# The risk culture of a public sector regulatory entity


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Mini-dissertation submitted in partial fulfilment of the requirements for the degree *Master of Commerce in Applied Risk Management* at the North-West University

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# PREFACE

This mini-dissertation is the final deliverable in the Centre for Applied Risk Management (UARM)'s taught master's degree programme. The mini-dissertation was written in article format and consists of three sections: Research project overview, Article, and Reflection.

This mini-dissertation is the student's work. The student was responsible for the final concept, set-up, execution of the research project and writing of the mini-dissertation. The members of the supervisory team contributed in an advisory and technical support capacity on study conception and design, analysis and interpretation of data, and critical revision of the manuscript. The mini-dissertation was language edited. The main study supervisor gave the student permission to submit this mini-dissertation for examination.

## ABSTRACT

There is a scarcity of published information on risk culture in the public sector regulatory environment in South Africa. The public sector regulatory entity in this study was established by an Act of Parliament to safeguard the interests of housing consumers and to regulate the homebuilding industry. This entity faces threats as it delivers on its mandate from political, economic and operational environments. This study assessed the perception of risk culture, at different employment levels, and in terms of different roles of employment, in the public sector regulatory entity selected for study. The assessment was based on evidence from the literature and a questionnaire survey. The survey was distributed to approximately 600 employees of the chosen organisation. The results showed a relatively high level of perception of risk culture among the senior management employees compared to middle management and non-management staff. Furthermore, the study found significant differences in the risk culture perceptions between members of the risk section and the rest of the organisation. Training was cited as the intervention required most to improve the maturity of the risk culture, followed by improved communication. This study demonstrated also an effective technique for assessing risk culture, and for obtaining recommendations for improving risk culture maturity, of the regulatory entity studies and other similar organisations. This study could be the first of its kind to address a public sector regulatory entity.



Keywords: Risk culture; Public sector risk culture; Public sector regulatory risk culture; Public sector regulatory entity

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# RESEARCH PROJECT OVERVIEW

## Project background

This study is about the risk culture of a public sector regulatory entity. This regulatory entity was established by an Act of Parliament to protect the interests of the housing consumers (home owners) and to ensure that home builders comply with housing standards and regulations. Part of the entity's key activities include, amongst others, registration of home builders, conducting regular quality assurance inspections and issuing non-compliance notices on defective houses. The entity also provides a five-year warranty on houses completed by its registered home builders.

There is a scarcity of published information on risk culture in the South African public sector regulatory environment. For this study, the regulatory environment refers to the broader South African housing sector, which forms the core business area of the regulatory entity selected for study.

The entity faces risks as it delivers on its mandate. Looking at the nature of this entity and its mandate, the current underlying economic and political pressure in the provision of housing justifies the need to understand the risk culture of the regulatory entities in this sector. When executing its mandate, the entity selected for study faces risks from the political, economic and operational environments. These risks include:

- The high number of complaints from housing consumers due to poor workmanship by home builders registered with the entity.
- The strain on the cash flow of the entity selected for study due to poor workmanship.
- The backlog in the provision of housing. One of the undesired results of this backlog is protests about service delivery.

## Purpose of this study

The aims of this study were to:

- undertake a literature review on risk culture in private and public sector regulatory organisations;
- investigate the perception of risk culture at different levels of employment in the public sector regulatory organisation under study;
- investigate the perception of risk culture in different roles of employment in the public sector regulatory organisation chosen for study; and

- make recommendations to enhance the risk culture of the regulatory entity based on the study findings.

**Expected contribution of the study**

This study could add value to the current and future academic literature on risk culture in public sector regulatory entities. A formal risk culture assessment has not been conducted in the entity selected for study since its establishment in 1998. The results of this investigation could add value by addressing the absence of a formal risk culture assessment for this entity. Other academics could build on this study to investigate further the risk culture in other public sector regulatory entities. This research is likely to assist the stakeholders of the organisation selected for study as well as employees of the organisation by revealing the different perceptions and challenges of risk culture at the different levels of employment. This study could set precedents for other public sector regulatory and housing entities in respect of the influence of risk culture on the organisation and on the assessment of risk culture. This outcome of this study could enhance organisational risk management processes.

**Justification for the selected journal**

*Risk Analysis: An International Journal* was selected for the publication of this research study on the basis of its scope and aims. This journal was selected based on factors such as its popularity, accessibility, reputation, the nature of the studies it publishes, and the articles that have appeared in it.

The journal is internationally recognised, accredited and features papers on risk perception and risk management. Its academic articles have been well cited. From the literature review undertaken for this study, it seems that there is a scarcity of published articles on risk culture in *Risk Analysis*, as none could be identified during an internet search.

This shortage of published literature on the topic has presented an opportunity for submitting this article on risk culture to this journal, whose URL is: http://www.sra.org/sra-journal

This article is not yet at the appropriate level for submission to the journal. Further work will be undertaken to bring the article to the required level for this purpose in due course.

