

Note: Standard errors in parentheses, * p < 0.05, ** p < 0.01, *** p < 0.001.

Annex O. Descriptive statistics of the three study groups, and the total sample by treatment group.

Table A O.1. Descriptive statistics

	Control (N = 863)	Treatment 1 (N = 838)	Treatment 2 (N = 836)	Total (N = 2537)
Gender				
Female	399	361	385	1145
Male	317	327	307	951
Non-binary	7	9	14	30
Prefer not to say	140	141	130	411
Age				
20-29	83	58	88	229
30-39	210	223	213	646
40-49	286	278	279	843
50-59	214	212	191	617
60-69	70	67	65	202
Career length in PA				
Less than 1 year	24	23	25	72
1-2 years	100	77	106	283
3-4 years	61	71	67	199
5-9 years	135	129	140	404
10-14 years	89	118	109	316
15-19 years	135	114	105	354
20-29 years	218	199	192	609
30 years and over	101	107	92	300

Annex P. Limitations

This study has several limitations. For example, the distribution of the primary outcome variable (see Annex C) has clusters around tens (especially around 0, 50 and 100), which can have altered the results. This was likely due to the design of the survey (the answers to some questions were given on a continuous interval, with every tenth highlighted). This limitation was addressed by running several robustness checks (Logit, Tobit, OLS with rounded frequencies, means testing).

Another reason for the peaks at tens (for instance in the variables Age, where peaks can be identified at 30, 40, 50 and 60), may have been that the respondents gave approximative values for their age. The respondents may have feared being identified from their responses, even if the experiment was anonymous. Nevertheless, the Age-variable still is approximatively normally distributed.

Due to the lack of data on the distribution of age, career lengths in the public administration and agencies, the study was not able to confirm whether the distributions of these variables follow the population distribution, to see whether the sample is representative of the underlying population. These factors have important implications for the external validity of the results.

To have power of 80% to find an effect size of 2.9-4 percentage points, 3000-5700 approximately observations was needed (see chapter 3). Due to high attrition, i.e., respondents not finishing their survey responses, almost half of the responses were excluded due to incomplete responses. Yet, since the effect sizes found by the regression in this study were much higher (8.21-12.00 pp, comparatively 8.99-14.46 estimated by the statistical tests), the study found sufficiently high effect sizes and gathered large enough sample, to attain statistical power of 80%.

Improving Corruption Risk Management in the Slovak Republic

RESULTS FROM A 2023 EXPERIMENT IN APPLYING BEHAVIOURAL INSIGHTS TO PUBLIC INTEGRITY

This report provides insights on applying behavioural insights to improve public integrity in the public administration of the Slovak Republic. This report illustrates, through a stepwise application of the OECD BASIC toolkit, how corruption risk management policies can be improved through the identification and analysis of undesired behaviours, and through the design and testing of strategies to change these behaviours. Specifically, a randomised controlled trial was employed to test the effect of two behaviourally informed strategies to improve risk communication in the public administration. The results provided novel empirical evidence that: 1) providing support to public servants to better understand risks; and 2) exposing public servants to good leadership examples can improve their propensity to communicate risks. Moreover, it was found that feeling safe, trusting and being aware of risk communication channels also play an important role in improving risk communication. Based on the findings, this report provides recommendations to improve the risk management system of the Slovak Republic and inform the discussion on the upcoming National Anti-corruption Strategy, contributing to advancing the country's efforts in curbing corruption.



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