# ARTICLE

## The risk culture of a public sector regulatory entity


### 1. Abstract

There is a scarcity of published information on risk culture in the public sector regulatory environment in South Africa. The public sector regulatory entity in this study was established by an Act of Parliament to safeguard the interests of housing consumers and to regulate the homebuilding industry. This entity faces threats as it delivers on its mandate from political, economic and operational environments. This study assessed the perception of risk culture, at different employment levels, and in terms of different roles of employment, in the public sector regulatory entity selected for study. The assessment was based on evidence from the literature and a questionnaire survey. The survey was distributed to approximately 600 employees of the chosen organisation. The results showed a relatively high level of perception of risk culture among the senior management employees compared to middle management and non-management staff. Furthermore, the study found significant differences in the risk culture perceptions between members of the risk section and the rest of the organisation. Training was cited as the intervention required most to improve the maturity of the risk culture, followed by improved communication. This study demonstrated also an effective technique for assessing risk culture, and for obtaining recommendations for improving risk culture maturity, of the regulatory entity studies and other similar organisations. This study could be the first of its kind to address a public sector regulatory entity.



Keywords: Risk culture; Public sector risk culture; Public sector regulatory risk culture; Public sector regulatory entity

## 2. Introduction

This study reports an investigation of the risk culture of a public sector regulatory entity whose mandate is to regulate the house-building industry and to safeguard the interests of housing consumers. Its main services include the registration of home builders, the renewal of home-builder registrations, and the inspection of subsidised as well as non-subsidised houses. The organisation strives to ensure the achievement of numerous business deliverables through the effectiveness of its audit and risk management processes. Its corporate governance policy embraces the principles of accountability, discipline, independence, responsibility, fairness and transparency. As such, the role of the organisation's board of directors (the Council) is to ensure that it complies with all applicable governance requirements.

The entity selected for study faces threats from the internal and external environments, which include:

- complaints from housing consumers (home owners) for poor workmanship;
- the strain on its cash flow as a result of poor workmanship; and
- the backlog in the provision of good quality housing.

The board of directors is responsible for the governance of risk within the organisation (King, 2009). The Audit and Risk Committee reviews the effectiveness of the risk management processes, strategies and influences the effective monitoring and maintenance of risk management frameworks. The prevailing economic and political pressure in the provision of good quality housing justifies the need to understand the risk culture of the regulatory entities of this sector. However, there is little that has been published on risk culture in the public sector regulatory environment in South Africa. In this study, I assessed the perception of risk culture in such a regulatory organisation. The first part of the investigation was based on the evidence from the literature.

The second part of the study involved examining the perception of risk culture, at different employment levels among the staff, and in terms of their different roles in the organisation using a questionnaire that was distributed to all members of staff. . An investigation of this nature requires a general understanding of culture, organisational culture and risk culture in particular. These terms and others employed in this study are defined as shown in Table 2.

The literature review indicated a lack of research on risk culture and its assessment in the public sector regulatory environment. The purpose of this study, therefore, was to:

- undertake a literature review on risk culture in private and public sector regulatory organisations;
- investigate the perception of risk culture at different levels of the selected public sector regulatory organisation;
- investigate the perception of risk culture by members of staff playing different roles in the organisation; and
- make recommendations to enhance the risk culture of the organisation based on the study findings.

## 3. Background

**Table 1: Definitions used in this study**

| Terminology | Definition | Source |
|---|---|---|
| Risk | The effect of uncertainty on objectives. | (Purdy, 2010) |
| Risk | The definition of risk can readily be applied when organisational objectives are comprehensive and completely stated. | (AIRMIC, 2010) |
| Risk management | A process involving the identification and evaluation of actual and possible risk areas relating to the company as a whole, followed by risk avoidance, risk termination, risk transfer, risk tolerance, and mitigation (treatment). | (King, 2009) |
| Enterprise risk management | A process, influenced by an organisation's board of directors, management and other staff, applied as part of a strategy set-up and across the organisation, with the intent to identify possible events that may impact on the organisation. This includes the management of risks to be within the organisation's risk appetite and tolerance levels in order to provide reasonable assurance regarding the achievement of the organisation's objectives. | (COSO, 2004) |
| Culture | "The collective programming of the mind that distinguishes the members of the one group or category of people from others." | (Hofstede, Hofstede, & Minkov, 2010, p. 6) |
| Culture | Culture can be defined as those behavioural practices that a particular group learns within a specific period of time in an attempt by the group to solve its survival problems in an external environment as well as its internal integration problems. Such learning can be a concurrently behavioural, perceptive, and a passionate process. | (Schein, 1990) |
| Organisational culture | Organisational culture involves those aspects that individuals believe in terms of how the organisation operates as well as the behavioural results of those individual beliefs. Organisational culture can have a significant influence on organisational effectiveness by means of fostering a sense of purpose, and a consistent and adaptable set of meanings. | (Sinclair, 1991) |
| Risk culture | Is a term describing the values, beliefs, knowledge and understanding regarding the risk shared by a cluster of individuals with a common purpose, particularly the employees of an organisation or of teams or groups within an organisation. | (IRM, 2012) ; |
| Risk culture | Risk culture can also be defined as a financial organisation's norms and the collective conducts and behaviours of its individuals that influence risks and have an effect on outcomes. Risk culture gives a specific view that allows overall concerns regarding culture to emphasise risk-taking as well as risk-control activities. | (EY, 2015) |
| Risk culture | Risk culture is also defined as the individual behavioural norms in an organisation which determine the shared ability to identify, understand, cooperatively discuss, and act on the organisation's current and future risks. | (McKinsey, 2010) |

## 3.1 Literature review on culture, organisational culture and risk culture

### 3.1.1 Culture and organisational culture

Culture can be acquired and encountered by different individuals in families, at school, and in organisations (Hofstede et al., 2010, p. 6). Cultures can generally differ among nations and geographical areas (Hofstede et al., 2010, p. 21)

Organisational culture may have a strong influence on individual beliefs, behaviour, and attitudes within organisational limitations (Karahanna, Evaristo, & Srite, 2005). This author's view is that work behaviour can also be influenced by supranational (regional, ethnic, religious, linguistic) culture at the professional, national and organisational levels.

Organisational culture can have a significant influence on organisational effectiveness by means of fostering a sense of purpose, and a consistent and adaptable set of meanings (Sinclair, 1991). This aspect of culture can also encourage a sense of involvement or ownership, which reduces the need for other types of organisational controls. Organisational culture can be regarded as an important factor when determining the performance of organisations and can also be used as one of the management tools to influence and achieve coordination of controls within an organisation (Sinclair, 1991).

Organisational culture is one of the important ingredients for achieving organisational effectiveness (Sinclair, 1991). Similarly, risk culture can be seen as an essential element for achieving risk management objectives. The characteristics and functions of public sector organisations and the manner in which they are executed are significantly different from those in the private sector (Parker & Bradley, 2000). This is largely because public sector tasks form part of a wider strategy for management of the economy and social development. Their organisations are largely influenced by dominating political ideas and so do not perform in the same manner as in the production of goods or delivery of services in the private sector (Parker & Bradley, 2000).

Organisational cultures have their own features and behaviours (Hofstede et al., 2010, p. 47). Similarly, there is no standard definition of organisational culture because it has many defining features (Black, 2003). The evidence from the literature suggests that there is a strong relationship between organisational culture and risk culture.

### 3.1.2 Risk culture

Power, Ashby and Palermo (2013) found that there are various aspects of organisational culture which can influence and guide both risk taking and its mitigation. These authors also found that a necessary step for achieving the desired goal is to begin by conducting an examination of how organisations perceive their risk culture.

The influence of risk culture on corporate risk taking applies to private sector, public sector, and public bodies as well as to non-profit organisations across the world (IRM, 2012). Bozeman and Kingsley (1998) support this statement by suggesting that the lack of a clear and overall understanding of risk culture normally results in organisations taking narrow approaches and incentives when addressing risks. Carrel (2009) indicated that one of the important steps when implementing a corporate culture that is focused on risks includes a distribution of all risk exposure by risk factors among all groups or individuals of an organisation who are responsible for them. This approach is in line with the distribution of risk exposure along business sections or departments.

The evidence from the literature suggests that risk culture enhances the idea of organisational culture with a specific focus on the shared ability to manage risk. The broader organisational culture on its own is a determining framework, and is also influenced by the concept of risk culture (IRM, 2016). Risk culture affects the way in which individuals perceive risks (Fadun, 2013). This finding is in line with our investigation into the risk culture of a public sector regulatory entity.

### 3.1.3 The need for an effective and sound risk culture in an organisation

Risk culture can be seen as an enabler that influences the effectiveness and integration of risk management (RM) processes and procedures. The same can be said of risk culture's ability to influence risk governance, internal control frameworks and the compensation practices that encourage suitable risk-taking behaviour (FSB, 2014). The achievement of a sound risk culture across the financial services industry does not need to be regulated (APRA, 2016). But it requires determination by individuals charged with the leadership of financial institutions such as the chief executive officers and executive management teams supported by a board of directors (APRA, 2016). According to the Institute of Risk Management (IRM) , the requirements for a successful risk culture include a unique and steady tone from the top about risk taking and risk avoidance (IRM, 2012).

There is a lack of a clear and acceptable model and framework against which organisational risk culture can be measured. However, a database of survey results with which organisations can compare and assess their risk culture scores against other organisations of a similar nature is available (McKinsey, 2010). A diagnostic approach for risk and risk culture framework has been proposed to assist organisations to benchmark and assess their culture levels (McKinsey, 2010).

The IRM (2012) recommended that the following be considered to understand organisational risk culture:

- Risk attitude, which is the selected situation accepted by an individual or group in terms of risk, influenced by risk perception and predisposition.
- Risk behaviour, which covers external risk-related actions that are observable including making risk-based decisions and risk management processes.

Risk attitude and risk behaviour have a strong relationship to the definition of risk culture and organisational culture (Bozeman & Kingsley, 1998). Risk attitude to a specific situation differs among individuals, teams, organisations and nations (Fadun, 2013). The development and testing of a method for supervision of behaviour and culture at financial institutions was tested and proved to be successful (DNB, 2015). The author showed that risks relating to behaviour and culture were positively identified, assessed and mostly mitigated (DNB, 2015).

Risk professionals are required to examine the language that they apply so that the risk stakeholders who are faced with decision making can acquire information that is useful, simple, consistent and unambiguous (Purdy, 2010). A consistency in risk definitions and risk management processes can lead to increased confidence in decision making and, eventually, to better decision making (Purdy, 2010). A consistency in the use of risk language can enhance risk culture.

According to Carrel (2009), to encourage risk culture, the functions of risk managers should involve the following:

- coaching the various risk management personnel in terms of the key risk factors to which they are exposed and their root causes (Carrel, 2009);
- interpretation and transformation of risk policies into measurable risk targets by means of risk factors (Carrel, 2009);
- encouraging the explanation of scenarios with focus on these risk factors (Carrel, 2009).

In Bozeman and Kingsley (1998), risk culture was used as a tool to understand possible differences between public and private organisations as well as their abilities to take risks. These authors found that a risky culture is connected to the willingness of senior management teams to trust their staff members. Their study also concluded that enterprises with extra red tape, weak connections between promotion and performance but with an interest towards particular management staff seemed to have less risk culture (Bozeman & Kingsley, 1998). The study reported here revealed the different perceptions of risk culture by the different levels of management in the organisation studied.

The need for effective risk culture in organisations is also supported by the UARM decision-focused definition of risk culture, which reads as follows: "The risk culture of an organisational group is manifested by the importance given to taking account of risk when the group makes decisions. The level of explicit inclusions of risk in decision making represents the implicit, subjective value afforded to risk by the group." An important implication of this definition is that risk management should always form part of the organisation's decision-making processes. Table 2 provides a summary of the key findings from the literature in this regard.

**Table 2: Key findings from the literature**

| Item | Finding |
|---|---|
| 1 | There is little that has been published on risk culture in public sector regulatory organisations. |
| 2 | Risk culture influences organisational leadership (Bozeman & Kingsley, 1998). |
| 3 | There is a necessity to understand culture in order to better understand the nature of organisations (Black, 2003). |
| 4 | A good understanding of risk culture requires the existence of a strong relationship between the organisation's strategic, performance management, and risk management processes (Frigo & Anderson, 2012) |
| 5 | There is no standard definition of organisational culture because it has many defining features (Black, 2003),(Karahanna et al., 2005). |
| 6 | Risk culture has the ability to influence risk governance, internal control frameworks and the compensation practices that encourage suitable risk-taking behaviour (FSB, 2014). |
| 7 | The achievement of a sound risk culture requires buy-in from individuals charged with the leadership of institutions, such as the chief executive officers and executive management teams supported by a board of directors (APRA, 2016). |
| 8 | Risk culture affects the way in which individuals perceive risks (Fadun, 2013). This justifies part of the need for an investigation into the risk culture of the public sector regulatory entity in the study reported here. |

The methods that were applied to collect, gather and analyse data for this study are discussed in the next section.

## 4. Method

### 4.1. Research design and methodology

The investigation involved the employment of the UARM 2017 Risk Culture Questionnaire (RCQ) in May and June 2017. The questionnaire had a total of 36 items that participants were required to answer. Cronbach's alpha coefficient was used to describe the reliability of items. The responses to the UARM RCQ-2017 questionnaire were analysed at a confidence level of 95%.

### 4.2. Study population

The questionnaire was sent to the entire staff complement of about 600 members of the organisation selected for study. All respondents were 18 years of age or older, and were based in the different regional offices across the nine provinces of South Africa.

### 4.3. Data collection

The questionnaire was distributed through an internal email communication facility, followed up by weekly reminders to potential participants, who were given one month to complete the survey. An online monitoring tool was used to track and monitor the progress of the responses. A total of 226 completed questionnaires were received, representing a response rate of 37%.

### 4.4. Data analysis

Descriptive and inferential statistical analyses were performed on the data collected using the SAS® tool. Since the parametric assumption of normality did not hold, non-parametric tests were employed to test for differences in the distribution groups based on the factor items. To attain the Wilcoxon rank-sum (Mann–Whitney) test results for two independent groups, the Wilcoxon scores were applied. The results were then tabulated and are discussed in the results section.

### 4.5. Ethical clearance

Permission and ethical clearance were granted by the organisation's chief risk officer to conduct the study and to administer the survey internally. Ethical clearance was also obtained from the University.

## 5. Results and discussion

### Biographical

The 226 respondents to the questionnaire were divided into three groups, namely, senior management, middle management, and non-management. The three groups consisted of 17 senior managers (8%), 54 middle managers (24%) and 154 non-managers (68%). I was interested in establishing whether there were significant differences in the risk culture perceptions of these three groups.

The comparison of these participants based on their job roles was also among the objectives of this study. Thus, I was also interested in establishing whether there was a significant difference between the 25 employees whose core role was risk management (11%) (hereafter referred to as members of the risk section) and the 201 respondents whose core role was not risk management (89%) (hereafter referred to as the rest of the organisation).

### The factors of risk culture perception from the analysis

The three factors that emerged from the analysis of the data were as follows: factor 1 assessed the perception of risk integration into the organisation and contained a total of 20 items; factor 2 assessed the perceived level of comfort with own risk management role and contained a total of 12 items; factor 3 assessed the perceived fairness of risk-taking incentives within the organisation.

In the sections that follow, the interpretation of the above factors and their corresponding scores among the three employment levels and the two role types will be discussed. The factor scores were interpreted in accordance with the risk culture maturity scales of the UARM RCQ-2017 questionnaire.

### The risk culture perceptions of senior management, middle management and non-management employees

The initial risk culture factor maturity scores for this study were obtained by calculating the average of items (per factor) for each employment level, and are shown in Table 3.

Table 3: **UARM RCQ-2017 average factor score per employment level**

| Level of employment | Factor 1 | Factor 2 | Factor 3 |
|---|---|---|---|
| Senior management | 3.4 | 4.0 | 1.9 |
| Middle management | 2.7 | 3.6 | 1.5 |
| Non-management | 2.6 | 3.4 | 1.6 |

A score of greater than or equal to 2.5 and less than 3.5 for factor 1 means that there was a medium level of perceived integration of risk in the organisation (Table 3). This implies that senior management, middle management and non-management employees, on average, perceived the integration of risk in the organisation as being between low and high.

A score of greater than or equal to 3.5 and less than 4.5 for factor 2 means that there was a high level of perceived comfort with their risk management roles (Table 3). This implies that all employees were comfortable with their risk management roles.

A score of greater than or equal to 1.6 but less than 2.5 for factor 3 indicates that there was a low perception of fairness with regard to risk-taking incentives within the organisation (Table 3). This could imply that there was little reward for risk taking.

**The differences in risk culture perceptions between different employment levels**

There were significant differences between senior management and middle management, and between senior management and non-management, in their perception of risk integration in the organisation (factor 1). There were no significant differences in their perceived comfort with their own risk management role (factor 2) and in the perceived fairness of risk-taking incentives (factor 3), among the three employment levels.

There were significant differences between the three employment levels for six items under factor 1. Of these items, all except one ("There are clear risk owners for every risk in the organisation") indicated significant differences between senior, middle and non-management, as shown in Table 4.

**Table 4: The differences in risk culture perceptions between different employment levels**

| UARM RCQ 2017 Item* | Senior management and middle management | Senior management and non-management | Middle management and non-management |
|---|---|---|---|
| There are clear risk owners for every risk in the organisation | No | No | No |
| The organisation's senior managers take accountability for risk events | No | Yes | No |
| The organisation provides adequate resources (of people, processes, systems, budget) for me to be able to manage risks connected to my role | No | Yes | No |
| Senior managers practise what they preach on risk issues | Yes | Yes | No |
| My concerns about risks will be taken seriously by senior management | Yes | Yes | No |
| I understand the organisation's risk management framework (processes, practices, etc.) | No | Yes | No |

Note: Items refer to the questions or statements that were asked in the UARM RCQ 2017 questionnaire.

The first item ("There are clear risk owners for every risk in the organisation") in Table 4 showed no significant difference between all three employment levels, namely, senior, middle and non-management employees.

The significant difference between senior management and non-management employees for the second item ("The organisation's senior managers take accountability for risk events") in Table 4 could imply that employees at senior management level take accountability for risk events more than those in non-management. There was no significant difference between middle management employees and senior management on this item. There was also no significant difference between middle management and non-management employees regarding this item.

There was a significant difference between senior management and non-management employees for the third item ("The organisation provides adequate resources such as people, processes, systems and budget for me to be able to manage risks connected to my role"). This could mean that that employees in senior management feel that the organisation supports its risk management process by providing adequate resources – of people, processes, systems, and budgets – more than non-management employees do (Table 4). There was no significant difference between middle management and non-management staff regarding the fourth item.

The results in Table 4 also show that there was a significant difference between senior management and middle management employees on the fourth item ("Senior managers practise what they preach on risk issues"). There was also a significant difference between senior management and non-management employees. This suggests that the former seem to be practising what they preach on risk issues in contrast to non-management staff.

There was a significant difference between senior management and middle management, and between senior management and non-management, on the fifth item in Table 4 ("My concerns about risks will be taken seriously by senior management"). This may imply that concerns about risks of senior management are taken more seriously than the concerns of middle management and non-management employees.

There was a significant difference between senior management and non-management employees with regard to the sixth item ("I understand the organisation's risk management framework, processes, practices, etc.") in Table 4. This suggests that senior management are more satisfied with the risk management processes than non-management employees. There was no significant difference between senior management and middle management in this regard. Similarly, there was no significant difference between middle management and non-management employees regarding the sixth item.

## The risk culture perceptions of the risk section and the rest of the organisation

The risk culture perceptions of members of the risk section and the rest of the organisation were also compared, to see if they differed. Table 5 shows the average factor scores per role type based on the UARM RCQ-2017 questionnaire.

**Table 5: UARM RCQ-2017 average factor score per role type**

| Role type | Factor 1 | Factor 2 | Factor 3 |
|---|---|---|---|
| Risk section | 3.1 | 4.0 | 1.7 |
| Rest of the organisation | 2.6 | 3.5 | 1.6 |

Factor 1 showed a score of greater than or equal to 2.5 and less than 3.5 (Table 5). This implies that there is a medium level of perceived integration of risk in the organisation by the risk section as well as by the rest of the organisation.

Factor 2 demonstrated a score of greater than or equal to 3.5 and less than 4.5, which implies that there is a high perceived level of comfort with their risk management role by both the risk section and the rest of the organisation.

For factor 3 the score was greater than or equal to 1.6 but less than 2.5, which indicates a low perceived level of fairness of risk-taking incentives by both the risk section and the rest of the organisation.

The results for factor 1 in Table 5 suggest that the risk section employees were more confident with their section facilitating the management of the entity's risks than the rest of the organisation, and that the risk section employees have a better understanding of the organisation's risk management process than the rest of the organisation. Employees from the risk section and the rest of the organisation revealed high overall scores for factor 2 (Table 5), although that for the risk section was higher than for the others. The average scores for factor 3 were similar (Table 5).

Table 6 shows the results of the differences in risk culture perceptions between the risk section and the rest of the organisation. There were significant differences between the two groups in their perception of risk integration in the organisation (factor 1). This may imply that the risk section has a higher perception of the integration of risk management into the organisation than the rest of the organisation. There were significant differences between the two groups in their perceived comfort with their own risk management role (factor 2). This could imply that the risk section has a higher perception of comfort with its own risk management role than the rest of the organisation. There were no significant differences between these two groups in their perceived fairness of risk-taking incentives (factor 3).

**Table 6: The differences in risk culture perceptions between the risk section and the rest of the organisation**

| Factor | | Risk section | Rest of the organisation |
|---|---|---|---|
| 1 | Perception of risk integration in organisation | Yes | Yes |
| 2 | Perceived comfort with own risk management role | Yes | Yes |
| 3 | Perceived fairness of risk-taking incentives | No | No |

**Items with high percentage of "I do not know" response**

There were three items under factor 3 that showed high percentages of the "I do not know" responses that could be worth investigating further by the organisation. These topics seem to show a corresponding lack of awareness by the risk section and the rest of the organisation. The first item was about whether the organisation punishes staff members who take irresponsible risks (see Figure 1).

A high percentage (35%) of employees from both the risk section and the rest of the organisation appear to have little or no knowledge of the entity's measures to punish staff members who take irresponsible risks. This lack of knowledge presents a concern and should be explored further as part of the actions to enhance the organisation's risk culture.

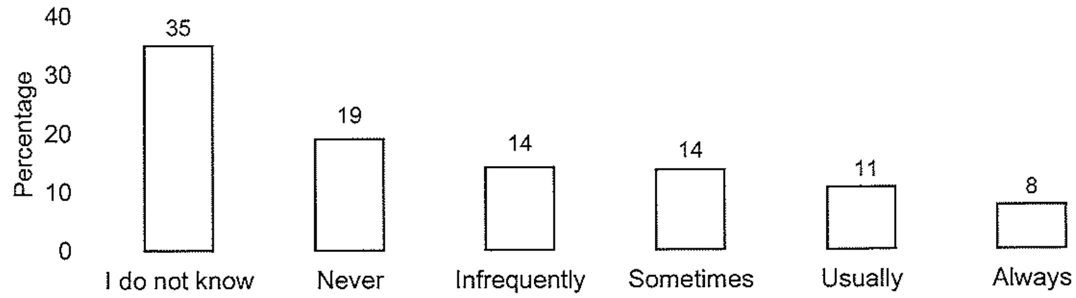


**Figure 1: Perceptions of the punishment of staff members who take irresponsible risks**

The second item was about whether managers treat staff fairly when a risk materialises (i.e. when a risk event occurs). Figure 2 shows that a high percentage (33%) of employees claim to have little or no knowledge of any measures implemented by managers in this regard. This lack of knowledge is another concern for the organisation to address in order to enhance its risk culture.

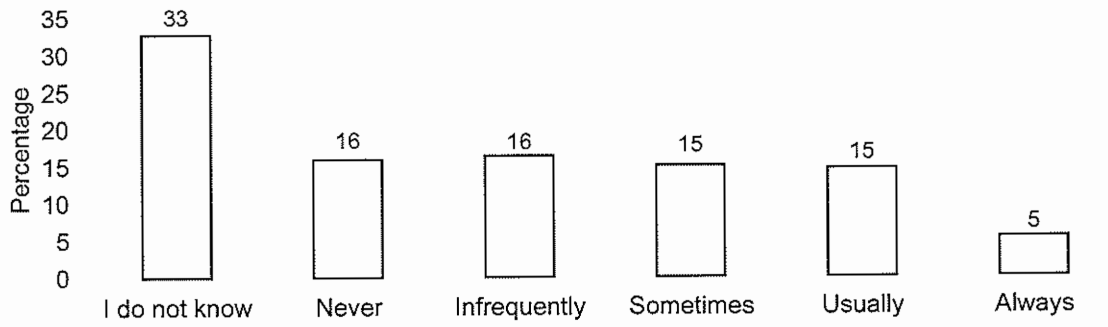


**Figure 2: Perceptions of the treatment of staff when a risk materialises**

The third item was about whether managers use risk management as a criterion when evaluating performance of staff members. Figure 3 shows that 32% of employees seem to have little or no knowledge of managers using risk management as a criterion when evaluating the performance of staff members. This high percentage could mean that risk management is not integrated into the organisation's performance management processes, a source of concern which should be explored further to improve the organisation's risk culture.

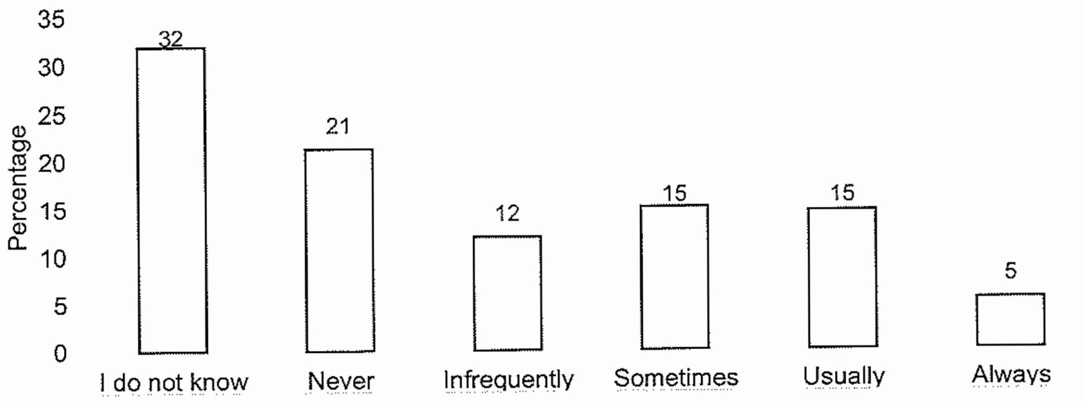


**Figure 3: Perceptions on the use of risk management as a criterion when evaluating performance.**

**What should improve?**

Respondents were asked about what actions should be taken to improve risk management in the organisation. Their results are displayed in Figure 4. Training was the course of action recommended by most (selected by 31% of survey participants), followed by improved communication (22%). Only 3% of respondents suggested that incentives needed attention.

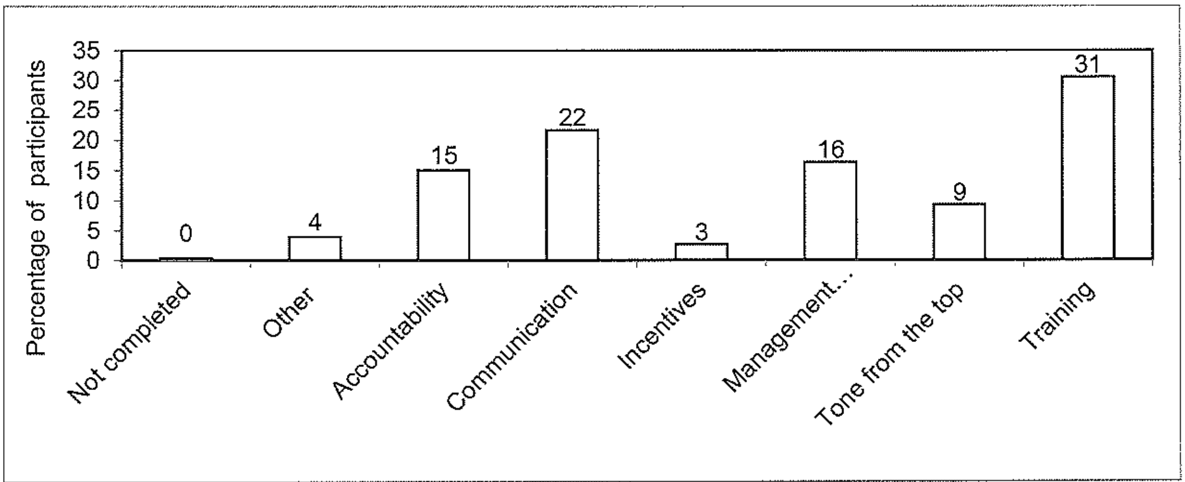


**Figure 4. A graphical presentation of what practices or attributes should be improved**

These initial results do offer important diagnostic areas to the organisational management for enhancing the risk culture of the organisation.

**Limitations of the study**

The questionnaire was not completed by all employees. Only a total of 226 of the staff complement of around 600 did so, representing a response rate of about 37%. However, this return is high enough for the results to be generalised to the rest of the organisation, although this should be done with care at this time. Another investigation and a more comprehensive study should be conducted and informed by these preliminary results.

Second, none of the board members of the organisation participated in the study. Furthermore, a higher percentage of participation from executive managers could have enhanced the results of the study. Third, the scarcity of risk culture literature on public sector regulatory entities made it impossible for me to compare my investigation with similar studies in other public sector regulatory entities. This study may be the first of its kind in the public sector regulatory environment and may set a precedent for other regulators in terms of how to assess risk culture in their organisations.

**Recommendations**

Based on the findings of this study, the following are recommended:

Risk management training and communication (awareness) sessions should be provided to all employees to address the following areas:

- how to they should take accountability for risk events occurring in the day-to-day activities of the organisation;
- how to integrate risk management processes into their daily activities and learning what the benefits of practising effective risk management will be to the organisation;
- to gain more understanding of the organisation's risk management framework (methodology, processes, practices, etc.);
- how managers can use risk management as a criterion for evaluating organisational performance; and
- how the organisation could benchmark itself with other entities through research and other means to identify measures to encourage responsible risk-taking by staff members, to punish those who take irresponsible risks and to ensure that employees are treated fairly when a risk materialises.

## 6. Conclusion

This study could be the first of its kind involving a public sector regulatory entity and could also set a precedent for other bodies within the public sector to assess their risk culture. The perception level of risk culture by senior management employees of the organisation studied was higher than by middle management and non-management staff. Furthermore, the study found significant differences in the risk culture perceptions between the risk section and the rest of the organisation. This investigation proved to be a successful pioneer in an environment where risk culture studies have not been reported in the academic literature. To enhance the risk culture of the organisation studied, training was cited as the intervention most required for it by survey participants, followed by communication. The expectation is that this research will provide useful information and may be used as an important tool to benchmark future academic studies by other public sector regulatory entities and agencies. Other researchers could build on these results to investigate risk culture in similar entities.

**Total words: 6096**

**Journal requirement: 7000**

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# REFLECTION

## Introduction

The aims of this study were to:

- Undertake a literature review on risk culture in private and public sector regulatory organisations;
- investigate the perception of risk culture at different levels of employment in the public sector regulatory organisation selected for study;
- investigate the perception of risk culture by members of staff playing different roles in the organisation studied; and
- make recommendations to enhance the risk culture of the regulatory entity based on the study findings.

The UARM RCQ-2017 questionnaire was used as a research instrument for this study. The questionnaire was distributed to a population of about 600 employees of organisation. A total of 226 responses were received, representing a response rate of around 37%, which is high enough for the results of this study to be considered representative.

## Aspects of the study that went well

This study had the support of the organisation studied, particularly because no risk culture assessment has been conducted within it previously. Similarly, no form of risk culture assessment has seemingly been done in any other public sector regulatory entities before. This study could be the first of its kind within the public sector regulatory environment. My main supervisor and co-supervisor proved to be very helpful in offering technical advice and offering statistical analysis.

## Potential areas that could be improved

Attempts to understand the statistical analysis for this mini-dissertation in the second year of study using numerical methods made this project an interesting challenge and required me to grab as much as I could in a short period of time. It may be helpful to give more comprehensive guidance on how to conduct statistical analysis during the earlier part of the programme in future.

**Learning from this project**

This study has been an important and worthwhile experience of my entire academic life. Through this project, I am now able to apply what I have learned to identify and solve problems within my organisation. This benefit has also been realised due to the value of what I learned from the other modules of this academic programme. All the modules learned as part of the UARM programme were also critical in giving me a solid and sound foundation for me to prepare and execute this project.

Some of the important learnings from this project include the following:

- **Article and report writing**

Reading a business report, for example a risk report or an academic paper, without understanding the actual process involved in the development of such a report or paper can result in a lack of a proper appreciation of the author's efforts. The process of determining and identifying a study area, formulating the topic, discussing the methods applied and results until final conclusions are reached can be challenging but equally beneficial.

- **Maintaining a clear and consistent storyline within the article**

The knowledge acquired in writing academic articles will be of enormous importance to me and I am of the view that I will be able to apply this knowledge in my current work environment. The clear and consistent storyline that has been maintained for this study will benefit my organisation and other public sector regulatory entities that would like to investigate, assess and understand their risk culture perceptions.

- **Expected results of the study are not always certain**

One of the major findings of my study is that there was a possibility of the research findings being different from the anticipated results. The implication of this is that it is not always guaranteed that the expected results will be produced at the end of the study. Unexpected results could be obtained. This is normal in research.

- **Consistent revision of the completed work**

Another important outcome of this study which contributed to its success is related to consistent criticism of the work. I discovered that the quality of one's work can be improved through critique by his or her peers for quality and relevance. Thorough engagements with my study supervisors and lecturers have also proved to be of great benefit in the development of my study and to critiquing my own and others' work.

- **What can be done differently**

I believe that the collection of the relevant literature in advance could assist in the development of other studies of a similar nature. I found that the appreciation of literature is a continuous process, which means that part of the literature gathered in the process was actually relevant to the study whereas some was irrelevant. The comprehensive collection of literature in advance allows for a wider selection of relevant articles for the study as opposed to focusing the literature search on a single aspect of the study. An initial, narrow focus on the literature may result in the researcher missing out on some critical information regarding his or her chosen study area.

# APPENDICES

## Appendix 1: Letter to the editor of the publishing house

North-West University
Centre for Applied Risk Management
UARM
Vaal Triangle Campus
RSA

humphreu@gmail.com

09 September 2017

The Editor

Risk Analysis: An International Journal

Dear Sir / Madam

**Submission of an article for possible publication in your Journal**

I would like to submit an article entitled "The risk culture of a public sector regulatory entity" in your journal. It is original and has not been published elsewhere. This article is based on the study that I carried out on one of the public sector organisations that currently operates as a regulator of the South African homebuilding industry. I assessed the risk culture perception of senior management, middle management and non-management employees in this organisation.

I am confident that this article would be of benefit to academics, risk management professionals within the public sector and other interested parties within the regulatory environment who seek to acquire knowledge and understanding of risk culture.

A copy of the article has been attached to this letter for your information and reference. I hope you find these results as interesting and valuable as I do.

Yours faithfully
Bongani Monareng